

SUSTAINABILITY REPORT 2022

# THE SUSTAINABLE EQUATION

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### METHODOLOGY NOTE

The Sustainability Report 2022 is the **first for Entsorga**. This is a voluntary choice, not dictated by legal obligation. The report is based on the **GRI Standards version 2021**, following the currently most widely used international guidelines.

The Report includes Entsorga Italia and Entsorga FIN and takes into account all information concerning the **material issues** identified by the Sustainability Committee and submitted to its stakeholders.

To ensure the reliability of the information reported, directly measurable quantities have been included, limiting the use of estimates as much as possible. The data refer to the period between 1 January and 31 December 2022. Where possible, they are compared with the previous year.

### LETTER TO STAKEHOLDERS

Time and profit are the two key words to secure the future of a company. Recent history has shown us this unequivocally. A company must be able to continuously generate profit for all those involved in its ecosystem. For shareholders, but also for employees, customers, suppliers and the community where the company lives and works. For longevity, the only winning strategy is to be sustainable.

We are so convinced of this that in 2022 we decided to make this journey official, one that started more than ten years prior, with the calculation of our carbon footprint. A journey that will lead us to become even more aware of our actions and, above all, focused on achieving **increasingly more concrete, targeted and measurable goals** to build a sustainable and long-lasting company. Thus the **first voluntary Sustainability Report** was drawn up.

As you will see, flipping through these pages, **2022** was a vibrant year, during which we grew, as a company and as people. Several objectives were achieved, in every dimension of sustainability, environment, social and governance.

But this statement is important to us above all because it lays down the **goals** we set for **2023** and the commitments for our near future.

We have set  $\text{new}_{\text{CO2}}$  emission reduction and offset targets and are establishing a renewable energy community that will be open to all our employees and collaborators. Also under consideration is an economic evaluation to set up an anaerobic mini-digester to dispose of the waste from our canteen and a new recovery project.

The certification of the health and safety management system (ISO 45001), the adoption of the Management Model in accordance with Decree 231, the Code of Ethics and the activation of an anonymous channel to report any illegal behaviour are already underway. We decided to further strengthen the internal organisational structure and made clear commitments to continue supporting projects related to the local community. Finally, we also decided to consolidate our development activity, dealing with obtaining environmental permits and finding investors interested in green operations. And to monitor progress, as well as to follow up on the preparation of this first Report, we set up a Sustainability Committee, made up of experts from inside and outside the company.

We know, these are all ambitious commitments, which show just how strategic and ingrained sustainability is in our way of thinking and doing business today. Some of these actions have just been started, but others are already almost completed.

The appointment then is for next year, to see how much of what we tell you in these pages we will have managed to achieve. For us and for all of you.

Thank you and enjoy your reading!

Pietro Cella Gian Francesco Galanzino

Chairman Managing Director



### **SUSTAINABILITY IN NUMBERS - 2022**

### INNOVATION AND THE FUTURE

### **PEOPLE**

30

EMPLOYEES

23% WOMEN - 77% MEN

100%

HIRED WITH THE NATIONAL COLLECTIVE LABOUR AGREEMENT

10,5

HOURS PER CAPITA OF TRAINING

5,41%

OF TURNOVER DIRECTED TO

R&S

**PROSPERITY** 

OVER

**ENVIRONMENT** 

1 MILLION

tCO2eq SAVED

THANKS TO ENTSORGA TECHNOLOGIES

CARBON FOOTPRINT tCO2eq/EMPLOYEE

2,92

33.540 € COMMUNITY PROJECTS

14.5 MILLION €

TO LOCAL SUPPLIERS



### Od OUR I.D.



We were founded 25 years ago with the ambitious goal of patenting solutions to lessen the impact of man's activities on the planet by transforming waste into new, renewable matter and energy. We drew inspiration from Nature to create our technologies, based on the skilful acceleration of biological processes, and also the names to identify them. The Ladybird was the first, still at the centre of the logo and our symbol around the world. Then came the Bee, the Beetle, the Turtle, the Hawk, the Eagle and all the others. This is where our Green Technologies Revolution began.





### **ABOUT US**

Impact, sustainability, environmental footprint. Commonly used terms today, but which, in 1997, belonged to only a few. Then, in a world far removed from the Paris Agreement, two entrepreneurs from Tortona founded a company that would study, invent and patent green technologies for waste treatment, beneficial for the environment and the economy. A pioneering vision, which has become our established business model, in Italy and worldwide.

Founded in 1997 and based in Tortona, Italy, in south-eastern Piedmont, Entsorga is a leading innovative SME in the field of green technologies that patents solutions for the biological treatment of waste and transforms it into fertilisers, biofuels and renewable fuels, in compliance with the highest health and safety standards.

In 25 years we have designed and built a hundred fully automated plants in more than 27 countries for both small communities and large industrial systems. Plants that work every day to recover and valorise waste, sorted and unsorted, reducing its environmental impact by more than half and saving the environment the emission of millions of tonnes of greenhouse gases.

## A solid structure, with an international background

Active on a global scale, in Europe, Africa, the United States and South America, our Group has gained experience and a solid international culture in terms of contracts, engineering standards and project management.

The development of patents, the design activity and the management of plants are concentrated in our offices in Tortona, where **Entsorga Italia** and **EntsorgaFin Spa**, the holding company that the 4 companies of the Group belong to and which carries out administrative, promotional and quality assurance activities for them, are based.

The foreign subsidiaries - Entsorga UK in England and Entsorga Inc in the United States - are appointed to business development in these countries.

Since 2017, we also have a stake in Entsorga West Virginia, a company that we built the first Biological Mechanical Treatment (MBT) plant in the US with, that uses our technologies to produce SSF (Solid Secondary Fuel) for cement plants from Municipal Solid Waste (MSW).





Pietro Cella 50%

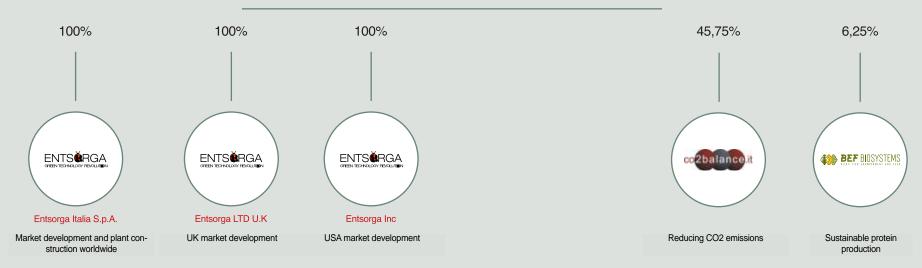




Gian Francesco Galanzino 50%

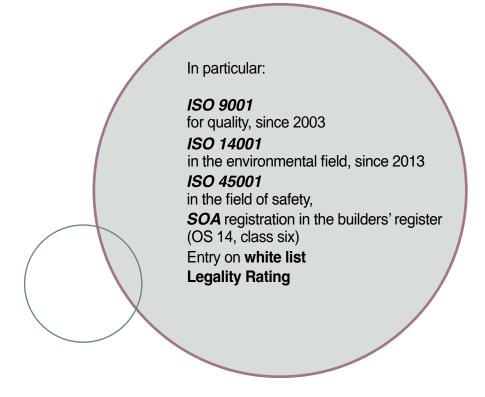
### **ENTSORGAFIN S.p.A.**

### **GROUP LEADER AND OWNER OF LICENCES, TRADEMARKS AND PATENTS**



# Long standing attention to quality, to the environment and to safety

Over time, we have obtained several **certifications** confirming the application of procedures and tools to ensure the **responsible development of our company** in terms of quality, environment, health and safety, information protection and tender management.





