Eni Rewind for 2021

A just transition

Eni Rewind's Mission

We are Eni's environmental company.
We work according to the principles of the circular economy to give new life to industrial land and waste through efficient, sustainable remediation and revaluation 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.

Global goals for sustainable development

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

ENI REWIND FOR 2021

A JUST TRANSITION

Images: All photos in the Eni Rewind for 2021 Report come from Eni's photo archive.

Cover images:

F Remediation of the Porto Torres aquifer
↗ To find out more: enirewind.com

O Operational remediation plan for the Brindisi Micorosa Area
↗ read more: see page 35 of the Report

R Crotone Remediation Project
↗ To find out more: enirewind.com

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Why read Eni Rewind for 2021?

In our Sustainability Report, Eni Rewind wants to share the objectives whereby we proactively contribute to the ongoing energy and ecological transition and a fairer and more sustainable economy, in line with Eni's strategy.

In pursuing our mission, we are committed to the regeneration and valorisation of land, water and waste through remediation activities and the development of projects for the recovery of resources, according to the principles of the circular economy.

Eni Rewind tackles today's challenges by bringing passion and expertise to research, to technological innovation and to digitalisation, while promoting human rights and the building of alliances for the growth of local communities. The Sustainability Report describes the model of excellence whereby the company operates in order to create long-term value in the areas of presence, building new development opportunities through constant relations with stakeholders.

External links
Bookmarks
Eni Rewind approach to Just Transition

Introduction

1 Carbon Neutrality by 2050

2 Operational Excellence

3 Alliances for Development

Message to stakeholders

Cengio: permanent safety measures of the A1 area

The beginning of 2022 was unfortunately marked by the war in Ukraine, a totally unexpected event that has suddenly revolutionised international balances and global trends that had been considered incontrovertible until then. The uncertainty of the recovery, still marked by the impacts of the pandemic and by the difficulties in adjusting supply to the sudden dynamics of demand, was further amplified, leading to immediate radical discontinuities, as well as undermining established processes of convergence and rebalancing in the medium term. The prospect of a gradual interruption of trade with Russia and the spikes in inflation to levels we had forgotten makes it even more necessary to intensify cooperation between States and international organisations to promote peace, fair development and protection of the environment. Diversification from fossil sources and increasing circularity in the use of resources are two objectives that, in this context, become even more strategic and paramount in order to build a more resilient and sustainable balance. What is needed is a profound and participatory change by all public and private actors, companies and individuals, which will modify the structure of supply and, at the same time, the behaviour and choices of consumers.

Eni Rewind is determined to concretely address these challenges and make a tangible contribution through the activities it manages in the areas where it operates. The exceptional context, from the pandemic to inflationary pressures due to import constraints, did not slow down our activities. We continue our commitment, in line with the objectives of the strategic plan, to remediate 75% of the land we own by 2030, to increase recovery and valorisation of waste, also by joining partnerships to build new treatment plants, and through the commercialisation of our technical and project management expertise.

We continue to invest in research and development, also by leveraging on agreements with institu-

tions and universities, as well as investing in our people. Eni Rewind boasts a team of interdisciplinary and passionate experts who have consolidated important and highly diversified skills in the field of environmental services. Alongside this human and professional wealth, we are aware that we still have a lot to learn and we want to innovate and experiment in cooperation with other actors, both public and private.

The most significant advancements made in 2021 for environmental remediation include:

- in Ravenna, the certification of the completion of permanent safety measures preparatory to the development of the Ponticelle project;
- in Porto Torres, the development and start-up of the environmental platform for the treatment of contaminated soil in the Minciaredda area;
- in Crotone, the construction of a breakwater, more than 1,000 metres long, to protect the excavation areas for the removal of former waterfront landfills;
- in Cirò Marina, the completion of the demolition of the Punta Alice jetty that was used to load ships with salt extracted from the Belvedere Spinello mines;
- in Gela, the demolition of the D1 torch and the SNOX chimney, two elements of significant visual impact with heights of up to approximately 150 metres;
- in Cengio, the finalisation of the permanent safety measures for the A1 area, an operation that completes the site remediation project defined by the Government Commissioner in the early 2000s;
- internationally, we have consolidated the launch of the agreement with Bahrain where we will test the patented e-hyrec® device for selective removal of supernatant from groundwater. In addition, in other European countries we have launched engineering support for environmental and decommissioning activities at Eni GTR&M depots and service stations.

For waste management, we have intensified our efforts to build new treatment plants that, despite structural deficiencies concentrated in Central and Southern Italy, will allow to reduce costs and increase the level of service for Eni while building a competitive portfolio of services for external customers. With this in mind, we established the company HEA - Hera and Eni per l'Ambiente - which will develop and manage a multifunctional environmental platform in Ravenna, in the Ponticelle area, alongside a new biopile plant for the treatment and recovery of hydrocarbon-contaminated soil managed by Eni Rewind. Other projects, ranging from special waste treatment to recycling and municipal sludge, are the subject matter of collaboration agreements with leading players in the sector, such as A2A, Acea, Conai, Veritas and Viveracqua. Minimising landfill disposal and the export of waste abroad are essential priorities, not only in terms of environmental impact, but also in regard to strengthen the competitiveness of the national economy. The new plants will mainly be located on reclaimed land or on areas that were made available following the industrial reconversion of Eni sites, so as to minimise land consumption and promote new development opportunities for disused grounds.

The road ahead is long and far from easy, with many uncertainties and challenges, but the path we must follow is very clear, as are the long-term goals. We will continue to work with passion and determination to make our contribution, while being open to dialogue and debate with all stakeholders, in order to to consolidate effective solutions and find new ones together!

Paolo Grossi
Chief Executive Officer

Eni Rewind in summary

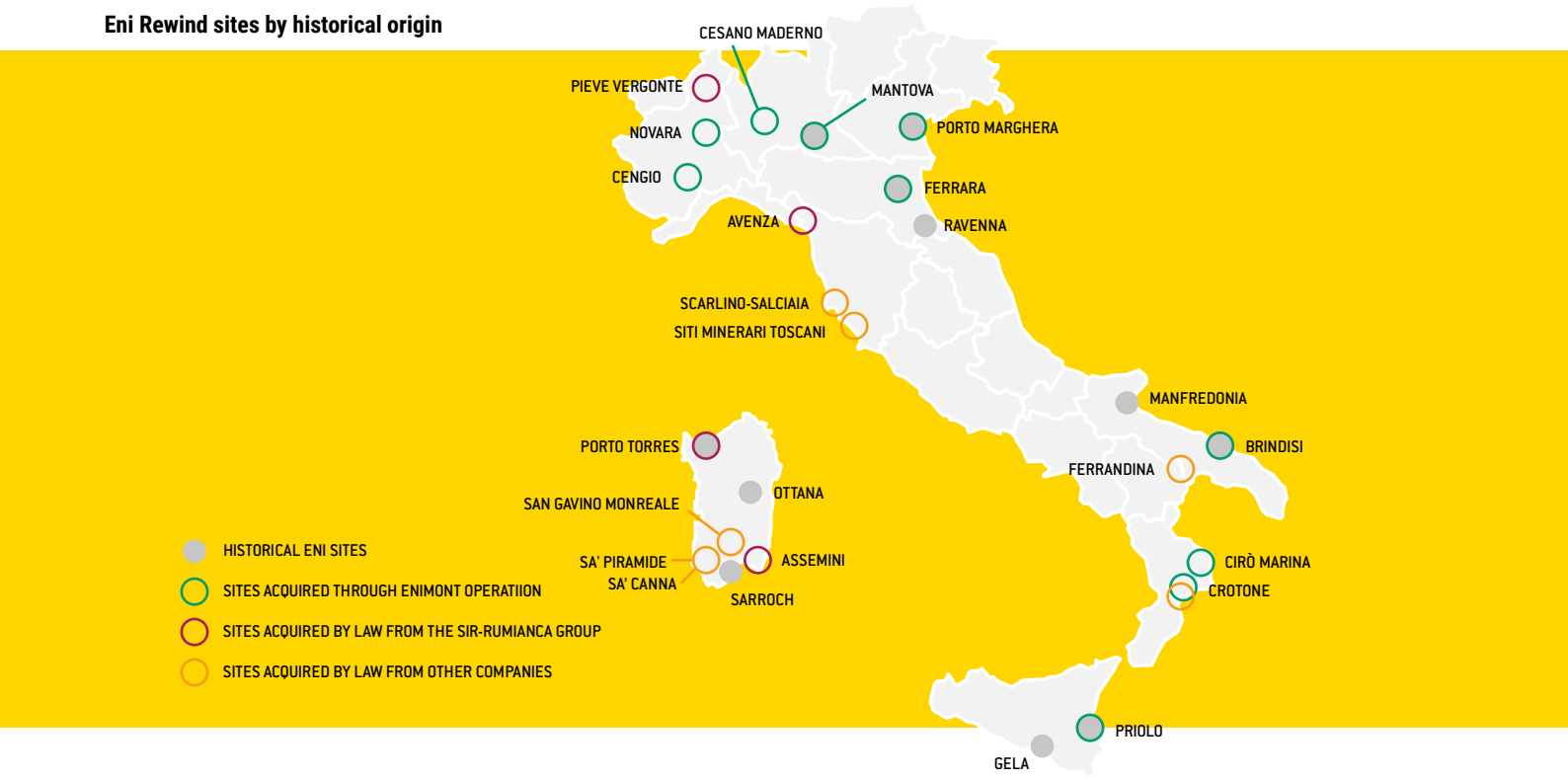
Eni Rewind is Eni's environmental company that operates in line with the principles of the circular economy to give new life to land, water and waste resources - be these industrial or from remediation activities - through efficient, sustainable remediation and revaluation projects in Italy and abroad. Rewind is the acronym for Remediation & Waste Into Development, an effective summary of the Company mission.

Eni Rewind currently owns about 3,760 hectares of areas in Italy, about 65% of which fall within Sites of National Priority. Since 2003, the Company has spent more than € 3.4 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 operations for the rescue of industrial companies in crisis.

The company is a global environmental contractor for all of Eni business lines, including upstream, refining, electricity generation, petrochemical, and commercial activities like service stations. Since 2018, the Company supports Eni in the development of environmental projects and services abroad, as well. As of 2020, with the aim of gradually transforming the Group from a service company to a market operator, Eni Rewind has been providing environmental services also to third parties, including Acciaierie d'Italia for the design of soil and aquifer reclamation works at the Taranto steel plant and Edison for the execution of remediation works at the Mantua site. In 2021, the company signed cooperation agreements with major Italian groups that manage the collection and treatment of municipal waste and with key players in the supply chain. These partnerships are part of the programme of activities that Eni Rewind will pursue over the next few years to build new waste treatment and recovery plants in a market characterised by structural deficiencies, giving priority to reclaimed land in synergy with the industrial reconversion of Eni sites.

Eni Rewind wishes to be an active participant in the sustainable development of the country with its wealth of experience, knowledge, technologies and with a systemic vision to which all stakeholders must contribute to pursue this common goal.

Eni Rewind sites by historical origin



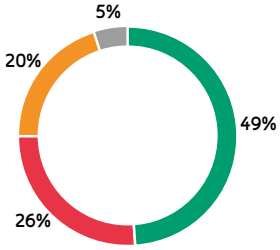
Total areas owned: ~3,763 ha

1,612
ENVIRONMENTAL INTERVENTIONS IN PROGRESS

310
FREE POST-REMEDIATION

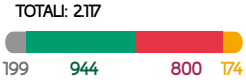
1,841
NOT AFFECTED BY ENVIRONMENTAL INTERVENTIONS

Breakdown of areas by origin



Costs incurred by site origin
(€ million)

Estimated costs to be incurred
(€ million)



- Sites acquired through Enimont operations
- Sites acquired by law from the SIR-Rumianca
- Group Sites acquired by law from other companies
- Historical Eni sites

Eni Rewind in 2021

~1000
Employees

€3.4 billion
Remediation expenses since 2003

~3,760 hectares
Owned

~€800 million
For environmental engineering

~60
sites with remediation activities in progress, over 400 environmental interventions in service stations

Over 100
sites where Eni Rewind is present

~80 km
total hydraulic barriers

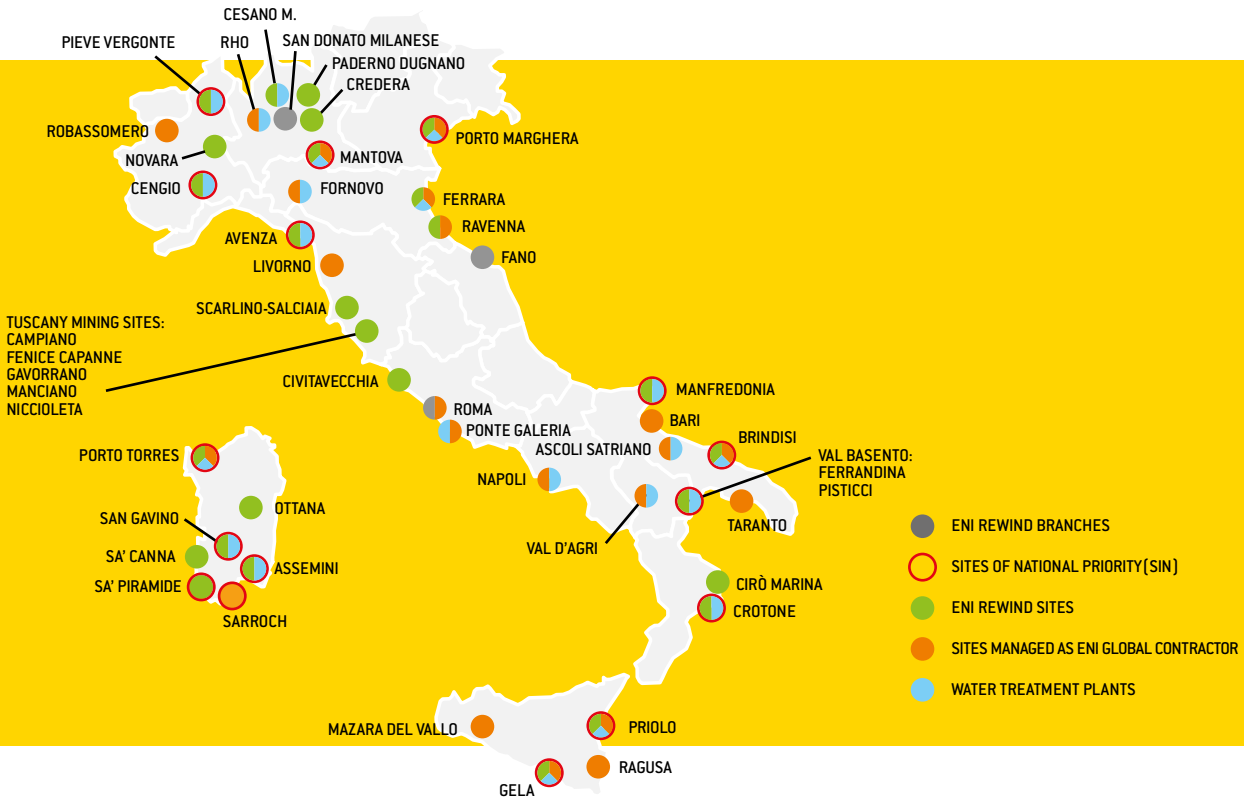
42
Water treatment plants

~36 million m^3
Treated water

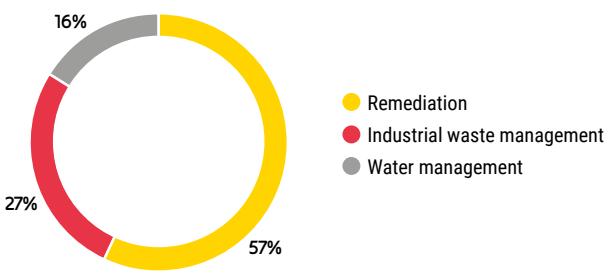
~9 million m^3
of water reused for industrial and environmental use

~2 million tons
total waste managed

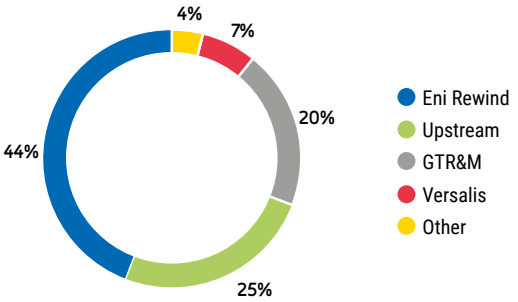
~73%
percentage of recovered/recoverable waste



Environmental activity managed by type



Environmental activity managed by client



Eni Rewind in the world

As of 2018, Eni Rewind has expanded its activities abroad, making its environmental know-how available to Eni entities around the world. In particular, the company is engaged in environmental engineering, water treatment and soil remediation projects at several sites in Africa, the Middle East and Asia. The Company is currently working with foreign subsidiaries in Iraq, Tunisia, Nigeria, Egypt, Angola and Kazakhstan, Algeria, Libya, and the UK, and has entered into a partnership with the Bahrain Ministry of Petroleum.
In addition, as of 2021, the engineering support activities for environmental and decommissioning work have also covered Eni Green/ Traditional Refinery and Marketing (GTR&M) active and decommissioned depots and service stations in Europe (France, Germany and Spain).

BAHRAIN

In January 2021, Eni Rewind and the National Oil and Gas Authority (NOGA) of the Kingdom of Bahrain signed a Memorandum of Understanding (MoU) aimed at identifying and promoting joint initiatives for the management, recovery and valorisation of water, soil and industrial waste in the Country, in line with the Sustainable Development Goals of the UN 2030 Agenda.
Eni Rewind will contribute to the partnership, by making available its environmental know-how, its expertise and the best technologies to date for the management and valorisation of resources.
The initiatives covered by the agreement, which are 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.
Following the first assessments conducted at petrochemical and refining plants in the Kingdom of Bahrain, three areas of collaboration were identified, which will take the form of aquifer modelling and field testing of Eni's proprietary "e-hyrec" technology at the Bapco Refinery, and optimised waste management of production plants under the Ministry of Petroleum.

Bahrain: partnership with NOGA for joint initiatives in water, soil and waste valorisation

TO FIND OUT MORE:

↗ enirewind.com

Transition and reference context

"The goals of the ecological transition set requirements and ambitions that are shared at a global level. However, to support a just transition, it is both fair and necessary to diversify pathways so that the countries that have used more natural resources contribute sooner and more substantially to restoring the Planet's environmental sustainability. With this in mind, we are committed to regenerating contaminated water and soil in order to minimise the consumption of new land and water withdrawals, while maximising the recovery of waste and refuse as a secondary raw material."

Paolo Grossi, Eni Rewind CEO

A just transition is, according to the Guidelines of the International Labour Organisation (2015), a *"process towards an environmentally sustainable economy that must be well managed and contribute to the goals of decent work for all, social inclusion and poverty eradication"* . In line with Eni's strategy, through its integrated and circular operating model, Eni Rewind is committed to maximising the benefits of resource recovery and reuse with a focus on the protection of the environment and the needs of workers and the communities in which it operates.

An approach that requires the concrete application of a regenerative systemic vision in which production and consumption cycles are waste-free and based on the increasing inclusion and participation of the actors involved throughout the supply chain, from institutions and entities to our partners, suppliers and customers. To be truly just, the Just Transition - for us - must preserve and enhance natural resources and recover waste, making the best use of the levers of technological evolution and economic and social cooperation.

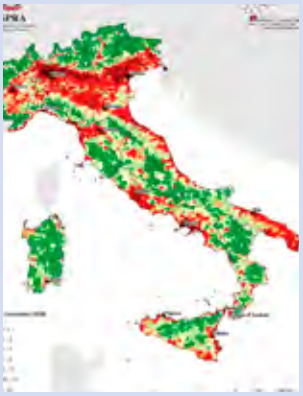
Furthermore, the implementation of a complex and long-term transition cannot disregard the need to prioritise the most effective interventions and synchronise the *"phase-out"* closure and conversion of obsolete plants and infrastructure, with the *"phase-in*, which will enable new technologies and more sustainable services and products. This path will be all the more equitable the more it succeeds in minimising the negative social and economic impacts generated by the change while supporting development opportunities consistent with the requirements and ambitions of the territories, beginning with the necessities of the workers involved directly and indirectly. This will require combining the demands of transition with the respect for rights, by ensuring dialogue, widespread skills development and social, health and safety protection.