### The numbers







11 PATENTS



6 REGISTERED TRADE MARKS



70% STAFF WITH DEGREES



1 MLN € INVESTED ANNUALLY IN R&D



2.5 MILLION TONNES OF WASTE TRANS-FORMED INTO RENEWABLE RESOURCES AND ENERGY EVERY YEAR



OVER 100 PLANTS IN 27 COUNTRIES



5 INSTALLATIONS UNDER OUR SERVICE PROVISION -SUPERVISION



1 'SHOWROOM' PLANT IN THE USA (AMARTINSBURG, WEST VIRGINIA, IN JOINT VENTURE)

## THE SUSTAINABLE EQUATION. THE MISSION AND VALUES THAT GUIDE US





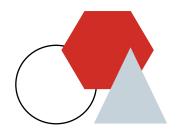
We develop smart technologies to lessen the
human impact on the environment and invest in
R&D to make our treatment methods ever more
useful and safe for people
and the planet.

We were founded with a clear objective: to create intelligent solutions to lessen the human impact on Nature.

An impact due to two determining factors that are difficult to control in the short term: the growth of the world's population and the average individual consumption of resources, with the proportional increase in waste associated with it. In order to avoid an uncontrolled increase in the outcome, we see only one way forward: to intervene in technological growth, the only factor we can influence in the short term.

This is the challenge we have been pursuing for 25 years, focusing on developing solutions with high technological value and low environmental impact. This has become our mission.

### **Innovative**



CREATIVITY
Ability to understand scenarios and anticipate technological development



GREEN SOUL Sensitivity to environmental issues



**TEAMWORK**Enthusiasm and involvement of people



APPROACH
Openness to global challenges and focus on growth markets



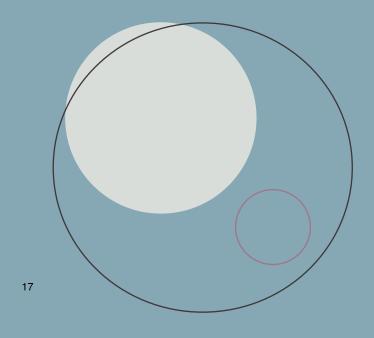
RELIABILITY
Accountability and commitment towards results



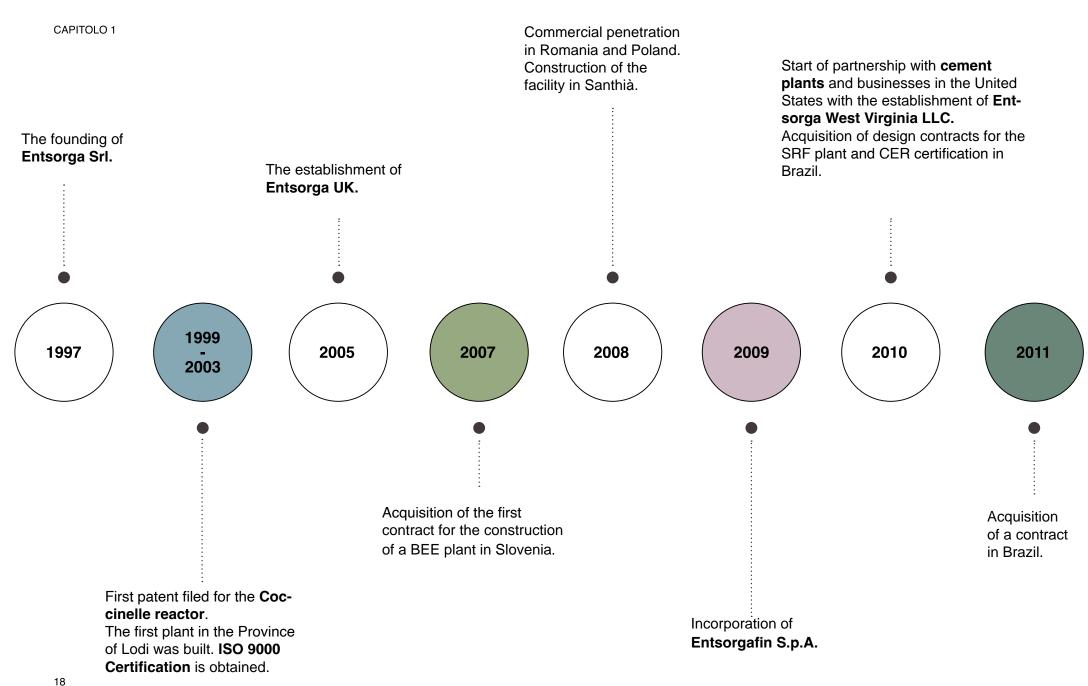
INTEGRITY
Ethical and transparent behaviour



### VALUES FOR 25 YEARS



Behind us we have a quarter of a century of solid experience and proven and certified reliability, a considerable time for our industry. Twenty-five years in which we have continued to work on our technologies, refining and improving them to make them more and more responsive to the needs of the environment and markets.



#### **CHAPTER 1**

SSF Prometheus
is accredited by EPA
as 'non-waste'.
The Group obtains
ISO 14000environmental
certification.

Construction of the first SSF plant in the United States with a Project Finance. The plant is sold to a local operator after completion and commissioning.

A second licence is obtained for a 150,000 tpa plant in the USA.

Agreement with a US investment fund to develop the construction of the plant. Construction of the semi-dry plug flow anaerobic digestion section to supplement the Santhià composting plant. The Eagle Cloud project is started for remote monitoring and management of the plant and AI data processing.

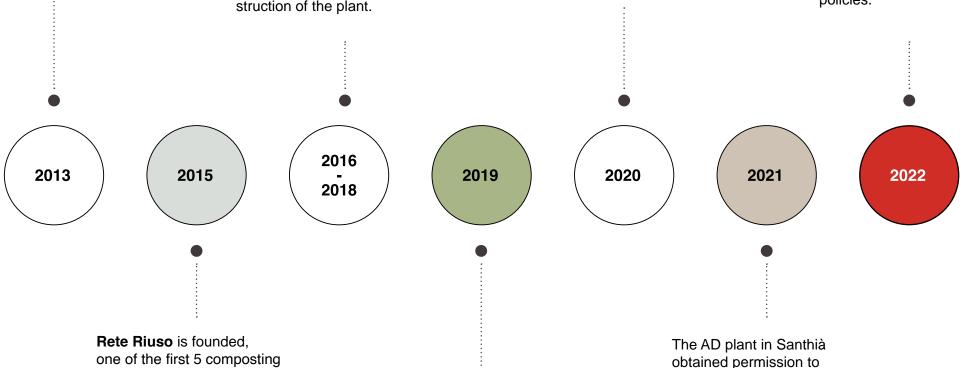
The Group invests to support **BEF Biosystems**, innovative bugfarm aimed at sustainable protein production.