With this in mind, Eni Rewind regenerates and valorises soil, water and waste, in an open and continuous dialogue with all stakeholders and in collaboration with partners willing to work together for Just Transition.

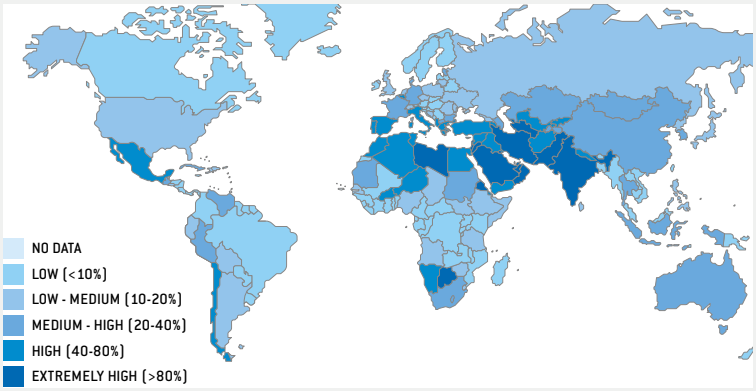
Scenario elements: challenges and opportunities - the consumption of soil in Italy

The consumption of land in Italy continues to rapidly transform the national territory. In the last year, new artificial coverings have claimed another 56.7 km^2, which is an average of about 15 hectares per day. This is what emerges from the ISPRA Report "Land consumption, territorial dynamics and ecosystem services" – 2021 edition.

"An increase that remains in line with what was recorded in the recent past, and makes our country lose almost 2 square meters of natural and agricultural land every second".



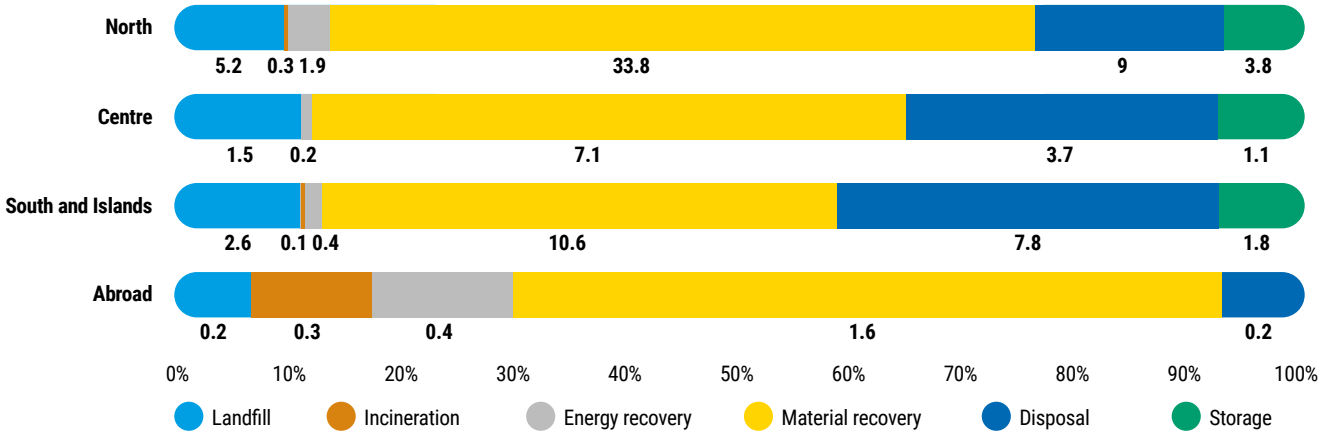
Land consumed at municipal level (% 2020)
Source: ISPRA analysis of SNPA maps



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

Treatment of hazardous waste by geographic area of destination (million tonnes)
Perimeter 93.6 million tonnes of industrial waste



* Given the nature of special waste and the related legislation, which provides for its free movement within the Italian territory and does not limit its treatment within the region of production, Assoambiente's analysis is carried out by macro-areas (North, Centre and South).

Special waste generation in 2019 stands at almost 153 million tonnes with an increase in total production, compared to 2018, of 7.3%, corresponding to approximately 10.5 million tonnes. In 2020 there was a slight decrease in their production (-4.5%), resulting from the impact on the Italian economy of the restriction/closure measures on production activities adopted due to the COVID-19health emergency (ISPRA Special Waste Report - 2022 edition). According to an analysis by Assoambiente (Environment Energy Work Report - May 2022) on the management of special waste, the national economy encounters critical issues that impact on the objectives of the circular economy: (i) material recovery is the most used activity in the North while in the Center and in the South, disposal (including landfill) remains important; (ii) waste-to-energy/energy recovery solutions, the only possible destination for certain types of waste, are mainly sought abroad, also taking into account the limited availability of plants of this type in Italy; (iii) as regards the circulation of special waste, about a quarter of the managed are treated in a territory other than the region of production; in fact, the linear correlation between the number of plants and volumes conferred outside the region stands at a statistical value of 90%; (iv) in general, there is a difference in the number of plants between different Regions/North-South, with a "virtuosity" of some territories in terms of response to the needs of the regional industrial context (e.g. Lombardy and Emilia-Romagna).

INTERVIEW

Interview with
Prof.
Alessandro Bratti

Prof. Bratti, in his previous roles from Chairman of the Ecomafias Commission to Director of ISPRA, has had more than ten years of experience during which he was able to tackle complex issues from different perspectives, including the governance of authorisation procedures for strategic projects regarding the energy and ecological transition. In your opinion, will the recent regulations, decrees, guidelines and policy directives lead to a concrete simplification by favouring the development of new projects within certain timeframes, overcoming the Nimby and Nimto effect and/or the lack of convergence on projects (see Superintendencies blocking renewable energy projects)? Could more have been done, also through a closer confrontation between public and private?

Recent standards have certainly introduced faster procedures, but in my opinion they do not always take into account the quality of the authorisation process. While the Ispra and Arpa control bodies have shortened their response times, they have not been given the appropriate tools to improve their processes, but only those necessary to abbreviate them. Moreover, if we talk about an assessment of the impact on the environment, for example, the studies proposed by companies are often not well made and are sometimes incomplete and require additions, lengthening the response time. I consider the technical guidelines to be a very important instrument: it is essential that these specialised manuals, I am referring in particular to the SNPA (National Environmental Protection System) guidelines, can be discussed with representatives of the manufacturing world before they are finally issued by the competent bodies.

I would also like to emphasise that, often, when talking about simplification,

attention is only paid to the regulatory part, completely neglecting the procedural issue, which is of fundamental importance for some processes. For example, conferences of services must truly be places where people work together, avoiding the constant postponement of decisions.
The issue of the acceptability or not of installations in the territory is much more complex, and must also take into account the quantitative and qualitative strengthening of territorial technical bodies. I am mainly referring to the Arpa bodies and Prevention Departments for public health. Citizens, especially in Italy, are extremely distrustful of companies and need to be able to rely on public structures to provide them with environmental and health guarantees.

Among the delays, that of the so-called End of Waste decrees has been 'stemmed' to date with the referral to the region on a 'case by case' basis? A missed appointment of national consultation that falls on the local authorities, who only have the SNPA guidelines as a reference. For operators, another authorisation obstacle. Lights and shadows of the System, what are the repercussions and what actions to implement?
The process of End of Waste decrees is too long and tortuous. The so-called "case-by-case" has undergone regulatory interventions bordering on constitutionality. The standard was changed in a short period of time, throwing into disarray the companies that, as is well known, need time to make investments. The SNPA guidelines are also an attempt to resolve more administrative issues that the legislature, due to different visions of the political forces in government, was unable to resolve. Arpa and Ispra are very careful not to encroach on fields for which they are not responsible.

The National Waste Plan is currently being drafted. In this plan, as operators, we have found some deficiencies, including a planning of future plant requirements, both for municipal waste and special waste, necessary to close the infrastructure gap (landfills and Waste to Energy) and achieve the targets set by European directives on the circular economy. What are the possible answers, including plant/technological solutions, to reverse this trend?
Italy is historically a country with a structural plant deficit. The phenomenon of illegal waste trafficking is so far-reaching also due to the fact that there is no adequate public-private system for managing the treatment and disposal cycle. A context in which the organised underworld has found fertile ground, causing environmental damage over time and draining resources from the legal supply chain.
Today, the National Waste Management Programme indicates both the type of plants and other elements useful to the regions for proper planning to reach the targets set at European level.
Substantial resources are made available in the PNRR to build new sorting and treatment plants, possibly including chemical recycling.
In Italy, unlike countries such as Germany, Austria, Sweden, etc., there is a lack of traditional plant hardware and it is therefore necessary to partially fill this deficiency. Therefore, some WTE equipment is probably necessary.

Remaining in the area of special waste for remediation, the scarcity of plants in Italy is a problem for operators who are forced to send them abroad to comply with decrees. A situation that is worsening given the ever-increasing restrictions on delivering waste across borders dictated by European legislation based on respect for the principles of proximity, priority of recovery and self-sufficiency of each State. What can be done to make authorities and territories aware of the desirability of on-site and/or local-regional disposal solutions?
It must be made clear that some environmental wounds generated in the past are difficult to heal completely. Situations need to be kept under control through systematic environmental and sometimes health monitoring. Transporting waste from one place to another is a nonsense that risks feeding a market in some cases bordering on legality. There is a need to invest in on-site remediation technologies, monitoring and knowledge dissemination, involving citizens step by step.

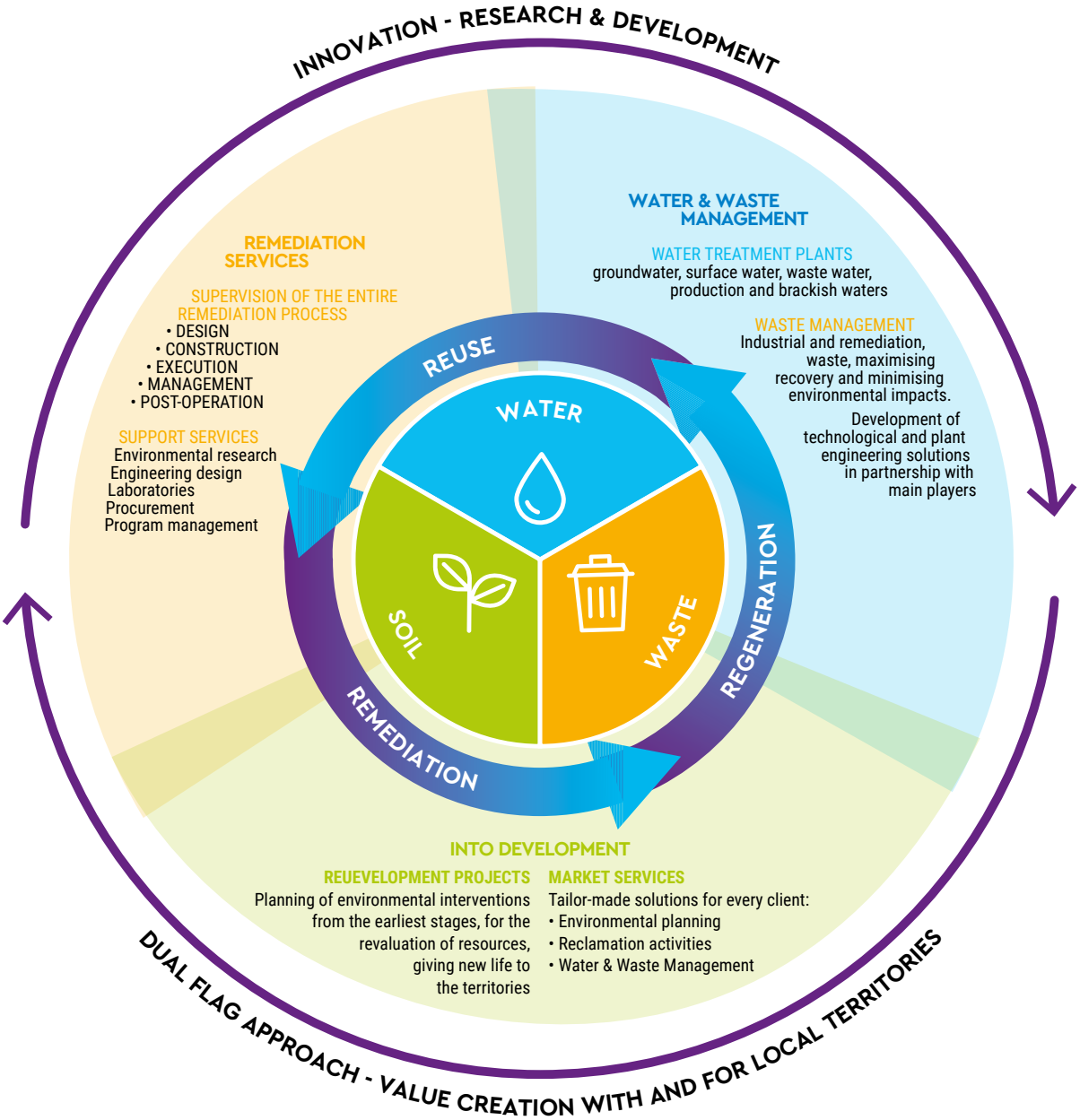
Another important segment in waste treatment and recovery is that of civil wastewater sludge, which is a critical issue for several regions in Italy. Among other things, regional regulations are moving in the direction of limiting the spreading of recovered sludge in agriculture.
What regulatory developments would you like to see to regulate the recovery and reuse of wastewater sludge?
Civil wastewater sludge does not always meet the basic requirements to be used in agriculture. Unfortunately, our purifier plants are often "mixed" and undersized. It is therefore necessary, even in this case, to distinguish between a sludge with suitable characteristics that, following ad hoc treatment, can be effectively distributed in agriculture as it contributes organic substance, and one in which the chemical elements present, while remaining below certain concentrations, may constitute a potential danger to the soil and, consequently, to people.

In the near future, what solutions can be used to divert an increasing proportion of sludge from disposal and promote its increasingly sustainable recovery?
Here again, technology can help us extract valuable elements from this sludge and send what is left for energy recovery.

Eni Rewind Services

Based on its integrated end-to-end model, Eni Rewind ensures the control of every phase of the remediation and waste management process by planning the projects for the valorisation and reuse of resources (soil, water, waste) from the earliest stages, and making them available for new opportunities for sustainable development.
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.

THE ENI REWIND INTEGRATED MODEL

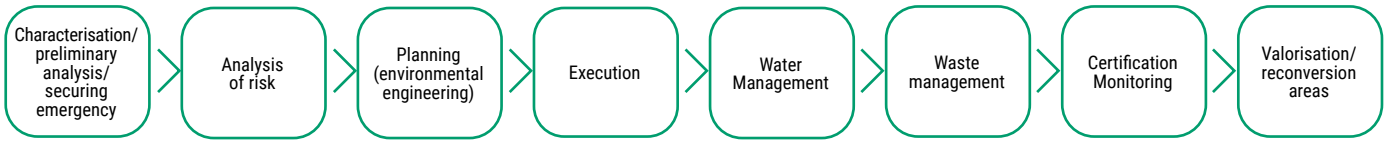


ENI REWIND SOLUTIONS FOR THE MARKET

Starting in 2020, with the objective of gradually transforming itself from a service company for the Eni Group to a market operator, Eni Rewind offers environmental services to private and public customers, having also obtained SOA certification for categories OG 12 remediation, OS 14 waste disposal and recovery, and OS 22 water purifiers and treatment.

REMEDIATION SERVICES

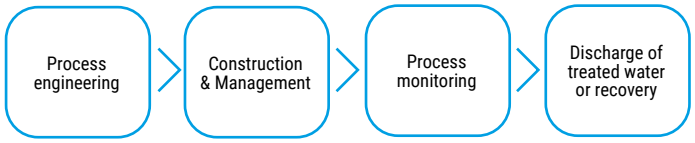
ENVIRONMENTAL PROCUREMENT
STAKEHOLDER ENGAGEMENT AND PERMITTING
PROJECT MANAGEMENT



Consolidated expertise to oversee the entire environmental remediation process in every single phase, from characterisation to certification and final monitoring through integrated and specialised teams, as well as dedicated permitting and procurement personnel. The operational model is based on a participatory approach that involves stakeholders from the preliminary stages of interventions in order to guarantee concrete opportunities for redevelopment and valorisation for the territories in which we operate.

WATER MANAGEMENT AND TREATMENT SERVICES

ENVIRONMENTAL PROCUREMENT
AUTOMATION - REMOTIZATION



Implementation and management of groundwater remediation interventions through solutions that guarantee the effectiveness and efficiency of processes for the treatment of water resources, in line with the best available BAT and BATNEEC technologies, also with a view to maximising reuse. The use of the most advanced methodologies of automation, remotisation and dynamic control of systems and hydraulic barriers allows water management services to be offered to different industries.

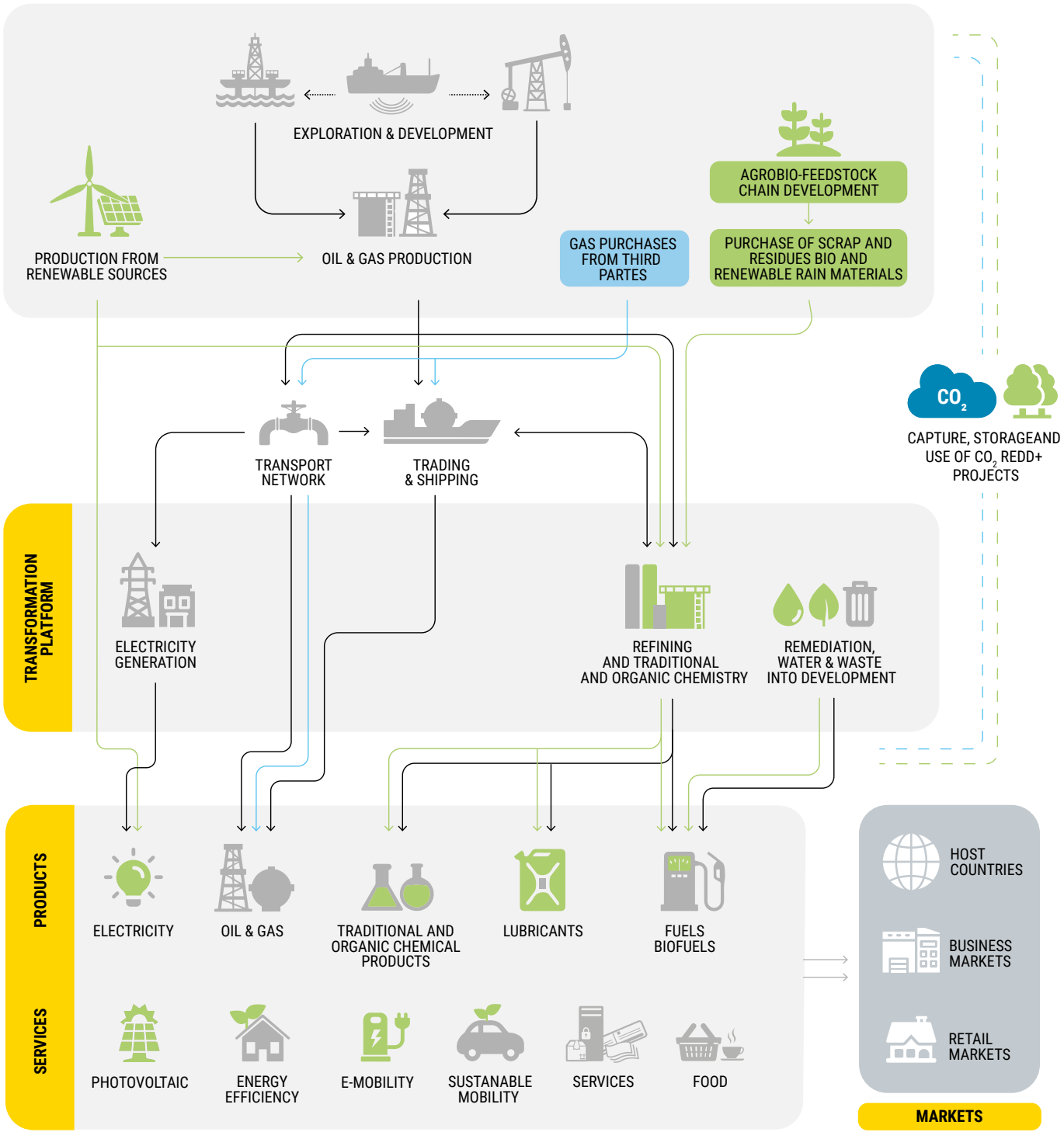
WASTE MANAGEMENT SERVICES

ENVIRONMENTAL PROCUREMENT
TRACEABILITY - DOCUMENT MANAGEMENT - PROCESS DIGITALISATION

Management of the waste cycle from remediation and industrial activities with efficient and sustainable recovery and disposal solutions, in line with the applicable laws and industry best practices. Transport, disposal and recovery of waste guaranteed by qualified suppliers through the definition of dedicated national contracts. Eni Rewind's waste management model adopts advanced IT systems to reduce the distance between the site of origin and the delivery facilities, minimising environmental impact, and enhancing traceability.

Eni Rewind in Eni's value cycle

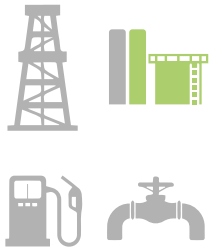
Eni Rewind has identified objectives and initiatives to foster the new circular economy, combining environmental activities with the valorisation of soil, water and waste through their efficient management and innovative recovery projects, in synergy with the territories. A commitment that the Company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



TRANSFORMATION

REMEDIATION

Remediation of contaminated areas to enable new opportunities for sustainable development



- Development and application of remediation technologies
- Management of decommissioning and soil and aquifer remediation activities:
  - at decommissioned and operational sites
  - at retail outlets (service stations)
  - at contaminated areas (e.g. due to break-ins on pipelines)
- Planning of remediation interventions with a view to land repurposing and future reuse

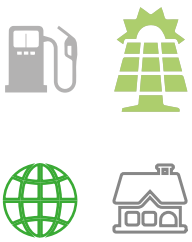
WATER AND WASTE

Water and waste treatment to maximise recovery and reuse

- Chemical/physical/biological treatment of groundwater, surface water and production water for reuse in industry or irrigation, contributing to using less water from nature
- Management of industrial and remediation waste cycles, from production to final disposal, maximising recovery and minimising waste
- Development of technologies and skills in partnership with main players

DEVELOPMENT

Development of new businesses to support the energy transition



- Realisation of new waste treatment and recovery plants in synergy with the industrial reconversion of Eni sites
- Use of remediated areas for development by Eni New Energy, as plants for the production of energy from renewable sources
- Development of Third Party activities (non-Eni), relying on the skills gained in the field of remediation and waste management

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.

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
- Optimisation/efficiency of water treatment
- Maximising the recovered/recoverable waste ratio
- Development of new waste treatment and recovery plants, giving priority to reclaimed land in synergy with the industrial reconversion of Eni sites
- Signing of cooperation agreements with major players in the waste sector to analyse infrastructural deficiencies and realise potential initiatives of collective interest
- 7 million in decarbonisation and circular economy projects

OPERATIONAL EXCELLENCE

People and Health

- Training: design and development of professional career paths
- Promotion of Diversity & Inclusion initiatives
- Strengthening of work-life balance initiatives
- Initiatives dedicated to health promotion and care

Safety and Environment

- Initiatives to raise awareness of employees and contractors on HSEQ aspects
- Continuous improvement in occupational safety through dedicated initiatives and instruments (e.g. THEME project, HSE pre-sense, Root Cause Analysis)
- Process Safety and asset integrity: gap analysis conducted for groundwater treatment plants with respect to process safety standards

Human Rights and Integrity in business management

- Application of Eni human rights guidelines
- Dissemination of the Supplier Code of Conduct
- Contribute to the promotion of legality agreements in more complex remediation sites
- Sharing skills and promoting supply chain sustainability through the application of the JUST model

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

TRANSVERSAL THEMES

Innovation and digitalisation

- Investments R&D 2021: approximately EUR 3.2 million
- Partnerships/agreements with the academic world for the development and application of innovative remediation and resources valorisation solutions

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 functi ons 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 operating lines under the CEO, as represented below.
The two operating lines coordinate Remediation and Water and Waste Management activities, specifically:

- "Environmental Technical & Site Activities": integration of engineering, technological innovation and operational management of environmental remediation 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.

ENI REWIND ORGANISATIONAL STRUCTURE

CHAIRMAN
Rita Marino

CHIEF EXECUTIVE OFFICER
Paolo Grossi

SUPPORT FUNCTIONS

HR BUSINESS PARTNER	PLANNING, ADMINISTRATION & CONTROL	HEALTH, SAFETY, ENVIRONMENT & QUALITY	ENVIRONMENTAL PROCUREMENT	INSTITUTIONAL RELATIONS LIAISON	CIRCULAR ECONOMY & BUSINESS SERVICES
Gennaro Cangiano	Roberto Pasqua	Francesco Massimo Manglaviti	Filippo Saranga	Enrica Barbaresi	Roberto Marchini






OPERATING LINES

ENVIRONMENTAL TECHNICAL & SITES ACTIVITIES	WATER & WASTE MANAGEMENT
Francesco Misuraca	Michele Troni


Main events of 2021

JANUARY

- The National Oil and Gas Authority of the Kingdom of Bahrain (NOGA) and Eni Rewind sign a Memorandum of Understanding (MoU) aimed at identifying joint initiatives for the management, recovery and reuse of water and soil resources and waste in the country.

FEBRUARY

- In Cengio, a delegation from the Ministry of Justice and the Ministry of Infrastructure visit the site to assess its suitability to host new initiatives at the service of the territory.
- In Gavorrano, the permanent safety measures and environmental restoration started at the Bacini di S. Giovanni mining site.

MARCH

- HEA, a 50-50 joint venture between Eni Rewind and Herambiente, was established to build a multifunctional platform for the treatment of special waste as part of the Ponticelle area in Ravenna productive redevelopment project.

APRIL

- In Assemini, the subsidiary Ing. Luigi Conti Vecchi finalised the sale of the chlorine soda branch assets to Società Chimica Assemini.

MAY

- In Gela, Eni Rewind, Enimed and Raffineria di Gela supplement the cooperation agreement for food safety in Gela with a commitment to renovate and equip the premises of the former city slaughterhouse for distribution among the neediest.

JUNE

- In Taranto, by assignment of Acciaierie d'Italia, the design for the remediation interventions of the former Ilva area was completed.
- In Porto Torres, the construction of the multifunctional platform planned as part of the Nuraghe land remediation project was completed.
- In Gela, Eni Rewind starts, as part of a collaboration agreement with ISPRA and UNEM for sustainable innovation in land remediation, the experimentation of passive sampling to assess leaching paths in the aquifer.
- In Manfredonia, activities were completed to optimise the remediation of the aquifer through the revamping of the treatment plant and the hydraulic barrier, which will make it possible to eliminate the withdrawal of water resources from nature, thanks to re-injection.

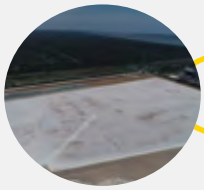
JULY

- Online the new Eni Rewind website with a section dedicated to the envirionmental serviecs offered on the market and to customers outside the Eni Group.

Certifications

Eni Rewind's commitment to safeguard the environment, to protect the health and safety of all workers and to ensure a quality service to its customers is guaranteed by its specific compliance with the relevant legislation in force and by the voluntary adoption of an integrated management system for HSEQ aspects, with the achievement for the entire Company of a single certification in accordance with UNI ISO standards.
In 2021, Eni Rewind also obtained the SOA Certificate, a compulsory certification for participation in tenders for the execution of public works contracts, in categories OG 12, OS 14 and OS 22.
Furthermore, Eni Rewind carried out, with the support of RINA, an analysis of the level of application of the international standard ISO 26000 "Guide to Social Responsibility". The analysis, which included visits to operational sites and interviews with external stakeholders, highlighted the company's excellent performance and suggested a number of actions for continuous improvement.

Crotone - seafront reef construction completed, Remediation Plan Phase 1

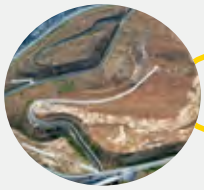


AUGUST

- In Ravenna, ARPA Emilia-Romagna issued the remediation certificate on the completion of permanent safety measures, which officially started the site's productive redevelopment plan.
- In the United Arab Emirates, Eni Rewind is qualified by ADNOC as a supplier for remediation and demolition activities.

SEPTEMBER

- In Crotone, Eni Rewind completes the construction of the seafront reef, more than 1,000 metres long, which will protect the former landfill area from exceptional weather and sea events during the execution of the removal work envisaged in the Phase 2 Soil Remediation Plan.
- In Cirò Marina, demolition work on the 300-metre-long Punta Alice jetty is completed.
- In Gela, as part of the decommissioning project of the former ISAF phosphoric acid plant, the construction of the 140,000 cubic metre landfill begins, which will receive waste from remediation and demolition.



OCTOBER

- In Ravenna, as part of the Ponticelle project, Eni Rewind and HEA submit a joint PAUR (Regional Single Authorising Provision) application for authorisation to build, respectively, a bioremediation platform and a multi-purpose environmental platform for the treatment of industrial waste.
- In Cengio, the permanent safety measures for Area A1 are completed, an intervention with which the company finishes the site remediation project envisaged by the 2000 Programme Agreement for the former ACNA site.

NOVEMBER

- Eni Rewind is awarded the management of characterisation and analysis activities 2022-2025 in the context of the tender called by ANAS for the Emilia-Romagna, Marche, Abruzzo, Molise and Puglia regions.
- Edison entrusts Eni Rewind with the waste treatment service at the Altomonte thermoelectric power plant in the province of Cosenza.
- In Rho, the remediation certificate is issued for the completion of the work carried out in the area of the former Dein depot owned by Eni GTR&M.
- In Avenza, excavation work starts on the land remediation project by lots, an important step towards a progressive productive redevelopment for the revitalisation of the area.

DECEMBER

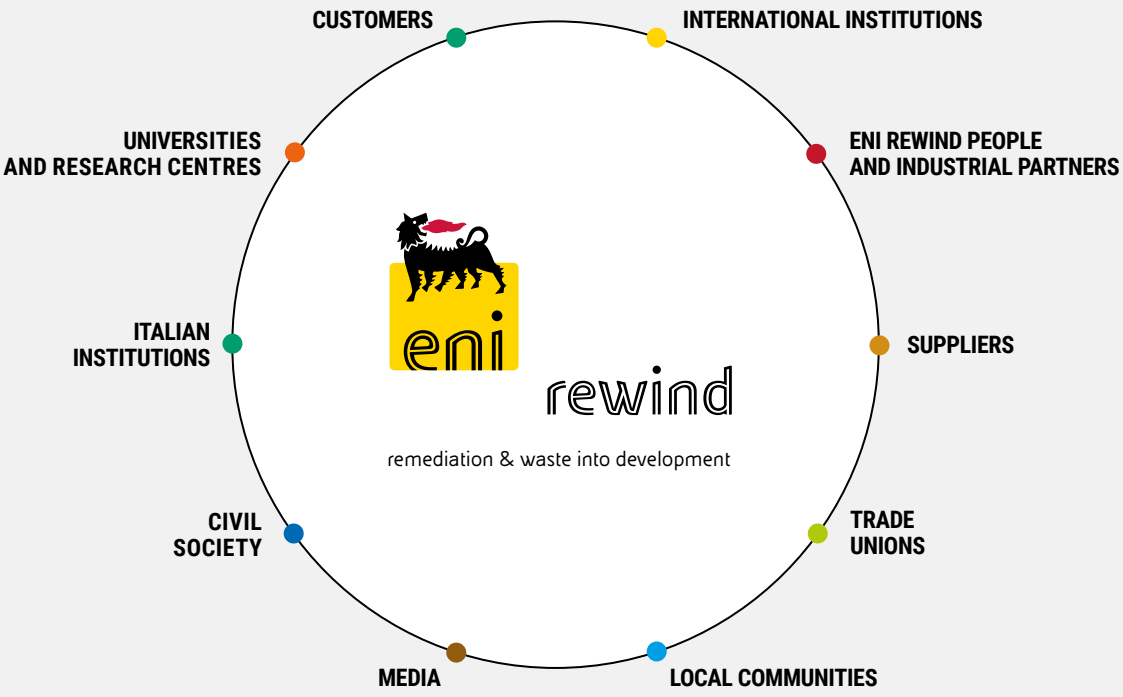
- The Ponticelle Project is included in the UNI/TR 11821 standard "Analysis of good practices of circular economy for the assessment of their operation and services and to favour their replicability", officially becoming a best practice of circular planning.

Member of CISQ Federation RINA CERTIFIED MANAGEMENT SYSTEM ISO 14001	**UNI EN ISO 14001 of 2015 Environmental management systems - Requirements**	The ISO 14001 standard is an international instrument that outlines the parameters of an Environmental Management System, which demonstrates the adoption of a management system that is adequate to keep the impacts on the environment of its activities under control, and strives for constant improvement in an effective and sustainable manner.
Member of CISQ Federation RINA CERTIFIED MANAGEMENT SYSTEM ISO 9001	**UNI EN ISO 9001 of 2015 Quality Management Systems - Principles and glossary**	The ISO 9001 standard is an international instrument for the certification of Quality Management System requirements, which guarantees an organisation's competence in executing corporate processes, improving the effectiveness and efficiency of services, and achieving and increasing customer satisfaction.
Member of CISQ Federation RINA CERTIFIED MANAGEMENT SYSTEM ISO 45001	**UNI ISO 45001 of 2018 Occupational health and safety management systems - Requirements and guidance for use**	The ISO 45001 standard is an international instrument that outlines the requirements for the implementation of the Occupational Health and Safety Management System in order to enable the organisation to provide safe and healthy workplaces by preventing occupational accidents and health problems, as well as continuous and proactive improvement in terms of people's health and safety.
SOA attesta	**SOA OG 12, OS 14 and OS 22 certification**	Mandatory certification for participation in public tenders to execute works, with an auction amount higher than € 150,000. Eni Rewind obtained certification on its core activities, in the general category OG 12 - Environmental remediation and protection works and plants, and in the specialised categories OS 14 - Waste disposal and recovery plants and OS 22 - drinking water treatment plants and purifiers.

Stakeholder engagement activities

Eni Rewind believes in proactive engagement with stakeholders and is committed to building relationships based on dialogue, fairness and transparency. This improves decision-making processes aimed at pursuing the development and valorisation objectives at the sites where Eni Rewind operates. The company adopts a methodological approach based on the monitoring of territories, the involvement of stakeholders right from the initial stages of a project, and the pooling of technologies and skills, with the aim of carrying out remediation, resource recovery and productive redevelopment activities with certain timescales, methods and costs.
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 2021, Eni Rewind received important authorisations from the Ministry for the Ecological Transition and other local authorities for remediation and valorisation projects. These include the Ministerial Decree for the Vallone della Neve Project in Priolo and the Municipal Determination for the Gavorrano Basin MISP. The significant acceleration that has taken place in recent years has meant that, by the end of 2021, operational remediation projects (Remediation Plans) have been decreed in all Sites of National Priority for about 95% of the contaminated areas.

THE STAKEHOLDERS OF ENI REWIND



MAIN STAKEHOLDER ENGAGEMENT ACTIVITIES IN THE YEAR

INTERNATIONAL INSTITUTIONS

Periodic meetings and consultation tables with institutions and national and local Authorities for technical discussions and examination of the projects presented
Visit of a parliamentary delegation to the Cengio site to learn about the progress of activities and projects for the valorisation of the remediated areas.

LOCAL COMMUNITIES

Sponsorship of the 45th Maremma Rally Trophy in the Colline Metallifere area of Tuscany.
Continuation of Food Safety Project activities in Gela.

TRADE UNIONS

Continuous dialogue and discussion to support the development of the Company's organisation and the achievement of business objectives.

CIVIL SOCIETY

Participation in Europe's leading trade fairs for ecological transition, circular economy and environmental remediation - RemTech Expo and Ecomondo - with presentations on sustainable remediation and circular resource management.

INDUSTRIAL PARTNERS

HEA, an Eni Rewind - Herambiente Servizi Industriali joint venture, was established for the construction of a multifunctional platform for the treatment of special waste as part of the Ponticelle Project in Ravenna.
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.

UNIVERSITIES AND RESEARCH CENTRES

Eni Rewind is participating in the MYSOIL project under the European LIFE programme to test a bioremediation technique for unsaturated hydrocarbon-contaminated soils.
At the request of UniTo, Eni Rewind organised an educational visit to the Eni site in Robassomero to illustrate the results of the application of the phytoremediation technique.

ENI REWIND PEOPLE

Campaign to raise awareness on an environmental culture through a series of training initiatives and information.
New format of the Pact for Safety and the Environment extended to additional sites.

MEDIA

More than 300 articles with references to Eni Rewind were published in the main national and local newspapers, of which about 60% had a positive/neutral tone.
Online launch of the new Eni Rewind website.

CUSTOMERS

Meetings were promoted with institutions and major Italian companies to illustrate the mission and know-how of Eni Rewind in order to initiate a debate on the main environmental and valorisation measures affecting the country.

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 top risk for Eni Rewind, i.e., the risk considered to be of greater relevance in terms of its potential impact on the Company's activities, is the permitting risk relative to possible criticalities on the timing of obtaining authorisations preparatory to the remediation activities. The table below shows the main risks to which the Company is exposed in the ordinary course of its business.

External risks	
COUNTRY	Critical situations in the phase of obtaining authorisations for remediation activities and circular economy projects (Permitting)
FINANCIAL	
REGULATORY DEVELOPMENTS	Operational impacts related to the evolution of HSE regulations
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
	Unethical behaviour reported in the procurement process by personnel
	Inadequacy of the supplier base

Innovation and digitalisation

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 approach optimises the efficiency and quality of environmental interventions, contributes to reducing risks, and improves 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 aquifer remediation projects, as well as waste management, with the aim of shortening the gap between research and development and accelerating the implementation of innovative solutions. The evolution of research is driven through a network of collaboration with various Italian and foreign universities, public and private institutes, and start-ups.

PARTNERSHIPS WITH UNIVERSITIES

CA' FOSCARI UNIVERSITY OF VENICE
As part of the Convention for the Study and Implementation of Concrete Tools for Measuring the Sustainability of Environmental Interventions, activities continue on the application of Ecological Risk Analysis (ERA) in those sites with high ecological value, such as the Vallivo area at the Mantua site, as well as the development of ASTRA (Advanced Sustainability Tool for Remediation Assessment). The latter is a multi-criteria decision-support instrument to assess the sustainability of remediation techniques and interventions on the basis of internationally recognised (ISO 18504:2017) environmental, social and economic indicators derived from the Life Cycle Assessment.

ALMA MATER STUDIORUM UNIVERSITY OF BOLOGNA
Combining waste and water management needs, a research project is underway to utilise biochar and second-generation char (Char 2G) produced from waste and carbon-based production waste for the generation of activated carbons to be used in the filtering systems of groundwater treatment plants and pump & treat plants.

POLYTECHNIC OF MILAN
Efforts continue to use Polymer Flakes (functionalised acrylic polymers) for the selective removal of contaminants from groundwater and process water.

SAPIENZA UNIVERSITY IN ROME
Collaboration continues on the identification and field application of new, innovative and more sustainable solutions for aquifer remediation, such as recirculation wells, reactive permeable barriers and the injection of soil improvers by in-situ adsorption.

UNIVERSITY OF ROME 'TOR VERGATA'
Experiments based on radon gas monitoring for the detection of the presence of supernatant organic phase in the aquifer.

UNIVERSITY OF MILAN BICOCCA
Study project aimed at verifying and comparing the effectiveness of some commercially available products (biosurfactants, nutrients, bioaugmentants) to support the degradation of contaminated soils with bioremediation-based remediation techniques.

EUROPEAN LIFE PROGRAMME

The LIFE Programme is the 2021-2027 European financial instrument for the environment and climate action that aims to contribute to the transition to a sustainable, circular and resource-efficient economy. Eni Rewind participates in the programme with the MySOIL project, in collaboration with 6 other partners, including the University of Tuscia.
The objective of the project, coordinated by EURECAT - Technological Centre of Catalonia, is to demonstrate the applicability of mycoremediation technology on a pilot scale for the removal of total petroleum hydrocarbons (TPH) from soils. This type of bioremediation, based on the use of fungal inocula, could provide improved services compared to conventional technologies - such as landfill dispoisal and thermal desorption - while ensuring significantly lower energy consumption and greenhouse gas emissions, as well as promoting the recovery of treated soil.