A 3 million Euro green corporate bond is signed by Illimity Bank to support the Group's growth and ESG policies.

double its capacity and the

signed.

contract for construction was



Construction and commissioning

of an **automated feeding system** (Spider and Pelican crane) in the EU for a major cement production group. Sale of the Company Local Area and Resources at Iren Group.

19

plants in Piedmont, creating

the third national composting

hub.

## FROM WASTE TO RESOURCE. FOURTEEN TECHNOLOGIES TO CHANGE POINT OF VIEW

Reduce waste, promote reuse, improve recycling and eventually recover waste to limit the use of landfills. This is what it means for us to develop green technologies.

#### **CHAPTER 1**

ENTS TRANSPORTED REVOLUTION

Since our inception, we have created **14** proprietary **technologies** and **11 patents**, which are constantly improved through the continuous application of R&D results. Easy-to-use, automated, energy-efficient solutions that fully respect the principles of the circular economy.

To **recover matter** and **energy** from waste, or to reduce its volume and **stabilise it** before it is sent to landfill.

One of the first patents was the **Coccinella®**, our bio-reactor system to treat small amounts of organic waste and turn it into **compost**. Thanks to that, our brand has established itself globally and it has become our symbol throughout the world.

This was accompanied by technologies to reduce the polluting potential of waste and solutions to **bio-dry** and **refine** it into **alternative fuels**, particularly for cement kilns. Right up to the latest technology: an integrated system to treat organic waste and obtain not only compost and alternative fuel, but also **biogas**, the natural gas that **biomethane** is made from.

So we have come full circle, making 100% circular plants.

Zero waste, zero emissions and zero impact. The first has already been built in Santhià (VC), is already being expanded and has become a benchmark for those working in organic waste treatment.

The last frontier of our Green Technologies Revolution is **cloud-based support**: it is on this terrain that we hope to really play to our advantage, capitalising on our history and the enormous amount of data we have accumulated. The aim is to monitor plant performance even better thanks to a remote control system that also processes information using machine learning procedures, to keep processes in optimum condition at all times and intervene quickly in the event of anomalies.





























#### CHAPTER 1

	EMIS	SIONS		REACTORS					MECHANICAL TREATMENTS				SOFTWARE	
ENTS PRGA GENTE MACONTEAL PR	GeCo₂™	Biofiltro™	Bee™	Coccinelle™	Turtle Q-Ring™	Bat Q-Ring™	Q-Ring™	Scarabeo™	Cow™	Spider™	Prometheus <sup>®</sup>	Pelican™	Falcon™	Eagle™
COMPOSTING														
BIOSTABILISATION														
BIO-DRYING FOR SSF (SECONDARY SOLID FUEL)														
SECOND-GENERATION CELLU- LOSIC BIOETHANOL/SUSTAIN- ABLE AVIATION FUELS														
ANAEROBIC DIGESTION FOR ORGANIC WASTE														
ANAEROBIC DIGESTION FOR BIOMASSES														
SORTING AND RECOVERY OF PLASTICS														
ALTERNATIVE FUEL FOR KILNS IN CEMENT PLANTS			2											
METHANE CAPTURE SYSTEMS														
OPERATIONS AND MAINTENANCE														



### THE 4 R'S TO CLOSE THE CIRCLE.

The first strategy for limiting the human impact on the planet is to produce better, with less waste, therefore Reduce the use of resources needed to manufacture goods. But it is also the longest road to pursue. This is where the other 3 Rs can help us: Reuse, Recycle and Recover. These are the key actions to manage resources sustainably and develop a true circular economy model.



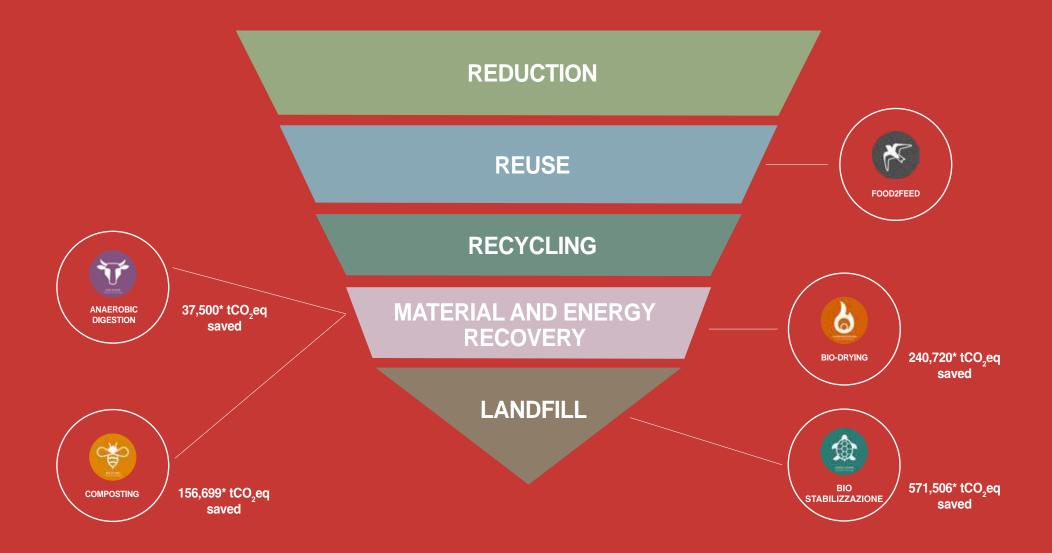
The impact of our waste on the climate is greater than we imagine. Worldwide, after agriculture, the oil and gas sector is responsible for about **20% of methane emissions**.

To address this scenario, the 4 R's pyramid was developed, a virtuous system of strategies aimed at prolonging the life of assets and keeping their value in circulation as much as possible. **Reducing** them, **Reusing** them, **Recycling** them and **Recovering** them, to minimise the use of landfill.

If the first two actions are aimed at **preventing** waste production, the third and fourth are the conditions for **transforming** it into a new resource and keeping it alive.

Our technologies are at the last level of the pyramid: they are agile and efficient solutions for **recovering matter** (**compost**) and **energy** (**biomethane and alternative fuels**) from waste, maximising its potential. Alongside these, we also offer systems to stabilise and sanitise the waste before it is landfilled, preventing it from releasing harmful emissions.





<sup>\*</sup> tC0,@q data are obtained from an estimation calculation for the year 2022, which covered all active plants built with Entsorga technologies.