TO FIND OUT MORE:

↗ lifemysoil.eu

INTERVIEW

Interview with
Professor
Eros Bacci
University of Siena

How do you see the current Italian approach to major land remediation compared to what happens in other European countries or in America?
The Italian approach to large-scale remediation does not differ significantly from that adopted in other countries of the European Union or other technologically advanced areas of the planet. This is because there is continuous communication in the field of scientific research dedicated to environmental remediation. The common underlying note is the 'newness' of the subject, which came into being in the 1980s, and which has yet to bring into focus the set of sites on which to act and also an exhaustive list of potentially hazardous substances to be neutralised. In the 1980s, regulations came into force in Europe and the United States to reduce and contain the effects of environmental contamination in the main environmental components: air, water, soil and sediment. Due to their low turnover, soils and sediments are the environmental compartments that have received, and continue to receive, the most attention. The impact of the scientific journals in this field, which have been on the market for just over twenty years, is growing exponentially and seeks to highlight both the common aspects and, with particular attention, the substantial differences between soils and sediments, whereby the work on the latter is much more complex. It will be increasingly important for the regulatory framework to take into account the evidence and technological solutions that will be proposed by the scientific community.

What distinctive elements should characterise remediation interventions in order to qualify as sustainable?
The concept of sustainability sometimes risks being just a 'pleasant sound bite' of Lucretian memory. In the case of remediation, the first requirement is economic sustainability, without which the intervention cannot take place. Then there is environmental sustainability, in the sense that the balance between environmental benefits and costs is in favour of the former. Finally, it must be ensured that the site's remediation and recovery objectives are met in order to ensure its safe availability for future generations. Due to the relative novelty of the subject and the peculiar characteristics of the sites where one intends to operate, carrying out a remediation project requires, right from the characterisation and perimeter phase of the intervention sites, extreme care in reconstructing the experience of the sites, identifying the sources of contamination, and knowing the timeframe of their action. Most Sites of National Priority are the result of historical contamination that has produced secondary (contamination) sources that require the use of innovative technologies to understand their behaviour and how they impact the surrounding natural system. Today we have the knowledge and technological solutions to achieve truly efficient and sustainable remediation, so it is important to promote their application on sites, in synergy with all stakeholders involved.

Speaking of sediments, what do you think could be a viable solution to the critical issues arising from past contamination in man-made marine environments? On which priorities would you propose to focus a possible National Plan for the recovery and protection of marine environments?
The criticality resulting from historical contamination in man-made marine environments does not exist if criticality is understood as 'the set of characteristics that make the situation precarious, susceptible to irreversible degradation'. These are sources of contamination active, for the most part, from the first half of the 1950s until the end of the 1970s, marking the transition from the total absence of standards to protect the sea from contamination to the coming into force of new rules that imposed a drastic containment of the spillage of potentially hazardous substances conveyed, for the most part, by untreated process water. Therefore, criticalities susceptible to degradation, in this case, cannot exist unless they are produced by removing old deposits without the necessary precautions. What one encounters is what, of the incident, remains imprinted in the memory of the sediment. While water-mobile substances have long since left the point of discharge, non-water-soluble and hydrophobic substances, when unable to be transported by currents or weather agents, have remained in place, generating, though not always, one or more secondary sources of contamination, especially in the sediment compartment. The priority is to identify historical stocks in sediments that are still contaminated today, to verify their actual hazard through measurements of mobility as suspended particulate matter, residual mobility to water, bioavailability and any bioconcentration and biomagnification phenomena.

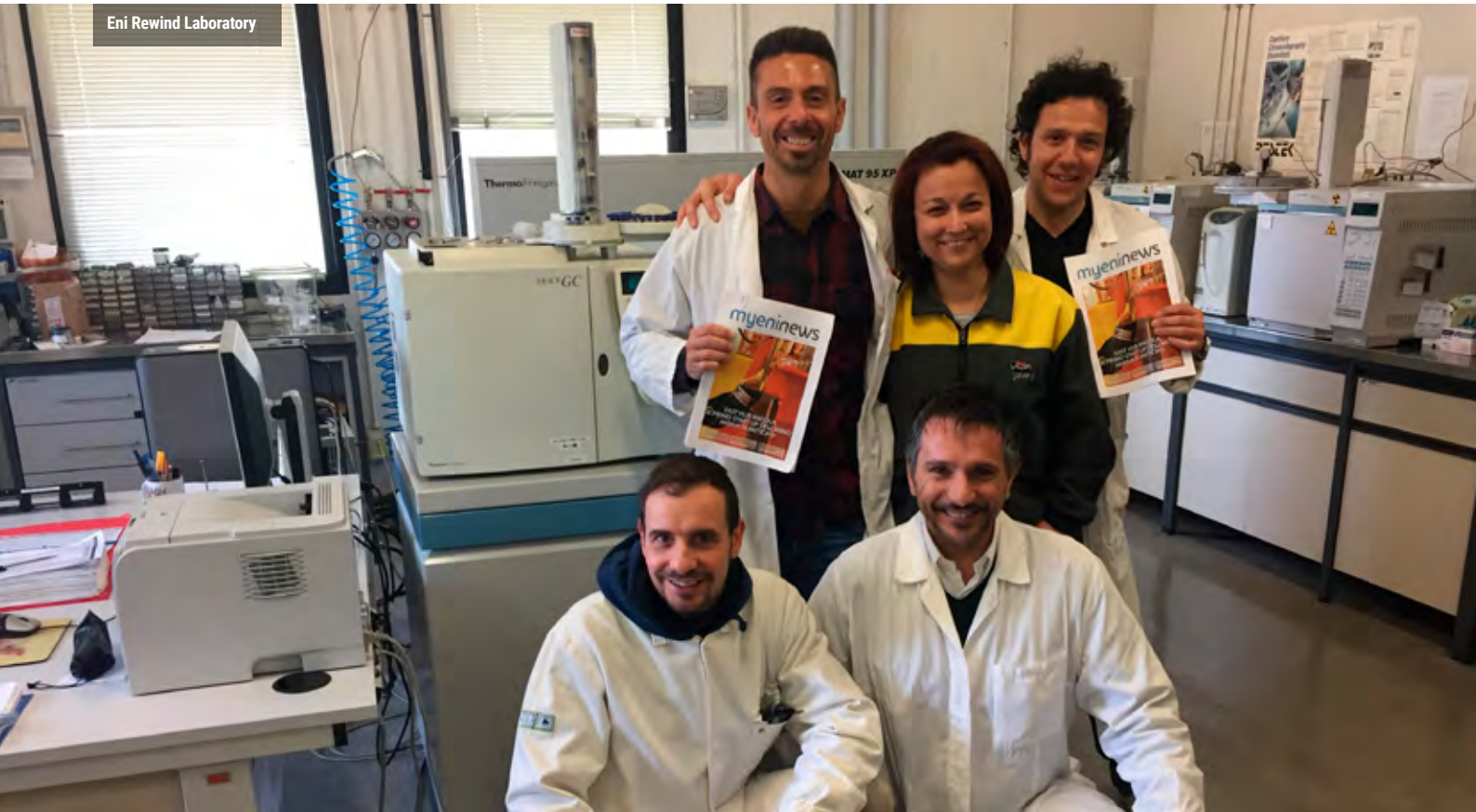
How can academia and/or research organisations contribute to assessing the risk from sediments contaminated by past production and propose viable solutions?
Given the relative novelty of the subject, any contribution leading to the identification of the danger and quantification of the risk to both aquatic organisms and human health is desirable. Particular attention should be paid to the environmental trajectories of different contaminants taken individually or in mixtures with each other, in order to identify sources and targets and assess the need for action.

ENVIRONMENTAL LABORATORIES

The quality of Eni Rewind environmental activities is managed directly by 3 environmental laboratories located in Italy (Ferrara, Priolo Gargallo and Assemini), which represent the national points of reference for the sampling and analysis of environmental indices.
Their expertise is the result of many years of professional experience in national and international scientific circles, thanks also to numerous collaborations with universities and research and standardisation institutes
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".
At the laboratories, environmental analyses are performed directly by highly qualified technicians for Eni Group companies and at the same time there is the professionalism to technically supervise the work carried out by external laboratories contracted by Eni Rewind. The results of laboratory analyses are of fundamental importance as they not only concern compliance with specific legal obligations, but also serve to guide choices and decisions on the most appropriate remediation technologies for a contaminated site, rather than in the appropriate destination and disposal of waste.

WASTE TO FUEL TECHNOLOGY

Waste to Fuel technology (proprietary to Eni) exploits the energy potential of organic waste through a process - called thermoliquefaction - that transforms it into bio-oil and recovers the water contained within it. The raw material is the Organic Fraction of Municipal Solid Waste (OFMSW), consisting of household food waste and waste from the agri-food industry. The bio-oil obtained, which varies between 3% and 16% depending on the composition of the incoming load, can be used as a mixture as a low-sulphur fuel, while the water contained in the organic waste - up to 60% of its weight - can be recovered and reused within the plant itself or for other industrial purposes.
Waste to Fuel technology allows the reuse of waste raw materials without taking resources away from the food and agricultural supply chain as the biomass used does not originate from field and crop production.
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".



Eni Rewind Laboratory

E-HYREC® technology (Eni hydrocarbon recovery)

The e-hyrec® is an automatic device that, placed inside aquifer remediation wells, allows 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, which extract up to 70-80% of water, the application of the e-hyrec® device ensures faster, more effective and efficient aquifer remediation, making an important contribution to the protection and preservation of water resources. So far, thanks to the 44 e-hyrec® devices installed at our Gela, Priolo Gargallo and Porto Torres sites and on the national territory, we have recovered over 350,000 litres of supernatant oil in much less time than traditional technologies, avoiding the disposal of more than 1,000 tons of equivalent waste. As part of the opening of Eni Rewind's environmental services outside Eni's captive market, a first e-hyrec® was installed at the former ILVA plant in Taranto at the end of 2021 to test its implementation in the ongoing MIPRE (preventive measures) activities, and the technology is scheduled to be applied at the BAPCO refinery in Bahrain in 2022.

E-LOREC® technology (Eni lower-placed hydrocarbon recovery)

In cooperation with Eni's R&D laboratories, a project is underway to develop and test an automatic device for the selective removal of the organic phase from contaminated groundwater (DNAPL - Dense Non-Aqeuous Phase Liquid). The device, registered under the European e-lorec® trademark, enables more effective and efficient aquifer remediation than traditional systems.
From 2021, after an initial laboratory phase, field tests are underway at the Porto Torres, Roma Ostiense, Assemini and Cengio sites, which will be completed by the summer of 2022. Subsequently, Eni Rewind will start the 'in-house' development of the device.

E-hyrec® device

PASSIVE SAMPLING ON POLYETHYLENE (PE) FILM

The monitoring and characterisation methodology, developed in collaboration with Eni R&D and a number of national and international universities, such as the University of Rome Tor Vergata and the Massachusetts Institute of Technology, enables the assessment of contaminant leaching from soil to groundwater and its volatilisation from soil to surface (soil gas) through the use of polyethylene film (LDPE) sheets. This makes it possible to more accurately determine the presence, distribution and bioavailability of contaminants in environmental matrices (soil and aquifer), and thus to define remediation measures that are more targeted to the actual need for remediation. In 2021, as part of the agreement signed between the Italian Energy Mobility Union (UNEM) and the National Institute for Environemntal Protection (ISPRA) for the development of innovative forms of remediation and sampling, testing of the technology continued at the Gela and Porto Marghera sites, in collaboration with the local control bodies. The aim is to test and validate its applicability as a simple and alternative instrument to traditional systems. Interlaboratory tests were also carried out with Unichim for the validation of the test method and the quantification of volatile organohalogen compounds (VOCs) on polyethylene film.

E-LIMINA® METHOD - ENI LINKING ISOTOPIC AND MICROBIAL INVESTIGATIONS AID NATURAL ATTENUATION

The e-limina® methodology, 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. In addition, it allows for the identification of the best microbiological conditions that can favour the process of abatement of contamination by indigenous bacteria directly in the environmental matrix, thus reducing the extraction of soil and water resources. Currently, Eni Rewind is applying the e-limina® methodology in several aquifer remediation projects, at the Assemini, Avenza, Cengio, Ferrara and Priolo Gargallo sites, on chlorinated organic contaminants, and is starting a trial for the use of this methodology on hydrocarbons.

Ferrara - Application of the e-limina® methodology in a bioremediation intervention

DIGITISATION

Laboratory Data Qualitys

Through the LIMS (Laboratory Information Management System) application, 'data verification & data validation' activities can be carried out on the results provided by external laboratories, through the verification of EDD (Electronic Data Deliverables) files. This application constitutes an innovative and unique element at Eni and enables the validation of results and the timely verification of the correct application of data quality assurance protocols, as well as the traceability of information, in order to ascertain the conformity of the analytical process and make the results scientifically defensible.

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 (400 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.

Robot Security & Environment project

As part of the Agreement for the experimentation of new technologies for characterisation and remediation, signed between UNEM and ISPRA, Eni Rewind is carrying out a feasibility analysis and testing of a robot for monitoring security and environmental parameters (such as air quality) at remediation sites.

#Water management

Eni Rewind is completing the digitalisation and automation of water treatment plants (GTP) and barriers so as to increase aquifer remediation processes efficiency and reduce risks. The digitisation process involved the implementation of a portal (GTP E-Portal) 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, operational 24 hours a day, makes it possible to improve the reliability and performance of installations (reducing, for example, the consumption of utilities and reagents), increase the level of safety, and standardise controls. Furthermore, thanks to greater operational and organisational flexibility, it is possible to dynamically identify the optimal control strategy (APC) of the water treatment system.

#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. In 2021 Eni Rewind implemented an integrated digital platform **"Waste Management Centre (WMC)** for the approval process (acceptability verification). The end-to-end platform makes it possible to enhance the traceability of the process at all stages, including the final destination of the waste, and to perform time and cost analyses in order to increase the efficiency of operating and control activities. In addition, to support the Monitoring & Reporting activities, a web platform (Qlik) was created for data consultation, business analysis and performance assessment of waste management processes.

#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. These include the "Third Party Safety Management" - TEM project, which, in addition to its functionality in HSE terms, is also used by Eni Rewind as a single platform for post-award documentary checks on suppliers. Furthermore, in 2021 the digital platform Open-es went online, a key step towards achieving the goals of the JUST (Join Us in a Sustainable Transition) project for the sustainable development of industrial supply chains. Open-es is a system-wide initiative, free of charge and open to all Eni suppliers, that addresses the need to measure (according to standard metrics), improve and share ESG performance. Eni Rewind registered itself both as a client and as a provider of environmental services as part of becoming a market player.

GTP control room, San Donato Milanese

TO FIND OUT MORE:

↗ Eni For 2021 page 81

Carbon Neutrality by 2050

Eni Rewind supports Eni's new strategy of a short-, medium- and long-term evolutionary pathway to achieve carbon neutrality by 2050, including direct and indirect GHG emissions throughout the life cycle of activities, assets and products. In this direction, we have adopted a business model that involves the development of projects based on circularity and the valorisation of recoverable resources.

The transition will require both the decommissioning of obsolete plants and the remediation of brownfield sites that will be able to accommodate new infrastructure, such as renewable energy and waste management plants, while reducing the use of new land. Added to the current challenges are the issues of water scarcity and increasing waste production for which we now consider it imperative to implement sustainable, forward-looking management aimed at maximising their reuse and valorisation.

Energy transition and circular economy

WHY IS IT IMPORTANT TO ENI REWIND?

The current economic and energy transition requires a new development model that shifts the focus to the scarcity of resources available in nature and the consequent need to recover, renew and reuse them beyond the end of their first life cycle. Eni Rewind, in line with Eni's mission, aims to contribute to the shift towards this more circular and responsible economy through soil regeneration and efficient water and waste management activities. A goal for which we have already put in place collaborations and partnership agreements, in Italy and abroad: the more sharing and cooperation there is between the various parties involved, the quicker we will all be in implementing long-term sustainable development.

Francesco Misuraca
Environmental, Technical & Sites Activities Manager

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.

KPI PROGRESS IN 2021

- +200 ha of areas freed up after remediation (hectares intended for reuse)
- +3 million m^3 of water recovered (9.06 million m^3 vs 6.1 million m^3 in 2020)
- Recovered 73% of recoverable waste
- Optimisation of consumption in plant management
- Reduction of weighted average Km/ton travelled for waste management
- Implementation of the project for the digitalisation of environmental logistics
- Signing of cooperation agreements with major players to investigate the deficiencies of waste treatment systems and realise potential initiatives of collective interest

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 new waste treatment and recovery plants, giving priority to reclaimed land in synergy with the industrial reconversion of Eni sites

CIRCULAR OUTPUT

Generate value from waste: developing technologies and constructing plants for the revalutation of secondary raw materials. Ravenna Bioremediation plant; solutions for sewage sludge recovery.

REUSE, RECYCLING AND RECOVERY

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 reclamation technologies. Reuse of treated water for the production of demi water for industrial use; Blue Water technology; research and development of bioremediation technologies.

€ 212 MLN
INVESTIMENTI
2022-2025

ECODESIGN AND EXTENSION OF SERVICE LIFE

Planning interventions and management of resources and assets in order to reduce waste and extend service life: planning of remediation interventions with a view to future reuse of land, development of innovative and efficient remediation and resource management solutions; remediation projects by lots; productive redevelopment project 'Ponticelle Project'; use of remediated land for the development of energy from renewable sources; application of e-hyrec® technology, e-limina® method, passive sampling.

INDUSTRIAL SYMBIOSIS

Researching and promoting exsting industrial, evironmental and socio-economic synergies in host territories. Establishment of new joint venture company Eni Rewind Herambiente: HEA "Ponticelle Project": signing of main player collaboration agreements in the waste sector; other local partnerships.

Remediation

~600,000
h/year for environmental engineering

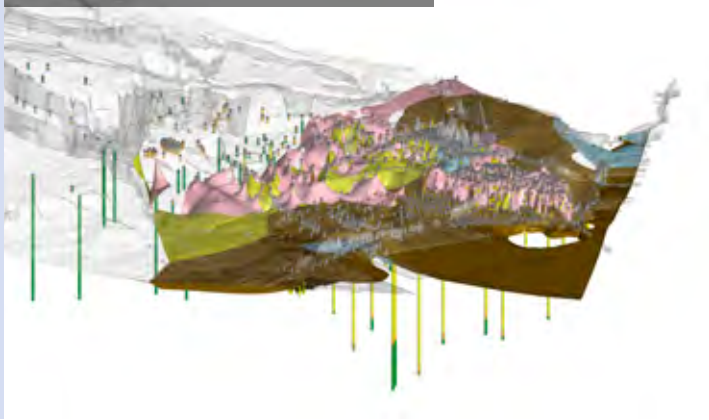
Remediation activities can generate development opportunities for territories. To achieve this, it is essential that the future reuse of areas is planned from the initial stages of the remediation process, in agreement with local institutions and stakeholders.
Today, thanks to the experience and expertise gained from operating at over 100 sites, 17 of which within 13 Sites of National Priority, Eni Rewind is able to oversee every phase of the remediation process for the future valorisation of land and assets, an opportunity both for the environmental recovery of former industrial sites and for the relaunch of the local economy. 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 constant commitment, Eni Rewind favours, in compliance with the relevant regulations in force, the application of in-situ technologies that allow for environmental matrices to be remediated in their natural location, without resorting to excavation and disposal operations, minimising waste and the carbon footprint of environmental activities.
Eni Rewind pursues a Programme for Sustainability in Reclamation with the aim of incorporating the concept of sustainability into environmental remediation activities. Operationally, the application of sustainability principles to remediation results in:

- protection of human health and the environment
- removal of contaminants from groundwater and soils with a strong focus on their recovery and reuse
- 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

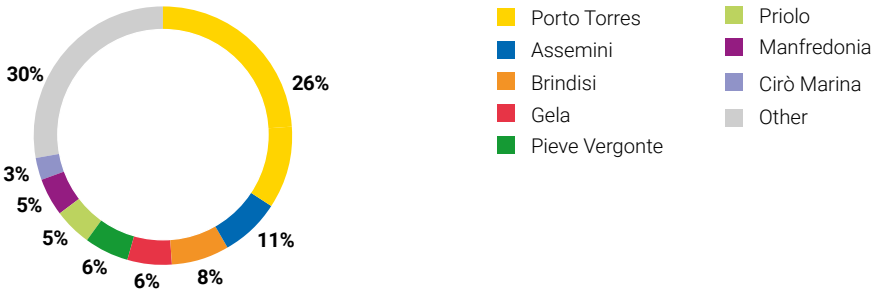
Environmental engineering: hydrogeological modelling

At Eni Rewind, integrated, multidisciplinary teams operate with skills consolidated through direct experience in the field and are able to design and offer innovative and sustainable solutions, also taking into account the specific characteristics of a remediation site. In particular, in the field of hydrogeological modelling, our specialists work with hardware and software instruments on the numerical modelling of groundwater flow, a strategic activity for the sizing and management of numerous hydraulic containment systems, which in the last year has also been implemented in Pieve Vergonte, Crotone, Porto Torres, Cesano Maderno, Cengio (Merlo area), Ponte Galeria, Brindisi and Avenza. In addition, on behalf of Acciaierie d'Italia, hydrogeological and 3D modelling of the state of the subsoil was developed in Taranto, a fundamental starting point for the design of the necessary environmental interventions that allowed the impact on operations to be minimised.