# THE PRINCIPLES OF OUR SUSTAINABILITY



### THE SUSTAINA-BILITY POLICY

Our first certifications on quality and environment and Carbon Footprint Offsetting Reports date back to more than 20 years ago. But it was in 2022, with the first two ESG assessments, that the journey of sustainability was defined in a declared and formalised policy, a prerequisite for all our business actions.







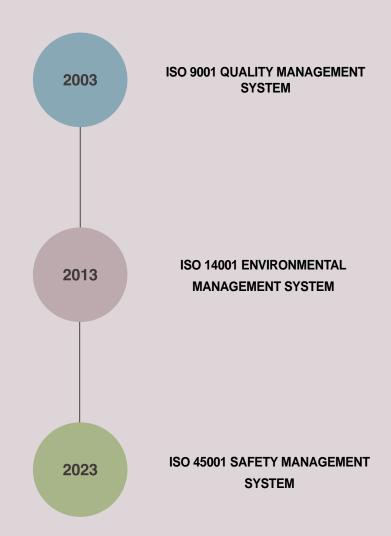
In 2022, we commissioned two **ESG assessments**, carried out with **Cerved Rating Agency** and through the **Open-ES** platform, obtaining an initial assessment of our sustainability performance, in the three environmental, social and governance dimensions.

In both cases, the **results** were **above the industry average**.

The scope of the analysis included the companies of EntsorgaFin S.p.A. group and Entsorga Italia S.p.A., with registered and operational offices in Tortona.

Based on the information that emerged, a sustainability policy was then defined, integrated into the ISO 9001 - 14001 and 45001 manual, and disseminated both within and outside the company.

In order to monitor progress on ESG issues and follow up on the preparation of the Report, a **head of** emissions management, CSR, social issues and governance was also appointed and a **Sustainability Committee** was formed, consisting of internal experts and 2 experts from outside the company.



### ENTSORGA GROUP SUSTAINABILITY POLICY

By sustainability we mean the creation of conditions for production, over the years, of profit streams that allow the preservation, development and remuneration of all the resources that have contributed to the result: the environment, first of all, our people, customers, suppliers and the community were we operate.



Here you can find the full version of our

Sustainability Policy.



# THE PACT FOR HEALTHY AND SUSTAINABLE DEVELOPMENT: JOINING THE GLOBAL COMPACT OF THE UNITED NATIONS

Our goals to create shared value and Entsorga's sustainability policy were set by taking into account the 10 principles of the Global Compact, as well as the 17 Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda.







In 2022, we joined the **UN Global Compact**, which encourages businesses around the world to create better economic, social and environmental conditions to promote **a** healthy and sustainable global economy that ensures everyone has the opportunity to share the benefits.









The UN Global Compact requires companies and organisations adhering to it to uphold and enforce within their sphere of influence a set of core principles relating to human rights, labour standards, environmental protection and anti-corruption. Universally shared principles derived from the Universal Declaration of Human Rights, the ILO Declaration, the Rio Declaration and the UN Convention against Corruption.



### **WE SUPPORT**



### THE TEN PRINCIPLES OF THE UN GLOBAL COMPACT

### **Human Rights**

**Principle 1**: businesses should support and respect the protection of internationally proclaimed human rights;

**Principle 2**: make sure that they are not complicit in human rights abuses..

### Labour

**Principle 3**: businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

**Principle 4**: the elimination of all forms of forced and compulsory labour;

**Principle 5**: the effective abolition of child labour; **Principle 6**: the elimination of discrimination in respect of employment and occupation.

### **Environment**

**Principle 7**: businesses should support a precautionary approach to environmental challenges;

**Principle 8**: undertake initiatives to promote greater environmental responsibility;

**Principle 9**: encourage the development and diffusion of environmentally friendly technologies.

### **Anti-corruption**

**Principle 10**: businesses should work against corruption in all its forms, including extortion and bribery.

### OUR GOVERNANCE

Transparency in actions, proper management and constant monitoring of risks. Our governance model, aimed at protecting and growing the company, is also the prerequisite for maintaining and developing healthy relationships of trust with stakeholders. And in this way create real shared value.

From a legal point of view, the holding company EntsorgaFin S.p.A. is headed by the **Board of Directors**, which consists of 2 persons, both legal representatives of the Group. Periodically, the Board of Directors liaises with employees, with a view to continuous improvement.

Every month, a meeting of the CEOs with the department managers is planned, and from this discussion the company's lines of action are prepared.

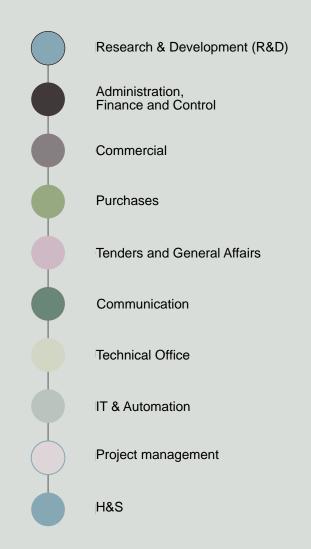


### The auditing bodies

The auditing bodies are the **external** auditing firm Ernst&Young and the Board of Statutory Auditors, consisting of 3 members and two alternates. Both have the task of supervising the proper management and administration of the companies, as well as compliance with the laws on financial statements.

In 2023, the Management Model pursuant to Decree 231, the Code of Ethics will be adopted and an anonymous channel (Supervisory Board), equipped with a secretariat, will be activated for the reporting of possible offences.

The Group's business activities are divided into **10 functional areas**:

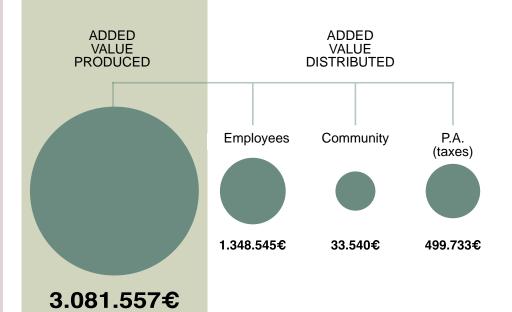






## THE GENERATED AND DISTRIBUTED ECONOMIC VALUE

For us, existing has always meant not only solving the waste problem in a cost-effective and efficient way, but also doing so in a way that is useful and fair to society. This creation of shared value has made us resilient and successful over time.





### A GLIMPSE INTO THE FUTURE

Constant innovation in products and processes, prototyping, experimenting with new methods of waste treatment and recovery. The development commitments for the next three years confirm our orientation towards creating economic value by generating positive impacts in the communities that we operate in.



## Investments in R&D

For us, investing in innovation is indispensable to guarantee, over time, those competitive advantages and thus those economic results that are essential to be able to continue protecting the interests of all stakeholders, i.e. our people, the community that we live in and the environment that hosts us.