3D geological reconstruction of the Taranto steel site



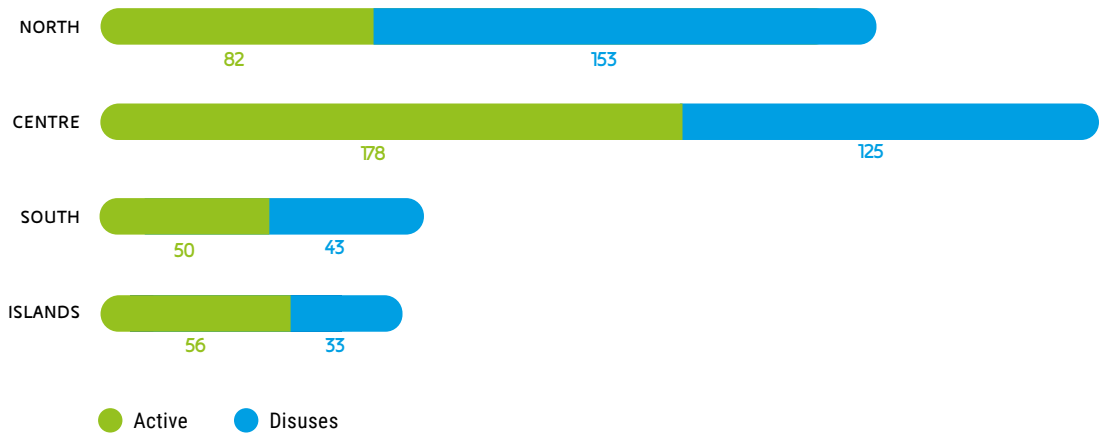
Proprietary sites - Main remediation projects (cost breakdown in %)



Operations on service stations and the pipeline network

Since 2016, based on a mandate from Eni GTR&M, Eni Rewind has been carrying out environmental remediation activities at disused and operating service stations in Italy, and in 2018 added soil and aquifer reclamation following oil pipeline break-ins.
The activities carried out in 2021 on over 700 Eni service stations (366 operating and 354 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 operations, also in 2021 Eni Rewind reduced the use of Pump & Stock plants for the external treatment and disposal of groundwater by around 30%, replacing them with on-site treatment plants (Pump & Treat) or shutting down the systems once the water has met legal limits. Furthermore, it brought from 60% to around 90% the recovery of contaminated soil after treatment.
With regard to cases of malicious break-ins on Eni's oil pipelines, the Company is managing about 70 soil and aquifer remediation projects in North-West and Central Italy, 3 of which have been completed.
At some remediation sites under Eni's mandate GTR&M continued the implementation of sustainable remediation technologies such as phytoremediation - or other innovative techniques for contaminant biodegradation - and absorbent barriers with micrometer-sized or colloidal activated carbon injection for groundwater remediation without generating wastewater.

Environmental activities management at Eni service stations



Porto Torres

The Nuraghe Project is a major soil remediation project that Eni Rewind is carrying out in Porto Torres for the treatment and removal of about 800,000 cubic metres of contaminated materials mainly from the former Minciaredda landfill. The area affected by the Nuraghe Project covers about 30 hectares out of a total of 1,200 owned by Eni Rewind in the Site of National Priority. To deal with the complexity of the environmental intervention, Eni Rewind adopted, in agreement with the local authorities and the territory, a solution that is unique in its kind in Italy in terms of innovation and sustainability, i.e. the construction of an on-site multifunctional platform equipped with various types of soil contamination plants, such as screening systems, biological treatment, soil washing, thermal desorption and inertisation. The multifunctional platform, which was commissioned in December 2021, can process up to approximately 1,000 cubic metres of excavated soil per day. In addition, the water used in the remediation processes will be treated in special auxiliary systems adjacent to the platform.
After treatment, the soils that comply with the remediation objectives will be reused to backfill the excavations from which they derive, while those that do not comply will be deposited in a permanent repository on site. Contaminated soil will therefore be almost entirely managed, reused or reallocated on site, maximising material recovery and, at the same time, minimising the impact in economic terms and on the environment of handling waste off-site, sometimes even sent thousands of kilometres away. For this reason, the Nuraghe Project represents a virtuous example of km 0 remediation.


Nuraghe Project - Multifunctional Platform

Avenza - Batch remediation

At Avenza, in the Massa Carrara Site of National Priority, Eni Rewind, attentive to the territory in which it operates, has planned, in coordination with the governing bodies, a land remediation project by lots that will allow the progressive liberation, redevelopment and valorisation of the areas once they have been reclaimed for possible new investments. Due to its geographical location, adjacent to an intermodal hub, and its facilities, the site areas are of particular interest for reindustrialisation.

The remediation project includes the removal of contaminated soil with excavation and recovery/disposal and the subsequent morphological restoration of the areas. Approximately 100,000m^3 of soil is expected to be handled. As of the end of 2020, having obtained local authorisations, the activities of Lots 1 and 2 started.

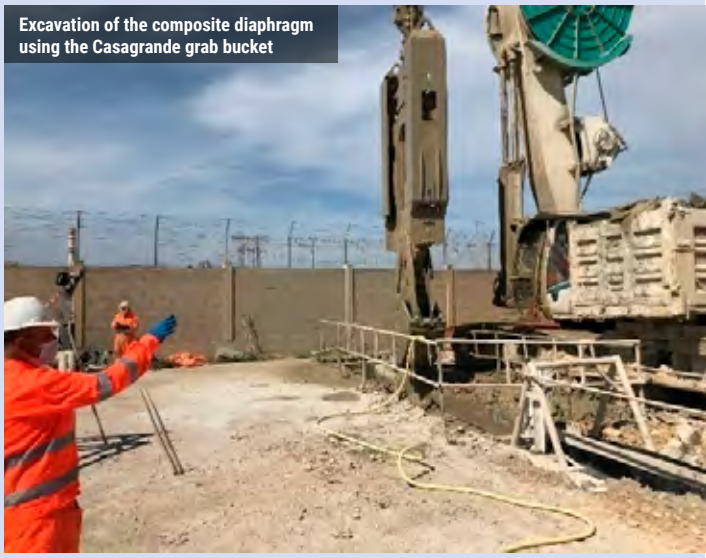
Avenza - Excavation in lots

Brindisi

The Micorosa Area, outside the multi-company plant in Brindisi, was used between the 1960s and 1980s for the dumping of industrial waste from the production cycle of Montedison, which owned it. In March 2014, Eni Rewind and the Municipality of Brindisi, together with the Region of Puglia, signed a programme agreement for the permanent safety measures - of the Micorosa area and other areas outside the plant.

The remediation project, approved in 2018, aims to contain the primary source of contamination, the former landfill, and return the areas through environmental redevelopment. In particular, the interventions include the construction of a physical perimeter confinement, the application of jet grouting technology and surface waterproofing, the installation of a system of ground water extraction pumping wells and a groundwater treatment plant, as well as the relocation of the Pandi Canal bed. Forest engineering works will also be carried out to control certain hydro-geological phenomena, using native water-dependent tree species.

In 2021, in the Eni Rewind areas, the composite diaphragm wall for physical confinement, the ground water extraction pumping wells, and the shifting of the canal with subsequent construction of the new river bed were completed. Furthermore, in order to minimise waste production, a Protocol for the management of Excavation Earth and Rocks deriving from the construction of the plastic diaphragm wall and the displacement of the Pandi Canal has been signed, which envisages their reuse for the capping of the landfill and the filling of the original river bed.



Excavation of the composite diaphragm using the Casagrande grab bucket

Micorosa area at the Brindisi site

DECOMMISSIONING

The process of environmental redevelopment requires, in many cases, the decommissioning of existing production facilities, normally decommissioned or to be decommissioned, understood as the remediation of circuits and plant equipment, the subsequent demolition of structures and the management of the resulting waste. These interventions are therefore of great importance, not only for their management and engineering complexity, in strict compliance with environmental and safety regulations, but also for their role as a fundamental and preliminary step to the regeneration of industrial areas and their return to future use.
For the decommissioning of complex production plants, Eni Rewind possesses a unique know-how, made up of technical skills and specific knowledge, coordinated through a multidisciplinary approach, which has led to the creation of a dedicated corporate function with teams involved in the design and execution of this type of intervention, to be carried out in our own areas or those of Eni's businesses, or even for third-party customers.
All decommissioning activities comply with the founding principles of the circular economy: the experience gained at numerous sites of different plant types has enabled the development of design standards, optimised according to objectives and aimed at reducing the environmental footprint, maximising the recovery of materials and minimising the sending of waste to landfills.

The most important decommissioning operations carried out in 2021 include:

In Cirò Marina, the completion of the demolition of the 300-metre-long Punta Alice jetty. The removal of the structures was carried out through a structural deconstruction of the various sections of the conveyor belt system, using equipped floating pontoons, and the cutting of piles on the seabed by a team of divers.
In Gela, at the station 6 area owned by Eni Rewind, the demolition site for the 3 parabolic sheds that were once used for storing fertilisers (with a length of 190 metres, width 35 and height 19) has begun. Due to the presence of friable asbestos in the waterproofing sheathing of the roofing of the sheds and the structural decay of the sheds, which does not allow for the preventive removal of the asbestos, the demolition of each shed takes place within a confined structure maintained under vacuum, to prevent the possible dispersion of the pollutant.
Also in 2021, the Gela Refinery mandated Eni Rewind to proceed with the demolition of the SNOX chimney, the thermoelectric power plant, including the G100, G200 and G300 thermal units as well as the related storage park, the Coking 1 and 2 drill structures used in the past for shredding pet coke, and the D-D1 flare. The activities were mainly performed by removal to avoid interference with other operational plant units.


Demolition activities

For all decommissioning work carried out in 2021, Eni Rewind has ensured the recovery and future reuse of materials, sending so far over 9,000 tonnes of scrap metal (mainly iron and steel) for recovery, which will be able to find a second life in the civil and industrial sectors.

Gela - ISAF Decommissioning

Eni Rewind is managing the decommissioning project of the former ISAF (Industria Siciliana Acido Fosforico - Sicilian Phosphoric Acid Industry) phosphoric acid plant, decanter and tank farm at the Gela site, one of the most challenging sites for the company from a planning and economic point of view, made possible by the synergy with local institutions. The programme includes the demolition and subsequent transfer of the waste material to a new on-site landfill, as well as the remediation of soil, subsoil and groundwater. The intervention is divided into four phases, each subject to prefectural authorisation under the former Legislative Decree 230/1995, and now the Consolidated Law on Radiation Protection Legislative Decree 101/2020:

- emptying the decanter and treating the extracted sludge in an authorised mobile plant;
- emptying the tank farm and treating the liquid phase;
- the demolition of the phosphoric acid plant, decanter and tanks;
- the construction, cultivation and closure of a 140,000 cubic metre special purpose landfill, designed and built to receive waste from the construction site that cannot be delivered to any other facility due to the presence of radiometrically active materials (TENORM).

All interventions are scheduled for completion by 2025. The activities of phases 1 and 2 are ongoing and the construction of the special purpose landfill within the perimeter of the former ISAF phosphogypsum landfill (phase 4) is being completed.


Construction of the landfill site

INTERVIEW

Interview with
Chairman
Valerio Scanu
Industrial Consortium Province of Sassari (CIPS)

Chairman Scanu, with the ongoing remediation of the Porto Torres Site of National Priority, a vast geographic area will be available for new economic development initiatives. What are the expectations of the Consortium that you represent, also in terms of stimulating companies and production supply chains in the area as well as the employment spin-offs?
The completion of remediation and decommissioning operations is a key factor in achieving a reindustrialisation process. Obsolete and dilapidated structures, old tanks and abandoned plants disfigure the landscape and limit the availability of land, particularly back-port land, thus mortifying the initiatives undertaken in favour of the attractiveness of the Porto Torres industrial area.
With environmental remediation, the great hitherto unexploited potential of a strategically located site will emerge. In fact, recent energy provisions foresee the arrival of methane, which will allow a gradual energy transition by aligning the costs of companies and citizens in Sardinia with those in the peninsula.
CIPS is committed to fostering the emergence of a hydrogen district in Porto Torres, a pioneering prospect to date, but one that will be a component of interest and development in the future.

What are - in your opinion - the most promising new projects and infrastructures for the revitalisation of the areas affected by the Porto Torres Industrial Complex Crisis Area Reconversion and Redevelopment Project?
Green chemistry, agro-industry, circular economy and blue economy represent the target production supply chains for the economic development of North West Sardinia.
I therefore believe that investments in green chemistry must be increased and the entire production supply chain must be activated, including local so-called no-food agricultural production.
As CIPS, we are determined to promote the reconversion of the industrial port, now almost totally unused, with enormous potential due to its extension and high depths that make it one of the most competitive in Italy. It is a gateway to the Mediterranean capable of hosting international logistics hubs and modern facilities for shipbuilding and the maritime economy in general. Special Economic Zones (SEZs) will provide tax and administrative concessions to companies and structural investments in port and back-port areas.

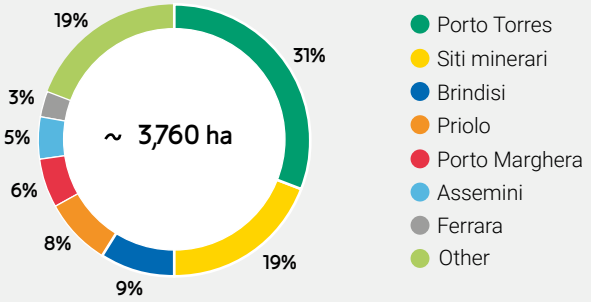
In such a scenario, what synergies and collaborations do you see with Eni Rewind, considering both the availability of areas for third-party investors and the planning in the waste sector, given the lack of infrastructure on the island?
Developing partnerships with industry groups is part of the institutional mission of CIPS, which is oriented towards an industry that is different from the past, which produces and at the same time ensures environmental sustainability.
In this scenario, synergetic actions will also be possible with Eni Rewind in the area of environmental services, for instance with a partnership for the management of the multifunctional platform of the Nuraghe project, which was created for the treatment of contaminated soil and can be used for different types of waste produced in Sardinia that now have to be transferred to the mainland.

Porto Torres site

Remediation and redevelopment of industrial areas

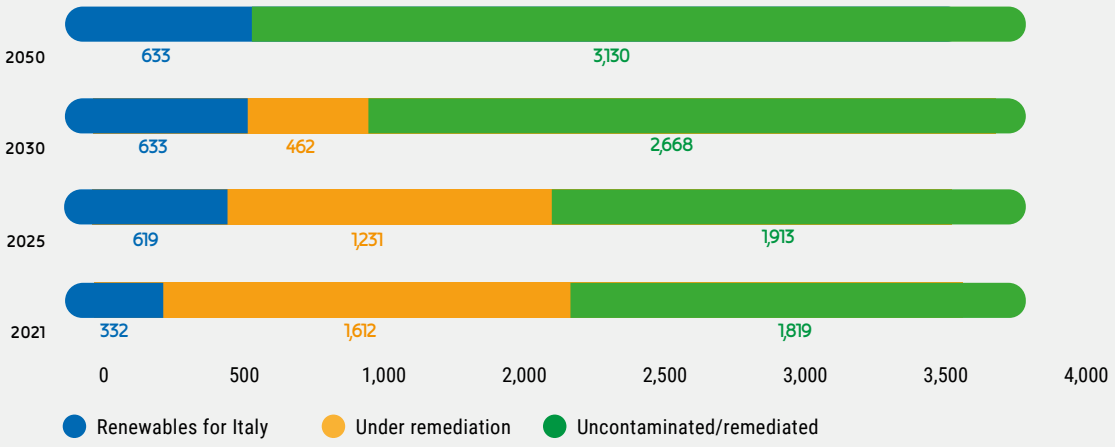
Land is a limited resource because it is not reproducible. Industrial sites that are disused or no longer usable are as critical environmentally as they are economically and socially if not regenerated. Eni Rewind's challenge is to give them a new lease of life through remediation designed with reuse and productive redevelopment in mind. This approach offers numerous advantages as the areas are located in already highly developed and serviced industrial zones that, once rehabilitated, lend themselves well to the development of new initiatives, such as the construction of plants for the production of energy from renewable sources or for the treatment and recycling of waste, while at the same time avoiding the consumption of additional 'virgin' land.

Total Eni Rewind areas



Site of National Priority at Porto Marghera.

State of Eni Rewind owned land (hectares)



The histograms represent the foreseeable evolution of remediations on the approximately 3,760 ha owned by Eni Rewind. During 2021, 43% was in the remediation phase, 48% was free from contamination and 9% had been allocated to the Renewables for Italy project, committed to the installation of plants for the production of electricity from renewable sources (16% by the end of 2025). By 2025, a further 10% of the areas are expected to be remediated and made available.

In particular, this time frame envisages the completion of remediation, certification and the freeing up of additional areas at the Sa Piramide (47 ha), Cengio (25 ha) and Manfredonia (17 ha) sites, as well as Avenza, Ferrara and other minor sites.

54.7MW
total installed photovoltaic capacity in 2021 on 91 ha

11.8MW
total authorised capacity in 2021 on 27.3 ha

38.6MW
total capacity under authorisation on 186 ha

Eni Rewind's contribution to the development of renewables

The development of renewable energies is central to Eni's strategy of progressive decarbonisation. The consolidated synergy between Eni Rewind and Eni New Energy, a Plenitude company dedicated to the development of renewable energy, is a concrete example of a 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 power stations 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 Ravenna (Ponticelle Project).

The Porto Torres project is a virtuous project that has seen the redevelopment of the areas of a Site of National Priority through the construction of a photovoltaic park, with an installed capacity of 31 MW. About 70 per cent of the annual production of the plant, inaugurated in early 2020, is destined for the companies present on the industrial site, saving a total of more than 25,000 tonnes of carbon dioxide emitted per year.

In addition, a wind farm with a capacity of 34 MW, awaiting authorisation, has been designed by Eni New Energy in Porto Torres, and will be able to power new sustainable development initiatives in the area.

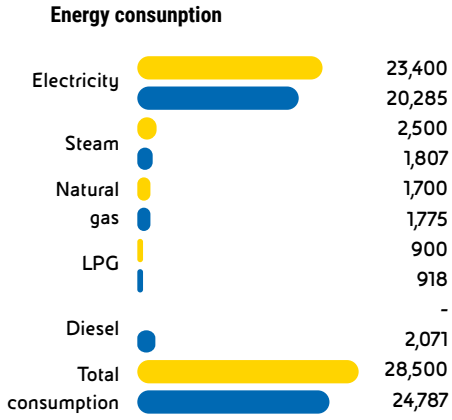
In order to make a further contribution to this collaboration between Group companies, a further 200 Eni Rewind hectares have been identified as suitable, once the remediation interventions have been completed, for the installation of photovoltaic and wind power stations, and which will allow Eni New Energy to reach an installed capacity of around 300 MW on about 600 hectares and a reduction of about 250 thousand tonnes of carbon dioxide per year.

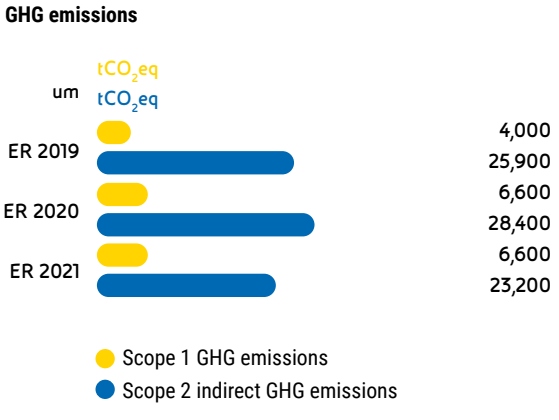
Gela photovoltaic parks


Porto Torres Photovoltaic Park

Decarbonisation: Eni Rewind's performance

The increase in 2019-2020 is mainly due to the installation of new boilers to produce steam for the GTP plant in Porto Torres, an energy vector that was previously supplied by the Versalis plant.





Water Management

Eni Rewind water management system:

42
Water treatment plants

1,200
pumping wells

over 4,900
monitoring wells

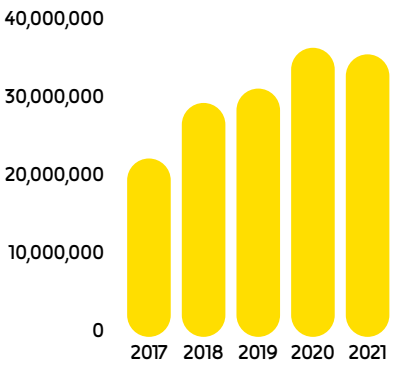
~36 million m³
treated water

~9 million m³
recovered water

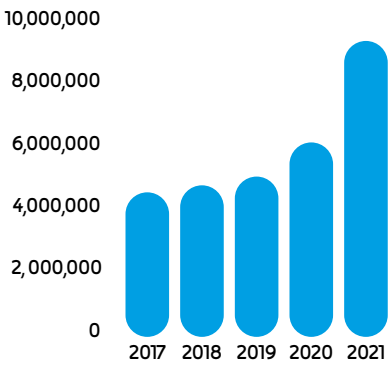

Pieve Vergonte GTP plants

Eni Rewind is engaged in carrying out major aquifer remediation at 22 sites through an integrated hydraulic barrier and water treatment plant (GTP) system, and in the management of municipal and industrial biological plants at the Gela, Cengio and Manfredonia sites.
All assets are aligned with the BAT (Best Available Technologies) and BATNEEC (Best Available Tecnologies Not Entailing Excessive Cost) and are subjected on a cyclic basis to SWOT Analysis to identify the optimal remediation interventions. Water treatment processes include strict monitoring plans that ensure full compliance with water discharge quality and atmospheric emissions.
With a view to continuous improvement, Eni Rewind explores all opportunities to optimise sections and/or processes that have the greatest impact on the environmental and economic sustainability of systems, including through partnerships with energy service companies.
In 2021, several energy efficiency initiatives were launched in synergy with Plenitude and Servizi Energia Ambiente.
To facilitate the recovery and valorisation of water resources, 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 2021, Eni Rewind treated about 36 million cubic metres of water, recovering about 9 million for industrial and environmental use.

TREATED WATER (m³)



RECOVERED WATER (m³)



Solutions for optimising water management

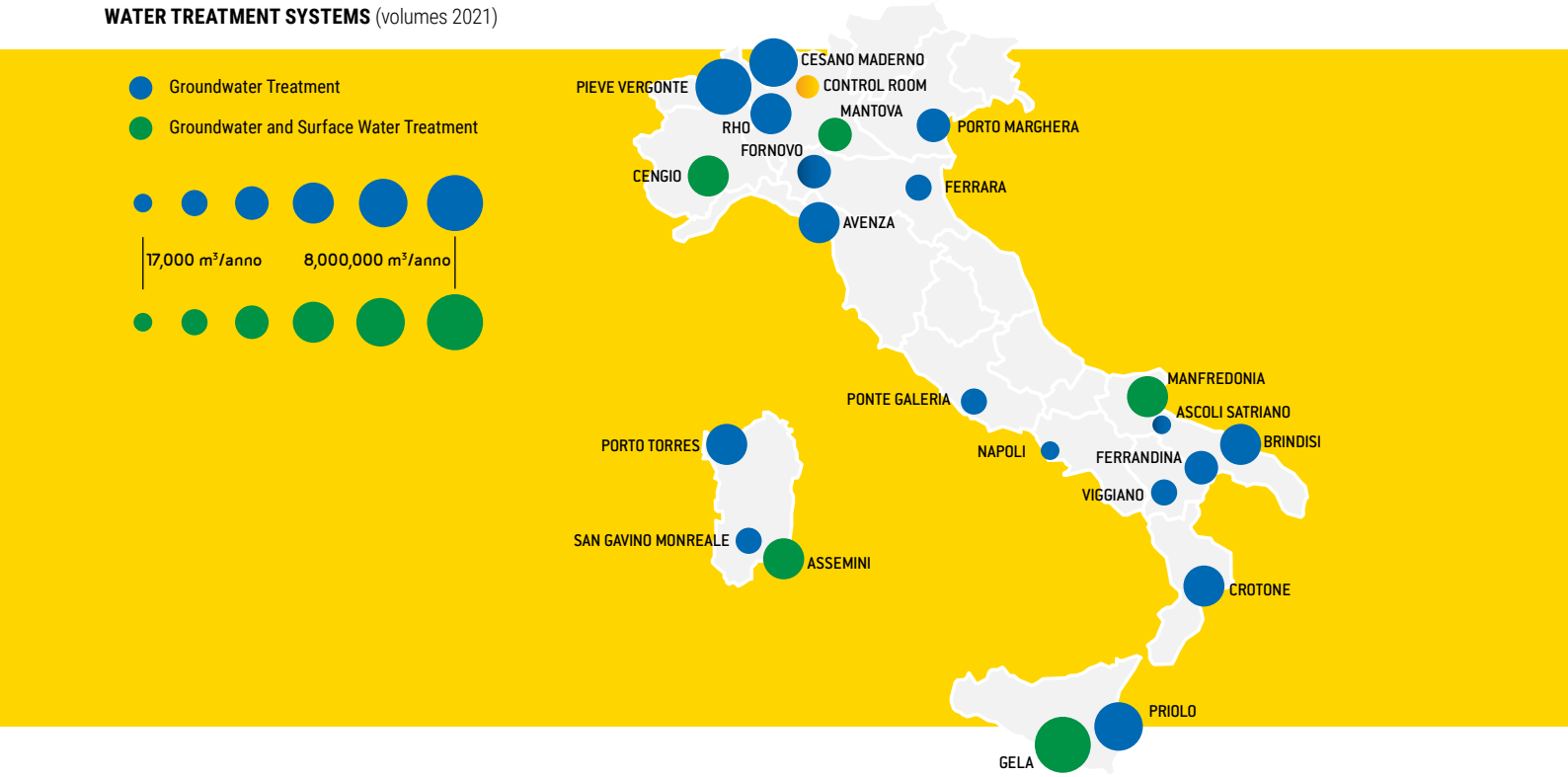
In the water treatment plants, Eni Rewind uses ad hoc technologies depending on the contaminants present and possible salinity with chemical-physical (metals), stripping (organic chlorides), activated carbon filtration (organic), biological treatment (ammonia compounds), osmosis (salinity) and potabilization sections for the reintroduction of water into the aquifer or for its recovery and reuse 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 and the continuous process of renewal of the plants. In fact, greater production efficiency corresponds to greater respect for the environment. For example, 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. 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 of the treated water resource. Its adoption has reduced energy and reagent consumption and has resulted in an increase in the production of osmotized water.

In 2021, research in the field of water management will continue in the development of further innovative solutions:

- **Wet Oxidation** high temperature and pressure oxidation technology to treat liquid streams characterised by high organic contamination refractory to common biological treatments;
- **Boron Recovery** a process to recover boron from certain liquid streams and significantly reduce the production of sludge in strata water purification processes through a series of membrane separations and final crystallisation. In 2022, the technology will be tested in a laboratory pilot plant;
- **Electroflotation**: electrolytic treatment of aqueous solutions with the presence of metals and complex organic substances that, through a series of electrochemical, chemical and physical reactions (production of hydrogen microbubbles, electric field, coagulation in the presence of aluminium ions), promotes the transformation and subsequent removal of contaminants. The process was tested with a pilot plant, yielding encouraging results in the removal of heavy metals. In 2022, further tests will be carried out for the abatement of arsenic and manganese, and the feasibility of the technology as water pre-treatment directly at the wellhead will be assessed.

WATER TREATMENT SYSTEMS (volumes 2021)



Manfredonia

The solution adopted in Manfredonia for the remediation of the aquifer is linked to the need to manage the saline intrusion and at the same time compensate for the groundwater extraction from the aquifer by injecting fresh water, so as not to alter the hydrogeological balance of the area. This is done through an inlet barrier along the site boundary that for the first fifteen years was fed by both treated groundwater and fresh water from the Capitanata pipeline. With the variant to the aquifer remediation project, approved in 2019, Eni Rewind planned a revision of the water extraction and re-injection systems in order to reduce the withdrawal of water resources in nature to zero. Thanks to the work completed in 2021, which included additional wells and piezometers as well as the upgrading of the GTP plant from 120 to 240 m^3/h, reinjection into the aquifer is now carried out exclusively with water treated at the site. In addition, in 2021 Eni Rewind started the construction of wells with Groundwater Circulation Wells technology, in collaboration with Sapienza University of Rome, which will accelerate the remediation of the aquifer in station 5. These latter interventions complement the action of the traditional ground water extraction pumping wells active on the site and limit the typical drawbacks of extraction actions close to the coastline.

Manfredonia site

Blue water

Leveraging its know-how and experience in water management, Eni Rewind, together with Eni's research laboratories, has developed Blue Water technology for the treatment and recovery of production water from crude oil extraction activities. Its application will make it possible to regenerate reservoir water, as is the case in traditional purifier plants, either for industrial use or by returning it to the surface water body. This has two important advantages in terms of environmental sustainability: it reduces the disposal of outgoing residues, i.e. salt solutions and sludge, and at the same time minimises the withdrawal of water from other virgin sources in nature.

The first industrial scale plant is being designed for the Val d'Agri Oil Unit in Viggiano, Basilicata, which will treat part of the production water, making it available to satisfy the water requirements. The volume treated translates into a reduction in the amount of water now transported for disposal to third-party plants - up to 1,000 km from Viggiano - decreasing the carbon footprint of the waste management process. The process of obtaining authorisations from the local authorities is currently underway.

Waste Management

The recovery of waste and industrial effluents is an important goal of the circular economy that we intend to pursue to support their more sustainable management, in line with the principles of zero consumption and zero waste. In this direction, we have signed partnerships with major players in the sector, with the will to provide a joint response to a market characterised by infrastructural deficiencies. The goal for the coming years will be to minimise the disposal and transport of waste out of the region of production, promoting new plants appropriately located and generating important benefits in terms of environmental and economic sustainability in favour of communities.

Michele Troni
The Water & Waste Management Manager for

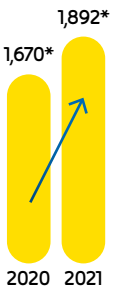
Eni Rewind, as Eni's global contractor, manages the cycle of waste produced by Eni's industrial activities or coming from environmental remediation and decommissioning, guaranteeing the constant control of the entire supply chain on a daily basis in compliance with the regulations in force. In line with industry best practices, the Company adopts technological and logistical solutions to increase the proportion of waste sent for recovery, as an alternative to other disposal choices, and to minimise the distance travelled between the production site and the delivery facilities, with a consequent reduction in costs and the effects on the environment. In particular, it ensures the environmental sustainability of remediation 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.
Approximately 2 million tonnes of waste were handled in 2021, of which about 88% was handled within the 400 km range. In addition, approximately 73% of recoverable waste was sent for recovery. The reduction in the recovery rate compared to 2020, which stood at 78%, is due to the qualitative (e.g. presence of asbestos and arsenic) and granulometric (presence of clays and silt) characteristics of the waste managed, which limited the treatment possibilities. This factor was compounded by a lower availability of final recovery facilities in some regions of Italy.
With regard to activities carried out for third party customers, Eni Rewind was awarded contracts for the industrial waste management service of Edison's thermoelectric power plant in Altomonte (Cosenza) and Società Chimica Assemini at its operational site in the province of Cagliari.

~2 million tons
of waste managed in 2021, of which 81% on behalf of Eni

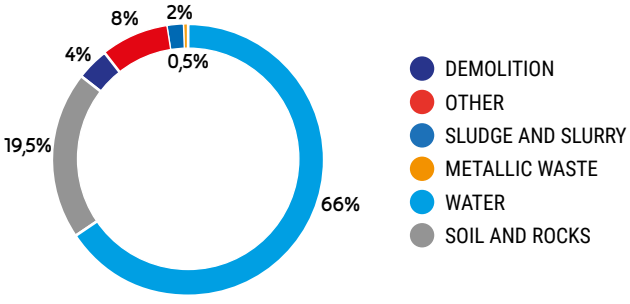
+70%
recovered vs. recoverable waste 2021

13%
hazardous waste vs. total managed

WASTE MANAGEMENT (kton)



TYPE OF WASTE MANAGEMENT



RECOVERED WASTE

2020	2021	Δ vs. '20	WASTE RECOVERED	WASTE FROM DEMOLITIION	METALLIC WASTE	SOIL & ROCKS	SLUDGE
78%	73%	-5%	% Waste recovered	73%	100%	72%	98%

* This includes waste from the management of the environmental activities of the service stations network.

Ravenna Ponticelle

The Ponticelle project in Ravenna is an initiative for the productive redevelopment of a disused industrial area on the border of the petrochemical plant, which, following environmental remediation, will become a hub for sustainable remediation, waste valorisation and green energy production.
The initiative represents a concrete example of how land remediation can bring added value to the territories and their communities thanks to the synergy between important realities such as Eni and Hera, without resorting to the consumption of new land, but rather by reusing and valorising that which has already been anthropised.
Eni Rewind, owner of the former industrial area, has planned and completed the permanent safety measures (MISP) with capping implemented on 18 of the total 26 hectares. The environmental intervention, certified by Arpa Emilia-Romagna in August 2021, is preliminary to the area's development plan, which envisages the application of innovative, sustainable and recovery technologies, as well as urbanisation works.


Jumpers first


MISP intervention with capping completed


Ponticelle after (rendering)

The works envisaged in the Ponticelle Project:

- **Photovoltaic power station with storage lab**
  The construction of the plant, authorised in January 2021, will be carried out by Eni New Energy, a Plenitude company dedicated to the development of renewable energy, in a portion of the area covered by the MISP (11 hectares). The project involves the construction of a solar tracking photovoltaic power station with a capacity of 5.6 MWp and an energy storage lab with a capacity of 1 MW.

- **Land Bioremediation Platform**
  The plant, with a treatment capacity of 80,000 tonnes per year, is dedicated to the aerobic biodegradation and recovery of hydrocarbon-contaminated soils, primarily from the remediation of service stations, through the use of indigenous microorganisms, i.e. bacteria. The aim is to return the post-treatment land to the service stations themselves, according to a circular scheme of recovery and reuse. The platform, which will cover 3 hectares, also includes a bio-laboratory capable of conducting preventive analytical checks on the conformity of waste entering the plant and periodic monitoring surveys of bioremediation processes.

- **HEA Multifunctional Platform**
  HEA (Hera and Eni per l'ambiente), a joint venture set up in March 2021 by Eni Rewind and Herambiente, will build a state-of-the-art environmental platform for the management of industrial waste on a portion of the area amounting to approximately 3 hectares. An important synergy desired by the two companies to minimise waste disposal, favouring energy and material recovery. The plant, which will replace the current HASI (Herambiente Servizi Industriali) platform, will manage up to 60,000 tonnes per year of special waste from environmental and production activities, with particular attention to those in the area, in line with the European directives of the Circular Economy Package. The aim is to make a concrete contribution to the structural lack of plants in Italy and also in Emilia-Romagna for the management of special waste and to maximise the recovery of materials and energy from collected industrial waste.

In October 2021, the joint PAUR (Regional Single Authorising Provision) application was submitted for the construction of the bioremediation platform and the multifunctional platform.

INTERVIEW

Interview with
Carlo Pezzi
Managing Director HEA (Hera and Eni for the Environment)

How has the synergy between Herambiente and Eni Rewind for the construction of the environmental platform in the Ponticelle area been received by the Ravenna area?
The synergy and the technological and corporate partnership (with the establishment of HEA S.p.A) between two important companies, leaders at national level, and at the same time strongly rooted and present at territorial level, certainly represents a guarantee of seriousness and reliability that the territory is able to perceive. The municipal administration immediately grasped the importance of the overall intervention, and also the economic-entrepreneurial system, thanks also to the progressive increase in knowledge of the project, has become aware of the importance of the initiative, both in terms of infrastructuring qualified services dedicated also to local businesses, and in terms of spin-offs on the territory, which are expected to be significant, with investments amounting to many millions of euro over the next few years. Furthermore, since October the start of the authorisation process has also entailed moments of public visibility for the productive redevelopment project in the area, without registering any particular stance by citizens or specific stakeholders. Even though it is never easy to develop projects for waste plants (particularly if it is of industrial origin), I believe there is ultimately a perception of the need for these facilities and a chance to raise awareness that the multifunctional platform, as part of the overall project, is perfectly in line with the objectives of the circular economy.

What scenario made this industrial symbiosis, now considered an Italian best practice, possible in brownfield valorisation projects? Can this virtuous experience be replicated in other territories and how?
The elements favourable to the realisation of this industrial symbiosis are manifold. First of all, the skills of the two partners favour an important synergy to optimise the management of waste, both related to the Eni Group's activities and deriving from the market, favouring the recovery of energy and materials with industrial efficiencies and economies of scale. The multifunctional platform project then fits into the virtuous process of recovering the *brownfield* Ponticelle of 26 hectares, which envisages, following the environmental remediation project, its overall productive redevelopment and the construction of a photovoltaic park and a bioremediation platform independently promoted by Eni Rewind. The projects, although autonomous and independent, are interconnected in the overall infrastructure of the area with a view to rationality. The synergy between the two platforms, in particular, is evident; although they will be completely independent in terms of waste treatment activities, they will use some utilities in a shared manner, avoiding unnecessary duplication. In addition, the new HEA platform, which will adopt the best available technologies, will replace the current HASI (Herambiente Servizi Industriali) owned platform located in the Via Romea area, with an important plant optimisation. Another relevant element for the success of similar initiatives is the attitude of the public administration in allowing, also through town planning, the possibility of realising certain facilities under the right conditions. As a whole, these situations are not easily reproducible, although replicability in other territorial contexts would be highly desirable.

What waste management and logistical needs does the construction of the environmental platform meet in the local and Italian landscape?
Without going into detailed numbers, the plant deficit in Italy (also) for the special/industrial waste cycle, which is often a commodity exported abroad, despite transport costs, is evident. It should also be borne in mind that the production of special waste is 4/5 times greater than that of municipal waste, with all that this implies in terms of plant requirements for this supply chain.
The Emilia-Romagna region boasts a strong establishment of manufacturing and industrial activities and is experiencing higher growth rates than other Italian regions. With this in mind, the recently adopted Regional Waste Management Plan (PRRB 2022-2027), with regard to the management of special waste, assumes the principles of self-sufficiency for the disposal of non-hazardous waste in the regional context, and generally of plant proximity. The province of Ravenna is one of the largest producers of special waste in the region. By optimising flows for disposal and maximising material/energy recovery with pre-treatment operations, the platform is fully consistent with planning objectives at every level and at the service of the territory in particular. It will also be able to address, in a versatile manner, the needs of local companies in the management of industrial waste, offering treatment solutions for, among others, various outflows from the plants of the Eni Group and other companies in the petrochemical sector.
The platform will be equipped with advanced waste traceability systems and environmental certifications to guarantee total transparency in waste management, ideally fitting into an area that boasts consolidated policies of environmental protection and control with the direct commitment of companies (monitoring networks, certifications, EMAS of companies and district).

Operational Excellence

Our model for operational excellence focuses on our commitment to the enhancement of people and the protection of the environment in which we operate. Basic corporate values that are embodied in approaching and conducting every activity with the utmost attention to sustainability, promoting the health and safety of workers and operating with integrity and transparency, while respecting human rights.