5,41%
5.41% of turnover
2022 is allocated
to Research &
Development

In particular, the main investment fronts in the coming years are concentrated on **two projects**:

- The study and implementation, with the collaboration of the University of Pavia as part of the Lauree Magistrali Plus programme, of anaerobic digestion micro-plants. Two students, one from the Department of Advanced Biotechnology and one from the Department of Environmental and Land Engineering, are placed in the company for one year to follow the COW portable project, a prototype of a small-scale mobile anaerobic digestion plant to treat small quantities of sludge or organic waste and recover biogas and a digestate suitable for composting and becoming a high-quality fertiliser for agriculture.
- The **Food2Feed** project to create and operate a new plant to recycle packaging and reuse farm and food waste in agricultural Anaerobic Digestion plants to produce biogas-biomethane or to feed insect farms and produce animal feed.

## Development with a view to the circular economy

Our **development** activity is also continuing for the next three years. The core business will be the feasibility study, design, obtaining of authorisations and subsequent construction (EPC, acronym for Engineering, Procurement and Construction) of plants for the transformation of waste or by-products into **renewable fuels**.

According to a well-established business model, we will act as a developer: on the one hand, we will take care of obtaining environmental authorisations to build plants, and on the other hand, we will organise contests to find investors interested in acquiring the authorisation and building the plants, which will then be assigned to Entsorga.

CHAPTER 1

## **KPIs - A glimpse** into the future

Based on the results of Entsorga's latest analysis of the Open-es digital platform created to measure the growth of companies in terms of sustainability, we have developed our KPIs for 2023, which we will use as a gauge in the next Sustainability Report.

Entsorga's
Open-es rating
increased from
56 to 66 (2021 vs
2022)

### **FIELD**

### **OBJECTIVE**

### SUSTAINABILITY SYSTEM

- Definition of the Group Sustainability Policy
- Drawing up a voluntary Sustainability Report for the year 2022, aligned with international standards
- · For the 2023 edition, drafting a real Sustainability Report
- · Appointment of sustainability manager

### **PEOPLE**

- Defining KPIs and monitoring employee health and wellbeing and injuries
- Adoption of System 45 001 on security
- Training:
  - o Analysis of staff training needs
  - Delivery of courses to PMs and internal courses to employees and collaborators on safety
  - Delivery of courses for Department Managers to consolidate/develop team management skills
- · Welfare:
  - Increased mental-physical well-being of employees through the activation of sponsorship contracts with various sports and cultural associations
  - Construction of company gymnasium
- o Edenred Welfare Card and topping them up with pay supplements
- Underwriting of additional health policies (Cadiprof)
- Opening up the possibility of joining the company's Renewable Energy Community to employees/families/consultants
- · Automatic salary increases for employees at the birth of a child

### **ENVIRONMENT**

- Integration of environmental aspects into company policy
- Establishment of a Renewable Energy Community (REC)
- · Carbon Footprint Analysis and Assessment
- · Reduction and offset targets:
  - Improving energy efficiency per employee
  - o Increase e-bike fleet for employees
- Carry out VER Credit Creation project: feasibility study with comparative cost/ revenue analysis of a forestation versus proprietary geCO<sub>2</sub> technology (CO<sub>2</sub> sequestration system placed in some landfills in the Tortona area)
- Reducing environmental impacts of personnel through an internal canteen waste disposal system and self-production of energy

### **PROSPERITY**

- Maintain investment in Research and Development above 3% of Production Value.
- Supervision of risks and opportunities.
- Activities as a plant developer in a circular economy perspective:
   Study, Design and Construction (EPC) of Plants for Transforming Waste or By-products into Renewable Fuels.

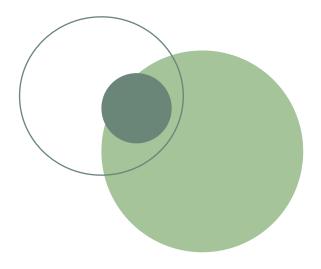
### **GOVERNANCE**

- Adoption of Model 231 for Entsorga Italy (appointment of Supervisory Board and administration office)
- White List Renewaladministration office)
- Application for renewal/updates Legality Rating.

# 03

## OUR ECOSYSTEM

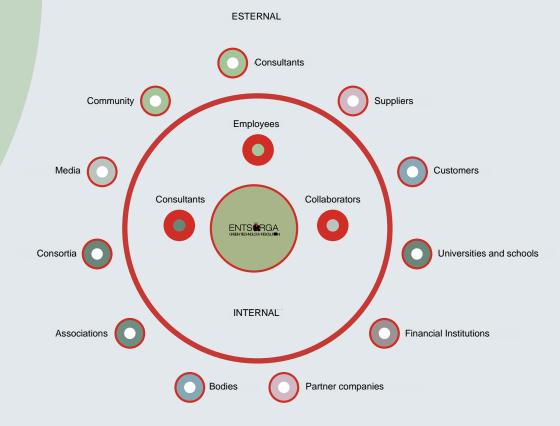
Transparency, trust, dialogue. The Sustainability Report is also an important opportunity to engage with our people, customers, suppliers and the entire ecosystem that we operate in. Knowing their expectations allows us to better define objectives and courses of action, taking into account their point of view and responding in a concrete manner to their needs as well.



### THE STAKEHOLDERS

Analysing all of the parties that we interact with, identifying those most affected by our operations was a key step in building a shared and participatory path to sustainability.

To actively involve our stakeholders, we started by defining the most relevant ones, distinguishing them into internal and external.





### Entsorga's values according to stakeholders











RESPECT FOR PEOPLE





## THE MATERIALITY ANALYSIS

Business approach and stakeholder perspective are effectively outlined in the materiality analysis. This is where the social, environmental and economic issues of greatest importance to Entsorga meet those of greatest importance to our main stakeholders. Comparing them leads to our priorities for action.

In order to identify the most relevant issues for the Group's internal and external stakeholders, for the first time we conducted a structured analysis of the main sustainability topics, resulting in our **first materiality analysis**, which takes into account the generated impacts.





## The material themes of Entsorga and their impacts

The Sustainability Committee, which was set up in 2023, defined the materiality issues to be submitted to stakeholders in the materiality analysis and at the same time highlighted the type of impact.

For each material topic, the level of significance that emerged from the stakeholder analysis is indicated. The value given ranges from low to very important on a scale of 1 to 4.

The material topics are functional to the achievement of one of the SDGs identified by the company by joining the United Nations Global Compact (see p. 27).