In this way, Eni Rewind ensures a concrete contribution to the ecological transition, tracking down the opportunities brought by the new environmental challenges and circularity through technological innovation, skills and experience gained in the field over the years.

Each of us

WHY IS IT IMPORTANT TO ENI REWIND?

The keys to Eni Rewind's success are its people, their skills and their energy. The women and men who work here are, in fact, a unique asset and a strategic factor in the constant pursuit of operational excellence and always taking on new challenges. The people share the company's values, like the enhancement of human capital and respect for the environment and the local community. The Company promotes the creation of a discrimination-free working environment that provides opportunities on the basis of shared merit criteria.

Gennaro Cangiano
HR Business Partner

POLICIES AND OTHER REGULATORY INSTRUMENTS

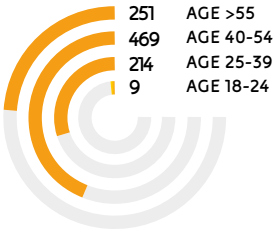
"Our People", "Integrity in our Operations", "Operational Excellence" Policies

MANAGEMENT AND ORGANISATION MODELS

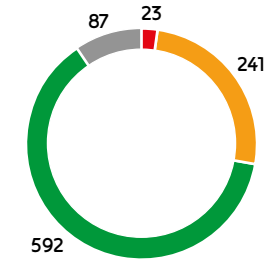
Integrated health, safety and environment and quality management system: compliant with ISO 9001:2015, ISO 14001:2015 and OHSAS 18001:07 standard for health and safety management.

The Eni Rewind team consists of around 1,000 people:

EMPLOYEES BY AGEGROUP IN 2021

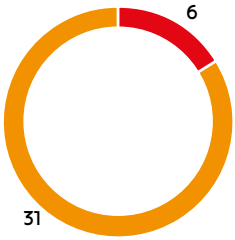


EMPLOYEES BY PROESSIONAL CATEGORY



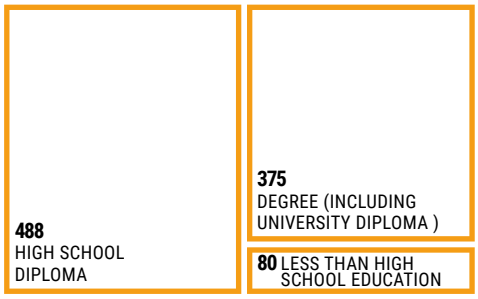
EXECUTIVES
OFFICE WORKERS
MIDDLE MANAGERS
MANUAL WORKERS

WOMEN IN POSITION OF RESPONSIBILITY



EXECUTIVES
MIDDLE MANAGERS

EMPLOYEES BY EDUCATION



Diversity and inclusion
The culture of plurality

Eni's approach to Diversity & Inclusion is based not only on the fundamental principles of non-discrimination and equal opportunities but on the active commitment to creating a working environment where personal and cultural diversity is considered a source of mutual enrichment and an indispensable element of business sustainability. Eni Rewind together with Eni ensures that all its people are treated fairly regardless of any differences in gender, religion, nationality, political opinion, sexual orientation, social status, physical abilities, medical conditions, family circumstances and age and any other irrelevant aspects.

37%
of women in engineering / R&D

27%
women in positions of responsibility

Main welfare initiatives promoted in 2021

With regard to gender diversity, Eni Rewind 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. In the course of 2021, together with Eni, it promoted a series of initiatives with a focus on gender parity for students in STEM (Science, Technology, Engineering and Mathematics) subjects with the aim of constantly enriching its processes and operational practices. Activities include:

- InspirinGirls: an initiative that started 4 years ago, involving some 7,000 junior high school boys/girls, to help them overcome prejudices by becoming aware of their own talents, including with the international social campaign #ThisLittleGirlIsMe so that girls all over the world can learn about the stories of thousands of women and feel free to choose any profession;
- 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.
- Participation in the work of the STEM1 Intercompany Committee promoted by Valore D with the aim of proposing an action plan to complement the implementation of the Manifesto for Women's Employment also signed in 2016 by Eni.

34,787
total hours of training

62%
HSEQ content

WELFARE

Even in 2021, our people, through the Smart Working instrument, continued to ensure normal operations during the health emergency phases, while reconciling the new personal and family life requirements created by the extraordinary situation. The experience gained in the two-year period 2018-2019, when Eni Rewind had been identified as a pilot company in Eni for the adoption of organisational Smart Working, had facilitated the widespread use of this mode of working since the beginning of the COVID-19 pandemic. For more information on the main welfare initiatives promoted together with Eni during 2021:

↗ Eni For p. 50

TRAINING

Eni Rewind enhances human capital with initiatives that promote the integration and growth of the skills necessary in the Company. In addition, it supports and promotes professional development, offering opportunities in different work contexts. In continuity with what has been achieved over the last three years, in 2021, initiatives have been organised to enhance human capital, incentivising the contribution that each individual can make and encouraging the development of knowledge and skills. The new digital and virtual training methods, which were already enhanced last year to cope with the limitations imposed by the health emergency, were consolidated. Interventions focused in particular on environmental issues, while maintaining the usual focus on safety and human rights issues.

UPGRADING SKILLS IN THE TRANSITION PROCESS: THE MAIN INITIATIVES OF ENI REWIND

Waste treatment technologies: initiative in cooperation with the University of Ferrara, which involved 26 colleagues working in the technical field for a duration of 32 hours focusing on technologies applied to waste.

Hydrogeology specialists a training intervention aimed at enhancing the skills of colleagues in the Environmental Studies unit, and fostering the insourcing process of hydrogeological site management and numerical modelling activities. The 12-module course involved 25 colleagues for a total of about 2,000 hours and will continue in 2022.

The circular economy in waste management initiative of *upskilling* included in the training plan foreseen by the expansion contract and realised in collaboration with Eni Corporate University (ECU) with the teaching of the Turin Polytechnic. The training course, delivered in virtual classroom mode, aimed to strengthen skills in the field of waste management and the best technical and engineering solutions for its treatment, enhancing the exchange between the academic and engineering worlds. The 20-hour course divided into 5 modules was attended by 54 resources with proven experience in the relevant fields.

HUMAN RIGHTS TRAINING ACTIVITIES

During 2021, the training plan on the issue of human rights continued, involving more than 100 people engaged in a course structured in 4 modules and aimed at promoting a corporate culture on the issue, improving understanding of the possible impacts of business on human rights and learning about Eni's commitment to respecting those rights.

TO FIND OUT MORE:

Learn more about the importance of respecting human rights at Eni ↗ Eni For 2021 p. 68-73

Health

In 2021, Eni Rewind adopted Eni's new health guidelines together with the corresponding operating procedures. The health management system aims to promote and maintain the health and well-being of people and to ensure appropriate risk management in working environments.

HEALTH SURVEILLANCE

944 health surveillance visits were carried out for personnel at the sites, in compliance with the COVID-19 procedures. Medical check-ups on returning from COVID-related illnesses were carried out regardless of the days of leave.

HEALTHCARE

In terms of healthcare, 194 medical check-ups were carried out for employees and 32 for contractors at the medical facilities. The main reasons for using medical facilities concerned:

- 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.

In addition, 12 employees and 10 contractors approached company medical services for suspected COVID-19 symptoms.

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 the recognition of diseases of suspected occupational origin, a total of 18 applications were received in 2021: 17 from former employees (4 from heirs), with no particular clusters of origin. The downward trend in the number of complaints is therefore confirmed.

2021 health surveillance check-ups

790
periodic check-ups, in line with the program

60
preventive pre-recruitment medicals

21
medical check-ups on the resumption of work after being absent for health reasons

31
pre-termination check-ups

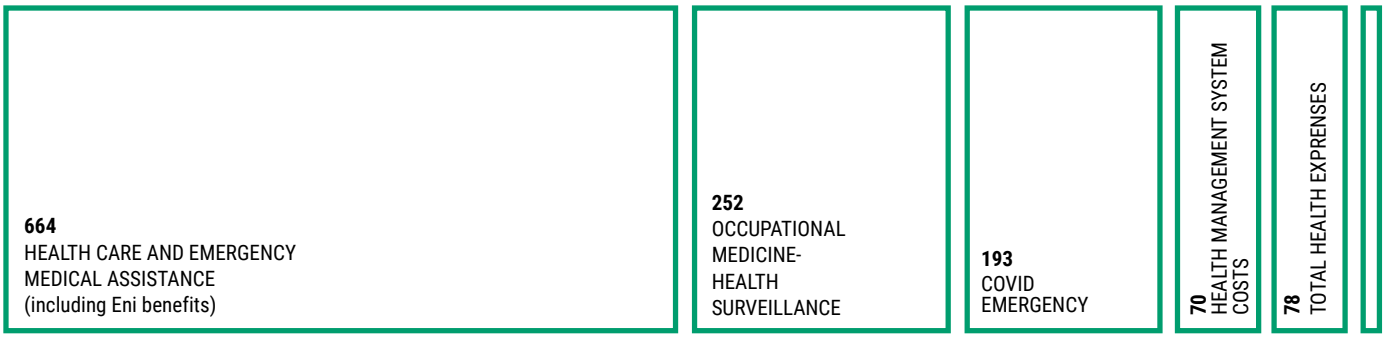
19
job change check-ups

3
check-ups at the worker's request

20
extraordinary check-ups

Expenses incurred in 2021 (€/000)

1,273
Total health expenses



Safety and Environment

WHY IS IT IMPORTANT TO ENI REWIND?

The implementation of Eni Rewind's HSEQ initiatives and projects, while respecting and protecting the environment and workers, contributes substantially to the achievement of business results. HSEQ results are achieved with the involvement and contribution of everyone's professionalism, because unity concretises the effectiveness of our work and enables us to promptly face new challenges, including international ones.
Commitment to constant dialogue, continuously involving field staff, local communities and suppliers, has enabled the growth of a culture that is increasingly sensitive to, and strongly oriented towards, HSEQ issues in order to be able to prevent accidental events.

Francesco Massimo Manglaviti
HSEQ – Health, Safety, Environment & Quality Manager

POLICIES AND OTHER REGULATORY INSTRUMENTS

SAFETY: "Our People", "Integrity in our Operations", "Sustainability" Policies, Eni Declaration on Respect for Human Rights; Code of Ethics.
ENVIRONMENT: "Sustainability", "Integrity in our Operations", "Eni Biodiversity and Ecosystem Services" Policies, Code of Ethics.

MANAGEMENT AND ORGANISATION MODELS

SAFETY AND ENVIRONMENT: Integrated environment, health and safety and quality management system: adopted by the organisation and certified under ISO 45001:2018 for health and safety management and ISO 14001:15 for environmental management; Legislative analysis and regulatory updates on Safety and Environment issues; Technical meetings for analysing and sharing experiences on specific Safety and Environment issues.

PROGRESS IN 2021

- **Training** more than 3,300 hours of internal training were provided in the areas of Occupational Safety, Process Safety and Industrial Hygiene and more than 1,100 hours of training for Eni Rewind people and third parties on contaminated site remediation, waste management, asbestos, discharges and emissions.
- **Implementation of digital initiatives**: AppHSEni (for safety management in operations with ATEX devices), electronic work permit, smart safety project.
- **Awareness-raising initiatives** for employees and contractors on HSE aspects and the importance of analysing and managing accidents, near misses and sub-standard conditions/actions (so-called weak signals).
- Initiatives to strengthen competence and knowledge in the field of **occupational safety**.

TARGETS

- **OCCUPATIONAL SAFETY** in order to achieve the objective of a progressive reduction of accidents, the implementation of the following initiatives will continue:
  - **HSE Eni Safety Pre Sense**: instrument for analysing weak signals entered in the computer database, in order to obtain predictive information with respect to the main risk areas;
  - **RCA (Root Cause Analysis)**: specific Eni training for the investigation of accident events to be delivered to HSE Employer Line Managers;
  - **THEME (The Human Error Model for Eni)**: methodology to analyse and manage the human factor in the field of safety;
  - **HSEni App**: increasing extension of the App by employees and contractors;
  - **e-WP** implementation of the Electronic Work Permit (e-WP) and updating of the management system in line with Eni procedures.
- **PROCESS SAFETY** :dissemination of Process Safety Fundamentals identified by Eni.
- **PRODUCT SAFETY**: Gap Analysis of product safety data sheet management and regulatory compliance for risk assessment and worker health.
- **awareness Initiatives** efforts will continue to strengthen the level of HS training and culture of employees and contractors, as well as the *Environmental Golden Rules* with the objective of promoting virtuous, more environmentally aware and responsible behaviour by Eni's employees and suppliers.
- **Environmental skills** Eni Rewind's commitment to strengthening environmental expertise will continue through training initiatives, focusing in particular on field operations and regulatory updates.
- **Specialist technical support** to the Operational Units.

ACCIDENT RATES AND INTERVENTION ACTIONS

In 2021, Eni Rewind also confirmed its commitment to the prevention and mitigation of health and safety risks for its own workers and suppliers, in order to minimise the occurrence of accidents.

Although there was an increase in the number of accidents during the year, from two in 2020 to five in 2021 (all of which occurred to employees), the Company nevertheless confirmed its commitment to achieving the Severity Incident Rate (SIR) target, Eni's internal index that considers the level of severity of accidents.

The total recordable accident frequency rate (TRIR) of the workforce increased in 2021 compared to 2020, with an increase in the employee rate and a decrease in the contractor rate to zero, but none of the recorded injuries had a prognosis of more than 180 days of absence or with consequences such as total or partial permanent disability. The index value for occupational accidents with serious consequences is therefore zero

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 compared to the previous year due to the number of absent days related to the five incidents recorded.

The results of 2021 drive our commitment to further improve our safety performance and those of our contractors. For each accident that occurs, as well as for the most serious accidents and near misses, in-depth investigations are conducted to identify the root causes of the events and the most effective corrective actions, using Eni's RCA (Root Cause Analysis) investigation method. Lessons Learned are also elaborated to be shared with all personnel of the different Eni Rewind Operational Units for increasing awareness among employees and contractors.

The identification and analysis of the causes of the events made it possible to implement immediate actions to prevent a recurrence:

- identification of basic operations for the safe execution of routine plant activities and preparation of related operating procedures/ instructions to be made available to all plant operators, implemented by training and learning tests;
- training of managers to improve resource management and teamwork;
- training, with verification of learning, on the correct way of carrying out work and work permits;
- coaching or leadership courses aimed at reinforcing safety messages and the application of 'stop work authority';
- updating of specific Operating Instructions for the use of equipment and application of checklists to verify the integrity of equipment;
- intensification of controls on work permits.

In order to further reduce accidents Eni Rewind has committed itself to

- enhance the capacity to analyse the data recorded in the HSE databases, using the Safety Presense instrument, with the aim of taking preventive action through corrective actions on situations with a potential accident risk;
- apply on operational sites human factor analysis methodologies in the field of behavioural safety to identify intervention strategies that act on human barriers, such as the implementation of the THEME methodology;
- introduce new, increasingly digital-intensive technologies to increase the safety level of its operators, such as Smart Safety or CCTV cameras for fire detection.

Furthermore, in line with Eni, to focus the company's commitment on the pursuit of employee safety, specific safety parameters and related commitments are identified, such as the aforementioned Severity Incident Rate (SIR) and the Safety Culture Program (SCP - a preventive safety management indicator involving aspects such as the analysis and management of weak signals, the implementation of safety awareness campaigns and emergency preparedness).

		2019	2020	2021
Hours worked (ML/h)	Workforce	5,186	5,020	**5,362**
	Employees	1,501	1,644	**1,610**
	Contractors	3,685	3,376	**3,752**
Number of accidents (contributes to FI calculation)	Total	5	2	**5**
	Employees	-	1	**5**
	Contractors	5	1	**0**
Days absent from work (contributes to SI calculation)	Total	56	169	**222**
	Employees	-	8	**222**
	Contractors	56	161	**0**
Frequency rate(accidents with days absent from work/ hours worked) x 1,000,000	Workforce	0.96	0.40	**0.93**
	Employees	-	0.61	**3.11**
	Contractors	1.36	0.30	**0**
Severity index (days absent/hours worked) x 1,000	Workforce	0.011	0.034	**0.041**
	Employees	-	0.005	**0.138**
	Contractors	0.016	0.048	**0**
TRIR Total recordable accident frequency rate [(accidents + work restrictions + medical treatments)/hours worked)] x 1,000,000	Workforce	0.96	0.60	**0.93**
	Employees	-	0.61	**3.11**
	Contractors	1.36	0.59	**0**

Safety expenses and investments (excluding ILCV) – €/000	**2019**	**2020**	**2021**
TOTAL CURRENT SAFETY EXPENSES	700	500	**560**
TOTAL SAFETY INVESTMENTS	1,500	1,500	**6,200**
TOTAL CURRENT HSE EXPENSES	170,000	180,000	**200,000**
TOTAL HSE INVESTMENTS	33,300	46,100	**62,000**

The culture of Safety and the Environment

Eni Rewind is committed to ensuring that everyone can become a leader and example when performing their activities in complete safety and with respect for the environment at starts with management and trickles down to all employees and contractors. In order to ensure safety in all workplaces and environmental protection, the company promotes various initiatives 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, taking advantage of the "online mode".

Eni Rewind awarded at Eni's Safety & Environmental Day 2021 for the programme to disseminate environmental culture

MAIN INITIATIVES:

Safety & Environment

Safety and Environment Pact: Subscribing by Eni Rewind and its contractors of a commitment that binds the parties to adopt and use a series of common instruments identified with the aim of carrying out works under contract without significant occupational accidents or accidents, permanently improving the safety culture and environmental management of contractors. Eni Rewind, with the support of the HSEQ Eni SCC (Safety Competence Centre) structure, signed Safety and Environmental Pacts at the Avenza and Siti Minerari, Ponte Galeria, Porto Torres, Porto Marghera, Cengio, Pieve Vergonte, Gela, Avenza and Brindisi sites.

HSE Day: program to raise awareness among employees and contractors on HSE aspects, on the importance of analysing and managing near misses and unsafe conditions/acts and to share the main Lesson Learned developed by Eni and Eni Rewind. In 2021, HSE Days were held at the Pieve Vergonte, Porto Marghera, Porto Torres, Crotone, Brindisi and Avenza service stations.

HSE Takeaway: informal sharing moments organised by Eni Rewind during the course of the year to raise staff awareness of safety and environmental aspects, in an atmosphere of discussion and experiential exchange.

Safety Competence Assessment carried out assessments aimed at strengthening the HSE culture and competences of specific figures at the Porto T orres and Priolo sites.

Worker for the HSE ++ pact carried out at the Porto Marghera and Porto Torres sites a survey addressed to contract workers on their knowledge of HSE aspects, to assess through interviews and questionnaires, the level of culture on safety and environmental issues.

THEME the Ravenna site acted as a pilot for the behavioural analysis project proposed by Eni to assess the impact of the human factor on individual safety performance.

Coaching SCC (Safety Competence Center): implemented in the GTP employer line of the Brindisi, Porto Torres and Gela sites the awareness-raising initiative promoted by Eni to improve company safety and which the SCC already carries out for contractors.

Programme for the dissemination of environmental culture which received an award at Eni's Safety & Environmental Day 2021, involved all Eni Rewind employees in training, information and awareness-raising initiatives on environmental issues such as:

- Normative Pills dissemination of regulatory aspects of key environmental issues via internal e-mail

- Relay Project: monthly meetings, called "workshops", aimed at sharing company know-how among colleagues;

- Flyers: periodic sending of leaflets by e-mail in order to raise awareness of particular environmental issues among Eni Rewind people.

'**Good morning HSEQ**':

- meetings with the Protection and Prevention Service Managers, Protection and Prevention Service Managers, the HEALTH Unit and "Coordination meetings with Employers" aimed at ensuring coordination in the context of the COVID emergency situation at all Eni Rewind sites and providing the relevant regulatory updates;
- "Meetings with Workers' Representatives" to disseminate and share HSEQ issues and to receive requests from sites;
- "Safety & Environment Meetings" with Employers, Unit Managers and HSEQ, to strengthen the dialogue between headquarters and operational sites.