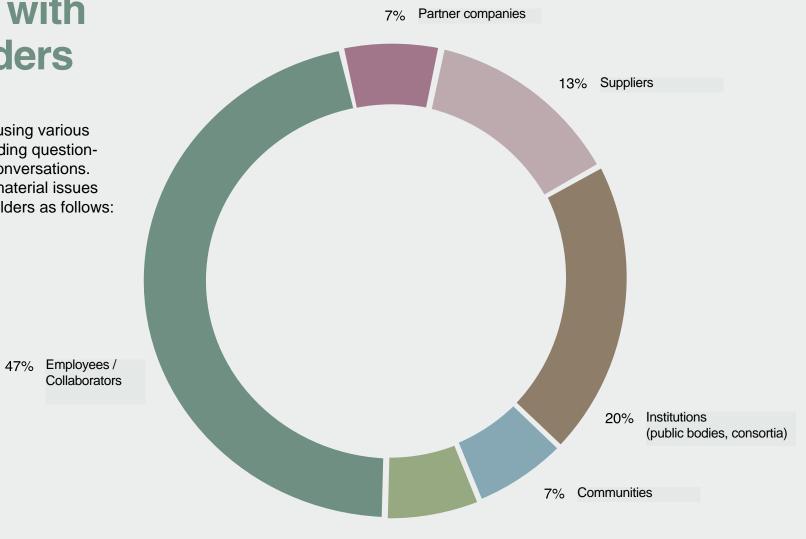
CATEGORY	MATERIAL TOPIC	TYPE OF IMPACT	SIGNIFICANCE FOR STAKEHOLDERS (low to very important on a scale of 1 to 4)	SDGs
Social responsibility	Community relations	Entsorga, through a constant presence, contributes to the development of the local area.	Very important	11 COMMUNITIES
	Employee welfare	Fostering a pleasant and safe working environment makes it possible to attract talent and reduce outgoing turnover.	Important	12 Environment representation repres
	Spreading the culture of environmental footprint	Entsorga believes in the importance of promoting a green culture inside and outside the company.	Important	13 PRINT MARKET COUNTY CO
	Culture of the local area	The local area that the company operates in is at the centre of a strategy of promotion and care.	Important	11 COMMUNITIES
Environmental responsibility	Circular economy and waste management	Supporting the circular economy model has a positive impact in economic and environmental terms.	Very important	13 ROFF AGAINST CONTACT CONT
	Sustainable technologies	Designing and marketing technologies that can make an environmental difference has positive effects on the environment and people.	Very important	13 FORM AGAINST  13 CANNEL  CONTROL  TO STATE OR CANTEL  TO STATE
	Research & Development	By dedicating resources to innovative projects, positive value can be generated.	Very important	13 COMME COMME
	Reducing emissions	Entsorga's commitment is twofold: to monitor and reduce its own emissions and to take action on third-party emissions through its own technologies.	Very important	13 CONTROLLET CONTROLL



CATEGORY	MATERIAL TOPIC	TYPE OF IMPACT	SIGNIFICANCE FOR STAKEHOLDERS (low to very important on a scale of 1 to 4)	SDGs
Governance	Transparency, ethics and integrity	Ethical business conduct and compliance with rules and i regulations has a positive impact in financial (penalties are avoided) and reputational terms.	Important	12
	Stakeholder involvement	Maintaining fair and transparent relations with one's stakeholders generates a positive impact.	Important	17 PATRICEGAS'S FOR GOLGENICS
	Sustainable supply chain management	Through the promotion of good practices, a virtuous circle is fostered.	Important	13 TRINT AGAINST CHANGE CHANGE
Economic responsibility	Financial sustainability	The company's financial strength enables it to support the other pillars of sustainability.	Very important	12 REPORTED PORTOR PORE
	Investments	The ability to invest in innovative projects has a positive effect on company growth and the environment.	Very important	9 ENTERPOSE NO MENORATE ENTERPOSE NO MENORAT
	Shared value	Generating shared value, both economic and intangible, has a positive impact on all stakeholders.	Important	11 COMMUNITES

## Dialogue with stakeholders

The process started by using various engagement tools, including questionnaires, interviews and conversations. We thus submitted the material issues to a selection of stakeholders as follows:



7% External consultants

### CHAPTER 3

Here are the first topics in order of priority for our stakeholders:

CIRCULAR ECONOMY AND WASTE MANAGEMENT

**INVESTMENTS** 

FINANCIAL SUSTAINABILITY

**COMMUNITY RELATIONS** 

**RESEARCH & DEVELOPMENT** 

**EMISSION REDUCTION** 

SUSTAINABLE TECHNOLOGIES

**EMPLOYEE WELFARE** 

SHARED VALUE

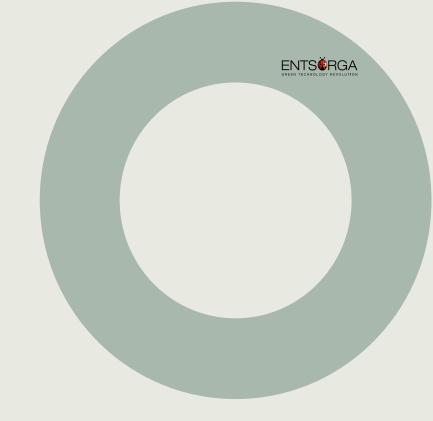
STAKEHOLDER INVOLVEMENT

CULTURE OF THE LOCAL AREA

SPREADING THE CULTURE OF THE ENVIRONMENTAL FOOTPRINT

TRANSPARENCY, ETHICS AND INTEGRITY

SUSTAINABLE SUPPLY CHAIN MANAGEMENT



Topics that are accounted for within this Report, confirming our commitment to keep the dialogue with our stakeholders open and alive.

## The voices of the parties we interact with

The level of expertise, specialisation and technological transversality developed by the company over the years make it an innovative lab that represents not only a benchmark for the region but also a source of inspiration to guide the dissemination of the culture of sustainability, which is fundamental to ensuring the development and well-being of society in the coming decades,

Sustainability and valorisation of the local area cannot be separated from each other. Entsorga and its affiliated associations have been implementing this process for some years now and the results are there for all to see.

This process has served not only to enhance the territory and promote environmental protection, but also to valorise the City of Tortona as a whole, in the fields of culture, food and wine, tourism, and accommodation, thus shedding light on the theme of itineraries. In recent years, following the Covid-19 pandemic, there has been a strong development in tourism, both national and international, with many tourists visiting our area, which has become a gem for the whole of lower Piedmont

Anna Ricotti - HR Consultant

Federico Chiodi - Mayor of Tortona and Fabio Morreale - Deputy Mayor of Tortona

The valorisation of the territory, particularly in the case of an environment such as that of the province of Alessandria, is fundamental to boosting economic and social development, thus giving dignity and hope to the inhabitants. The attractiveness of an area depends on its will to make itself unique. The characteristics of our area facilitate this task and therefore, the possibility of interacting with companies such as Entsorga could contribute to the sustainable development of the Province of Alessandria. I firmly believe that local development must, first and foremost, respect the environment. On the contrary, it should be able to make the environment an economic driver based on the close connection between labour employment and the well-being of the population

"

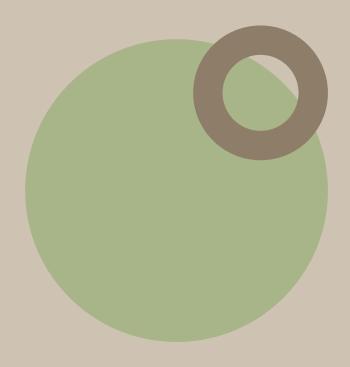
Matteo Gualco — Vice President Province of Alessandria I believe that companies in the green economy context have to work hard to guarantee and convey their mission and objectives both internally and externally (customers and suppliers, stakeholders, economic and social context) with strength, determination and without possible misunderstandings. We are realising more and more clearly that education through models is not entirely effective. Active roles must be implemented through authoritative and clear communication of choices, values, objectives and results. This has to be done by adapting communication to different audiences, to link critical aspects and problems as strongly as possible with positive actions and their effects. In this way we can promote awareness of the need for a sustainable culture

"

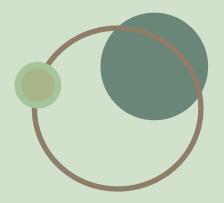
Enrico Boccaleri - Director of the Interdepartmental Centre UPO4Sustainability

# THE VALUE SHARED

For us, being sustainable means ensuring the creation of wealth over time and we rely on our people and stakeholders to do this.



## THE PEOPLE OF ENTSORGA



We are an engineering boutique, founded on the selection and development of excellent skills.

And it is precisely on skills that we believe our fate stands on today. This is why we consider any investment in training, welfare and corporate welfare a prerequisite for being more productive, attractive and competitive.

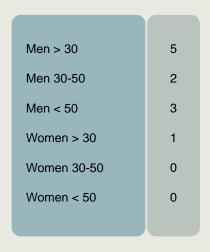


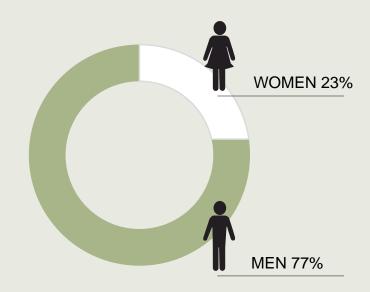
## **Employees – Facts and Figures**

At Entsorga we calibrate our recruitment by selecting new graduates to develop them in the company. In the case of the other age groups, the search is usually for senior profiles with high experience and training to add value to Entsorga.

The starting conditions are good, as shown by the **ratio of the entry salary** (guaranteed in your company) **to the local minimum wage**: for men the ratio is 1.79, for women 1.34.

### **Recruitment 2022**





In 2022 the number of employees is 30, a stable figure compared to 2021 (29). 100% of the employees are employed on a permanent basis and covered by the sector's national collective labour agreement: for white-collar workers it is the national collective labour agreement for professional offices, while one is covered by the national collective labour agreement for metalworkers.

We pay a lot of attention to the **relationship with the workers** and on average the notice period before a job change is about 1 month.

Employees - breakdown by gender and role	U.M.	2021	2022
Male executives	n	0	0
Female executives	n	0	0
Male middle managers	n	3	0
Female middle managers	n	1	0
Male employees	n	16	15
Female employees	n	4	8
Male labourers	n	4	4
Female labourers	n	2	2

### Diversity and inclusion

At Entsorga, there is a clear desire to consolidate gender equality, which has already been achieved at the level of pay (the ratio of the average salary of women to men is between **0.9** and **1.1**).

All employees are hired by level and job description, the average salary between men and women is uniform and aligned according to tasks.

At the policy level, internal guidelines are followed to ensure respect for diversity.





### **Training**

In 2022, we increased **training** per capita by 31%.

In particular, we planned **sustainability courses** to develop ESG skills and defined customised coaching courses to **strengthen the leadership** of the front lines.

On the other hand, we only planned health and safety courses for white and blue-collar workers because, for the other categories, the previously held courses were still valid.



Training and Education	U.M.	2021	2022
Average annual training hours per capita	h	8	10,5
Training hours per employee total	h	232	316
Training hours per male employee	h	204	223
Training hours per female employee	h	28	93
Middle management training hours	h	-	66
Employee training hours	h	104	152
Labourer training hours	h	128	99
Hours of health and safety training employees	h	-	108
Hours of health and safety training labourers	h	48	14
Middle management computer training hours	h	-	14
Middle management computer training hours	h	-	28
Specialised training hours	h	34	42
Middle management managerial training hours	h	-	26

### Welfare

We provided all employees with a supplementary health insurance policy and a Welfare Card for meal vouchers and petrol, and we have signed contracts with several local sports associations to enable everyone to take advantage of favourable conditions for physical activity and increase their mental-physical well-being. A benefit of 500 € was also distributed to each employee.

## Worker health and safety

Occupational Health and Safety is a priority issue for us. This is why we have a Risk Assessment Document which includes the activities of the consultants.

In 2022, **0 accidents** occurred to Entsorga personnel.



Occupational accidents with serious consequences

0

Recordable occupational accidents

0

Total number of working hours

50.727

All employees are eligible for UNISALUTE supplementary assistance.
In addition, employees travelling abroad for

In addition, employees travelling abroad for work are covered by CHUB insurance.



## THE COMMUNITY AND THE LOCAL AREA

Today, sustainability has become a recurring word, which risks losing its meaning if it is not transformed into concrete and continuous actions.

This is why our commitment to the community grows every year with economic support, especially to sports, social and cultural initiatives.



In order to make our region also a welcoming and **attractive** place for **young talent**, where they can choose not only to work but also to live, each year we promote **projects to support local communities**.

In the **sporting sphere**, in 2022 we confirmed our contribution to **Azalai**, the Tortona sports association created to promote running in nature and enhance the local area through sport, which also organised the first edition of the Derthona Half Marathon.







With Entsorga, we at Derthona Basket share the conviction that only joining forces can really help improve the impact on the environment by making it more sustainable. We also share a passion for what we do: an indispensable element for the success of any kind of activ-

Ferencz Bartocci - CEO of Bertram Derthona



Together with **Bertram Yachts Derthona Basket**, we inaugurated the 'Let's crushCO<sub>2</sub>' project to bring the team, the first in the Italian Series A championship, to **carbon neutrality**. The project was publicly presented on 8 September 2022 at the conference 'What Energy?' where several experts on climate change, energy issues and sport spoke. These included Luca Mercalli, climatologist and science reporter, Roberto Cavallo, Cooperativa Erica and Ferencz Bartocci (CEO of Bertram Derthona).



In October, for the first time, we joined the world **plogging** championship, an innovative and unique competition held in **Pinerolo** and the territories of the Unione Montana delle Valli Chisone e Germanasca. Runners, amateurs and professionals alike, raced cleaning up the land, sending out an important ecological message, with a focus on inclusivity: among the finalists, from a dozen nations around the world, there were also some Paralympic representatives.

We supported the **Rice Marathon** in Santhià (VC) and were partners in organising the **Milan Junior Camp** in Casalnoceto.