Eni Rewind 100%: in 2021, 3 streaming meetings were held by the CEO and Eni Rewind Top Management with all personnel aimed at raising awareness of occupational safety issues, preventive risk planning and assessment, and the timely execution of operating activities

Digital Safety

e-WP: (Electronic System of Work Permits) implemented the computerised version of the paper work permit at the Avenza, Cengio, Ferrara, Ravenna and Brindisi sites.

Smart Safety Operator: IT system applied at the GTP employer's line at the Brindisi site to support the management of worker safety for solo activities.

Safety Pre Sense: software, applied in the centre-South operational sites, that can analyse the accumulation of data and information related to accident events 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.

HSEni App: extended the use of the Safety Golden Rules App proposed by Eni to another 6 Eni Rewind sites, in addition to the pilot site in Priolo. It is a digital working instrument, downloadable to smartphones, which can be used for field audits, start-of-work analyses, safety moments, instrument-box talks, site visits, safety meetings, tracking and reporting on unsafe conditions, as well as being a digital convergence instrument for all HSE-related instrument material developed and for promoting HSE culture (videos, information material, etc.).

Smart Safety: the "smart safety - man-down" project at the GTP plant in Brindisi, which allows the use of the man-down detection device for the protection of operators working in unmanned outdoor areas.

In addition, to ensure more direct and effective communication, an online page on the company intranet dedicated to HSEQ Eni Rewind and accessible to all Eni employees was created. An online channel (mbx) dedicated to collecting HSEQ ideas and suggestions from Eni Rewind workers was also launched. As well as implementing suggestions, mbx is also promoting a series of awareness-raising initiatives, including the proposal of an online course for all employees in 2021 on the principles of standard ISO 45001 on occupational health and safety issues.

Process safety

At Eni Rewind, the commitment to process safety is fundamental in order to prevent and control accident risks, with the aim of safeguarding the safety of people, the environment, assets and corporate reputation. Specifically, Process Safety Management enables the proactive identification, assessment, prevention and mitigation, in accordance with the best applicable technical and safety standards, of risks associated with uncontrolled releases of hazardous substances that could result from process or equipment malfunctions or inadequate regulatory instruments.
In 2021, no process incidents occurred .
In line with the different nature of the hazards and risks associated with specific operational activities, Process Safety 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 continues the Process Safety Audits on the groundwater treatment plants (GTPs) in line with Eni standards and main best practices, and, with a view to continuous improvement. In 2021, 2 Process Safety Audit were conducted at the GTP plants of Manfredonia and Priolo, aimed at assessing the gaps in Eni plants in view of the implementation of the new Process Safety provisions.

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. Following the census of its main assets on the sites, a specific asset integrity function has been in place since 2021, which will continue to implement the necessary actions to ensure the highest safety standards.

Eni Process Safety Fundamentals

Process Safety Fundamentals (PSF) represent one of the most important safety initiatives in recent years at Eni, as activities must always be conducted through safe operations even in the current global emergency. PSFs aim to provide the frontline workforce with a instrument to improve the safety of operations and spread the culture of process safety and asset integrity.
Eni Rewind in 2021 ensured the dissemination of Eni's PSF (Process Safety Fundamentals) at a further 4 sites: Assemini, Brindisi, Porto Marghera and Porto Torres. In addition, an online workshop and several specific PSF dissemination meetings were organised, involving numerous employees from the operating lines.

Find out more ↗ Eni For page 59

Emergency preparedness and response

Emergency preparedness is regularly tested through drills that serve to test the ability to respond in line with dedicated plans, including the timely alerting of management and the necessary resources and assets to deal with the event.
Despite the continuation of the pandemic, the level of emergency preparedness at the operational sites was maintained at a high level by carrying out more than 100 exercises with fire, environmental, natural events and sickness and accidents scenarios. In addition, an emergency simulation requested by the Civil Protection - coordinated by Versalis and Eni - took place at the Porto Torres site, where the emergency response of Eni Rewind resources was also tested.
In 2021, two fire emergencies were recorded in the area outside the Belvedere di Spinello site.

Suppliers and customers

WHY IS IT IMPORTANT TO ENI REWIND?

The supply chain plays a key role in Eni's Sustainable Transition strategy. For this reason, Eni Rewind has decided to involve its entire supply chain in Sustainable Supply Chain programmes with innovation and industrial transformation initiatives in the economic, social and environmental spheres that aim at a fair and inclusive transition path. In fact, sustainability elements are an integral part of the whole procurement process. The aim is to also make suppliers and customers protagonists of a transformation that allows us to protect our environment and foster positive and profitable growth for all based on clear ESG objectives.

Filippo Saranga
Environmental Procurement Manager

Application of the JUST model in the Eni Rewind Supply Chain

In 2019, Eni launched JUST - Join Us in a Sustainable Transition, aimed at all its suppliers to promote knowledge and skills sharing and stimulate new ideas for supply chain sustainability.
The programme is inspired by the 17 United Nations Sustainable Development Goals (SDGs), in which the principles of environmental protection, social growth and economic development become the guideline for every supplier relationship, with concrete applications and measurable impact at every stage of the procurement process, from Market Intelligence initiatives, to qualification, to tendering.
Specifically, the JUST parameters take into account the 4 pillars of sustainability: Planet, People, Economic Prosperity and Corporate Governance Principles, underpinning the environmental, social and governance (ESG) metrics of 'Stakeholder Capitalism Metrics', defined by the World Economic Forum and the International Business Council (IBC). The relevant KPIs, included in the tender scoring models, contribute to the assessment of the supplier in addition to the well-established technical and HSEQ parameters, so as to confer a reward for those companies that are also more virtuous in terms of sustainability.
The application of the JUST accounting policies in the Eni Rewind tenders was preceded by a phase of engagement of Eni's qualified suppliers on sustainability issues, aimed both at understanding the level of maturity of the specific sector on these issues and at discussing possible sustainability KPIs to be included in future proceedings.
To this end, 7 workshops were held in 2021, attended by over 160 suppliers from the following sectors: liquid disposal, remediation, decommissioning, waste transport, engineering, groundwater treatment and geognostics.

70%
contracts awarded in 2021 with tenders including the JUST model

LOCAL CONTENT

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, where the subject matter of the contract and the market warrant it, the involvement of local companies, 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 Memorandums of Understanding for Employment signed by Eni with the Basilicata Region (Val d'Agri Oil Unit) and for the Gela industrial area are part of this direction of attention to workers and local communities. These agreements are managed through constant relations with the Prefectures and the competent bodies.

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

During these meetings, the project activities and estimated timeframes, the drivers of the related procurement strategies, as well as the minimum requirements for access to tenders and qualifications, and the related accreditation modalities are explained, in full respect of free competition and the market. More recently, in 2021, meetings were held with Confindustria Verbania for the works to move the Torrente Marmazza as part of the remediation of the Pieve Vergonte site, and Confindustria Sardinia for the subsequent activities planned as part of the important remediation interventions at the Minciaredda area (Nuraghe Project) and Porto Torres (SS) plants.

Eni Rewind-Confindustria meeting with local companies

Memoranda of legality

In order to counter attempts of infiltration by 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 Internal Affairs. In particular, protocols are applied in the most complex sites such as Pieve Vergonte, Brindisi, Crotone, Gela, to prevent organised crime phenomena.

Along these lines, Eni Rewind undertakes, among other things, to request an anti-mafia report on suppliers and subcontractors for all supplies defined as 'sensitive', to require that the same suppliers open 'dedicated' bank accounts for the traceability of financial flows related to the contract, and to send the Prefecture periodic information on the status of works.

All institutional stakeholders and trade unions 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.

Learn more about Eni's anti-corruption policies ↗ Eni For pages 74-77

CUSTOMERS

The current global challenges call for an overall vision of remediation and resource regeneration projects, accompanied by greater collaboration between operators, institutions and territorial realities.
Eni Rewind, thanks to its experience in managing even critical situations at sites with very different industrial histories, ensures its customers, both public and private, an effective and sustainable management of environmental activities, in compliance with the applicable law.
The company has developed specialised skills in environmental design, remediation, and water and waste management to maximise the effectiveness and efficiency of each intervention, offering innovative and sustainable solutions.
As Eni's environmental company, it actively contributes to the dissemination of best practices in a process of virtuous change to which all stakeholders contribute in pursuit of the interests of the territories and communities that inhabit them.
In 2020-2021, the Company received major assignments on behalf of third party customers related to environmental assessment, soil characterisation and remediation design, and assistance in permitting procedures.

The remediation of the Collina area at the Mantua site for Edison

3 Alliances for Development

The planet is in the midst of a profound transformation that requires a fairer and more inclusive development model. We are in a historical moment, characterised by more than two years of health emergency and a new geopolitical and energy scenario, which requires a decisive contribution to relaunching the economy and to sustainable and widespread growth. Never before has it been as decisive as it is today to prove how synergy and the sharing of skills is the key to ensuring responsible and lasting development for the next 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, continuing to promote a dialogue and a constant and transparent comparison with the territories and stakeholders.

Alliances for the Promotion of Sustainable 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 expertise, know-how and capacity for innovation with a focus on listening and inclusion allows Eni Rewind to promote a sustainable future for all, contributing to the circular economy and the energy and ecological transition.

Enrica Barbaresi
Institutional Relations Liaison Manager

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

THE PRINCIPLES OF THE STRATEGIC PLAN 2022-2025

- REMEDIATION OF CONTAMINATED AREAS TO ENABLE NEW OPPORTUNITIES FOR SUSTAINABLE DEVELOPMENT
- WATER AND WASTE TREATMENT TO MAXIMISE RECOVERY AND REUSE
- DEVELOPMENT OF NEW BUSINESS TO SUPPORT THE ENERGY TRANSITION
- OUR PEOPLE: COMPETENCE, HSEQ CULTURE AND COMMITMENT

SUSTAINABILITY OBJECTIVES IN THE STRATEGIC PLAN

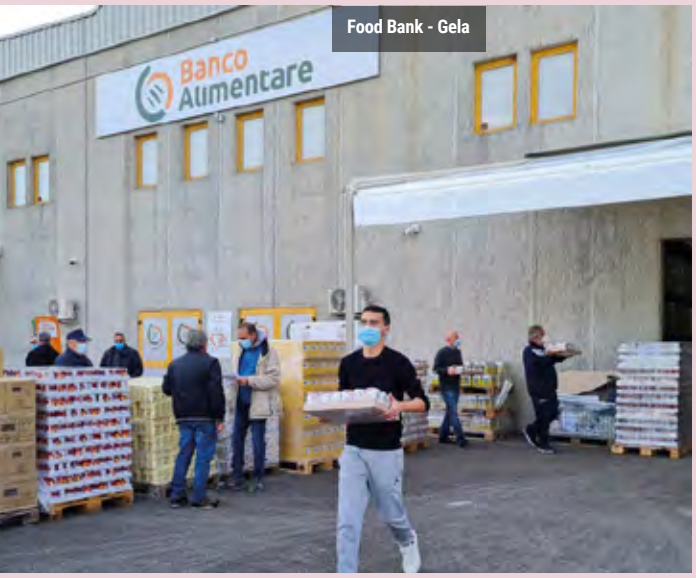
- HEALTH, SAFETY AND ENVIRONMENT
- ENERGY TRANSITION AND CIRCULAR ECONOMY
- LOCAL DEVELOPMENT MODEL

PARTNERSHIPS AND INITIATIVES WITH AND FOR THE TERRITORY

In line with National Development Plans and the UN 2030 Agenda, Eni Rewind is committed to identifying, in collaboration with institutions, associations and local stakeholders, the most suitable initiatives to meet the needs of the territories in which it operates in order to improve environmental and social conditions and promote and enhance the wealth of communities.
In order to ensure the transformation pathway, it is necessary to promote synergies and a 'co-creation' perspective throughout the supply chain.
In addition, the company has always been attentive to local schools and, over the years, has carried out various projects to support local students.

Agreement to develop circular economy projects in Bahrain

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.



Food Bank - Gela

FOOD SAFETY IN GELA

Eni Rewind, together with the other Eni entities present in Gela, signed a cooperation agreement to support food safety with the Municipality of Gela, the Banco Alimentare Foundation and the Banco Alimentare della Sicilia ONLUS. The aim is to intervene directly in the problem of access to food, reducing social vulnerability in the area and providing support for social cohesion. The project envisages Eni's direct involvement in the renovation and adaptation of the building made available by the Municipality of Gela for the creation of a decentralised headquarters of the Banco Alimentare in order to optimise and increase the collection of surplus foodstuffs, and then favour their distribution among the neediest.
The initiative will provide relief to the more than 8,000 people experiencing food poverty in the Gela territory.
This initiative is a clear example of a collaborative economy where public and private actors and associations work together with the aim of improving the living conditions of the most fragile people, while also contributing to increasing the well-being and resilience of the community.

Eni Rewind supports the 45th Maremma Trophy rally in the Colline Metallifere

For the sixth year running, Eni Rewind has sponsored the rally competition Maremma Trophy, a sporting initiative that is very much felt and participated in by the local communities. In 2021, the race, which winds through the Colline Metallifere (Metal-bearing Hills), took place over a total distance of 250.95 km and included 9 special tests, including the "Gavorrano" named after 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 aquifer safety and remediation activities.

Initiatives with universities and schools

Eni Rewind, at the request of the University of Turin (UniTo), organised an educational visit to Eni's Robassomero site to illustrate the results of the application of the phytoremediation technique, an activity researched by the university. The visit was preceded by a seminar held by Eni Rewind to present the activities carried out at the site after the experimental phases, the implementation of the project and the results. To complete this, a case study of the application of phytoremediation at another contaminated site (Assiano) and the positive results achieved were illustrated. In addition, Eni Rewind also contributes to the collaboration signed by Eni Corporate University and the University of Enna 'Kore' in 2021, which envisages a Master's Degree Course in Environmental and Territorial Engineering as well as the establishment of a 2nd level university Master's Degree Course in 'Environmental Protection and Redevelopment of Industrial Areas' and a professional degree course in 'Technologies for the Built Environment and Environmental Sustainability'.

Project UR On Air - Crotone

6 in ond@ is Eni's digital education project designed for primary school children. The initiative includes the creation of a web radio, as a communication and media education laboratory, to foster dialogue with the younger generation. The industrial, environmental and cultural history of the territories is told through the narration and the fresh eyes of the students involved in a radio station created by them on a dedicated web platform.
The initiative was launched by Eni Rewind with Eni Scuola in Crotone in 2019 with an initial in-presence training aimed at getting to know and use the working and communication instruments made available to classes by the Company. The project - suspended in 2020 due to the health emergency that hit the country - has in the pupils involved the real protagonists of the initiative, who have enthusiastically created the name, logo/mascot of the web radio hosting their podcasts made during the 2021-22 academic year, tangible evidence of the bridge launched between the local young generation and the Crotone area.

Service Learning Project with schools

Together with Eni Scuola and the Municipality of Porto Torres, Eni Rewind has promoted the R.E.T.I. project - Educational Research for an Inclusive Territory - entrusted to the Scuola di Alta Formazione Educare all'Incontro e alla Solidarietà (EIS) of the LUMSA University of Rome, with the aim of combating "educational poverty", preventing school drop-out, and strengthening the alliance between schools and educational actors (families, educational agencies, local authorities, etc.) in order to link the educational needs of children and young people to the reality of the territory. At the heart of the project is Service Learning, an educational proposal based on experiential learning so that learners can develop their knowledge and skills through solidarity-based service to the community. For the young people of Porto Torres, the project included an educational experience organised by the EIS and the Pontifical Scholas Occurrentes Foundation, divided into 3 workshop paths carried out with the support of a group of municipal workers and volunteers in which the students shared their visions on the reality of the city, their dreams, their needs, and drew up proposals to improve their community. The initiative ended with a public moment in which the students shared their proposals with local authorities and representatives of society and sport.

SUSTAINABILITY INTEGRATED INTO THE BUSINESS

Integrating the principles of sustainability into remediation means identifying the best solutions in terms of environmental, social and territorial impact and ensuring the full involvement of stakeholders in the decision-making process. A commitment that Eni Rewind pursues with the aim of guaranteeing the protection of human health, the remediation of groundwater and soil aimed at their recovery and reuse by applying innovative and sustainable technologies, as well as the reduction of the carbon footprint in remediation activities.

ASTRA - Advanced Sustainability Tool for Remediation Assessment

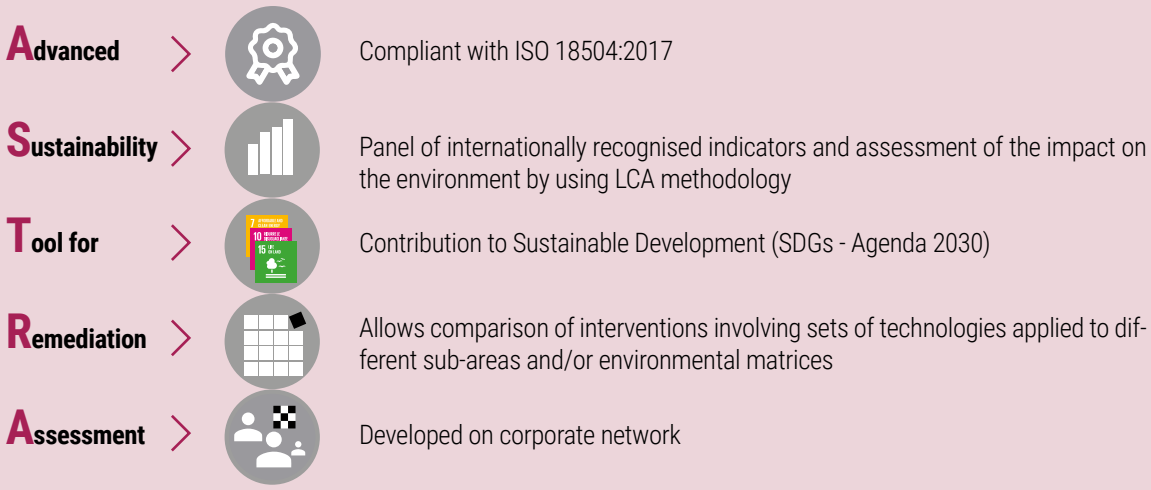
Eni Rewind has embarked on a project with the Ca' Foscari University Foundation to develop instruments to supplement the principles of sustainability and circular economy into its environmental activities, considering the social, environmental and economic impacts associated with the redevelopment of the areas involved.

The collaboration is developed along two main lines of research: the ERA *(Ecological Risk Assessment)* line, for the ecological risk assessment of contaminated sites, and the 'Sustainability and LCA (Life Cycle Assessment)' line, for the assessment of the sustainability of remediation measures through an integrated methodology with life cycle analysis.

The "ERA" research line resulted in guidelines for ecological risk analysis applicable to water, soil and sediment matrices potentially affected by contamination. For Eni Rewind, ERA represents a valuable decision-making process instrument for the management of contaminated sites with high ecological value, together with health risk analyses, in order to optimise the costs and time associated with remediation processes with a view to environmental protection. This is the first reference in Italy to standardise ecological risk analysis.

The "Sustainability and LCA" research line, on the other hand, aims at developing instruments to compare remediation strategies on the basis of environmental, social and economic objectives and indicators. **ASTRA** *(Advanced Sustainability Tool for Remediation Assessment)* a decision-making instrument to support remediation planners, stakeholders and decision-makers in choosing the most sustainable technologies to apply, in line with the ISO 18504:2017 standard.

The main advantage of ASTRA, compared to other models, is that it quantifies the impact on the environment of all the activities that make up the different stages of a remediation process through the use of life cycle analysis (LCA). In particular, the project involves the development of a simplified LCA methodology, based on the principles of ISO 14040:2021, specifically for the remediation sector.



Methodological Note

The Eni Rewind 2021 Sustainability Report is part of Eni sustainability reporting, which includes the Consolidated Non-Financial Declaration (NFD 2021) and the Eni Sustainability Report for 2021, 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 Sustainability 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 2021. Some data from the previous two years/four years are also given for comparison purposes. Where relevant, the activities and projects described in the document are updated to the first half of the year of publication 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.

GLOSSARY

See the glossary on enirewind.com

Avenza Site

Eni Rewind SpA

Registered Office
Piazza Boldrini, 1
20097 San Donato MIianese (MI) - Italy

Joint Stock Company
Shhare Capital € 321.862.263,98
Tax payer code: 09702540155
Business Register of Milan-Monza-Brianza-Lodi
R.E.A. (Economic Administrative Index) Milan n. 1309478
Company subject to the management and coordination
of Eni SpA

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