In the **cultural sphere**, three were the most significant initiatives supported:

- the jazz evenings of Arena Derthona, a musical event that has been bringing internationally renowned artists to the area for over ten years;
- the partnership with Attraverso Festival, a
  festival spread across the hills of southern
  Piedmont, with whom we also organised
  a round table dedicated to the climate
  emergency and the urgency of activating
  a serious reflection on renewable energy
  sources, alternatives to gas and oil;
- support for Progetto Ambiente Scrivia, an initiative dedicated to enhancing the city's river park, which provided us with the spectacular shots that enrich this edition of the Report and were also used to make the 2023 calendar.





### **SUPPLIERS**

We are a company that develops technologies and patents and uses a selected network of suppliers to implement waste recovery systems and plants. Responsibly monitoring and managing the sustainability of the entire supply chain is important first of all to ensure the quality of our interventions and the durability of our services. But it is also a commitment we have made, being aware of the impact the supply chain generates in social, economic and environmental terms.



Due to its transversality, the supply chain is the dimension in which a company can potentially have the greatest impact in making its contribution to the spread of sustainability.

Our business does not involve the purchase of raw materials. The largest share of expenditure is on commercial products.

In 2022, spending on local suppliers (calculated by taking into account the territories where the plants are built with Entsorga's technologies) amounted to around 14.5 million Euro (up from around 9.1 million Euro in 2021).

We have been involving first-tier suppliers on sustainability issues for years and have implemented a data collection system to measure their performance in this area.

Suppliers are required to sign the company's Code of Conduct. Rewarding criteria for the most sustainable companies were included in the tendering and qualification processes.



# THE COMMITMENT TO THE ENVIRONMENT



## CONSUMPTION AND EMISSIONS

Every year we monitor the direct impacts of our business, engage in precise mitigation strategies, and offset non-reducible emissions by acquiring certified carbon credits generated by positive environmental protection projects.

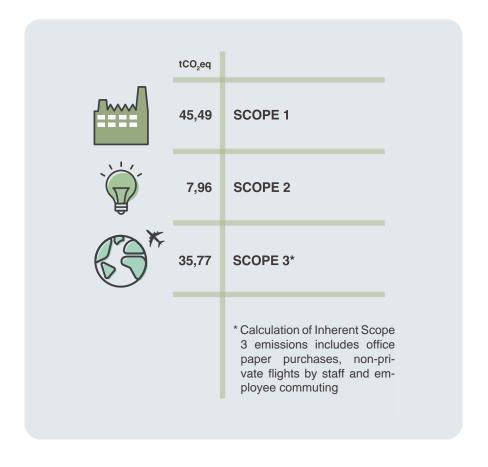


Despite growth in both the economy and the number of employees, in the environmental field we have set ourselves the goal of **continuing to limit our direct impacts**: we have thus set further targets for reducing and offsetting CO<sub>2</sub> emissions, which have been systematically monitored for more than ten years.

Our direct impact can be attributed to the **sum of** greenhouse gas **emissions** into the atmosphere generated by **energy, water and paper consumption and corporate mobility\***, expressed in tonnes of carbon dioxide equivalent (tonne  $CO_{2eq}$ ).

In 2022, our direct non-reducible emissions amounted to 90.7 tonnes CO<sub>2eq</sub>, a marked increase from 2021 (66.2). All indicators taken into account show growth, in particular corporate mobility for the resumption of construction sites after the pandemic. In contrast, emissions from paper consumption are decreasing.

In 2022 Entsorga monitored  $CO_{2eq}$  emissions related to the consumption of goods associated with non-renewable sources (consumption associated with means of transport, electricity, kg of paper used).



<sup>\*</sup>The data source for documenting direct impacts is the company archive. To calculate ton CO<sub>2eq</sub>, we performed a dimensional analysis comparing the estimated size with the emission factor (EF), according to Defra/DECC's GHG Conversion Factor Guideline 2017.

<sup>\*\*</sup>These emissions were offset with **the purchase of as many CO**<sub>2</sub> credits generated by the 'Torrione, Colleretto, Giacosa, Bairo landfills' project



In order to limit our direct impact, we are striving to reduce car journeys, favouring teleconferences, and to limit energy consumption, controlling the temperatures of our offices, as well as discouraging the printing of documents and favouring the use of certified ecological paper.

In 2022, we purchased **an electric car** for short staff trips and installed bike **storage systems** and **charging stations** for cars.

In 2022, a photovoltaic system was installed in the new offices, which will be fully operational in 2023, and the purchase of a fleet of e-bikes is also planned.

Also under consideration is the economic evaluation of building **an anaerobic mini-digester** to dispose of waste from the company canteen and transform it into electricity for self-consumption.



### **RESEARCH & DEVELOPMENT**

Constant innovation in products and processes, prototyping, experimenting with new methods of waste treatment and recovery. We are constantly engaged in Research & Development, also by participating in projects to share experiences and gauge ourselves against important and qualified partner networks. To always be at the forefront of the creation of cutting-edge technologies.

One of the world's most ambitious challenges to make our cities and industrial processes more sustainable is to find innovative ways of **recovering urban** waste and transforming it into new materials useful for agriculture and industry.

This is why **SATURNO** (acronym for Organic Waste and Carbon Dioxide Transformed into carbURants, fertilisers and chemicals; concrete application of circular ecoNOmia) began in July 2019, a project financed by the Piedmont Region that we participated in along with **23** other **partners** including universities, research centres and companies. Its process, which lasted three years and concluded in 2022, allowed important topics related to the **recovery of bioplastics from organic matrices and the reuse of** CO<sub>2</sub> to be explored.



In particular, our contribution concerned the construction of a prototype of a state-of-the-art NIR optical separator to identify and select plastics from organic waste and thus maximise their chances of recovery and reuse. The instrument was used together with two partner companies to carry out two types of tests: the first was carried out upstream of the recovery process, on plastics obtained from the pre-treatment of OFMSW (Organic Fraction of Municipal Solid Waste), the second on plastics separated downstream of the composting process. The sorted and untreated fraction of non-biodegradable plastics was eventually used in a plant to produce better quality SSF (Solid Secondary Fuel). In addition to the characterisation of plastics (PET, PE, etc.), a further objective of the tests was to create a database to assess the level of refining required to make SSF particularly efficient for cement kilns by eliminating PVC with a high chlorine content.

In 2021, Saturn received the **IR20 award from the Piedmont Region** dedicated to the best Innovation and
Development projects in the 'public-private collaboration'
category within the 'Green economy' sector.





# Insecticulture and biotechnology: the shareholding in BEF Biosystems Srl

Theinsect breeding sector is today considered one of the most interesting and promising sectors to meet the growing demand for protein sources and to offer an alternative and sustainable solution in animal nutrition.

2022 also marked the beginning of our collaboration with BEF (Bugs for Environment and Feed) Biosystems, an innovative start-up that in 2016 patented a biotechnology to produce protein for animal feed by rearing Soldier Fly larvae on organic waste. In 2022, EntsorgaFin became a shareholder of BEF and, at the same time, Entsorga Italia SpA signed a supply agreement for the industrial production of machinery developed by BEF Biosystems.



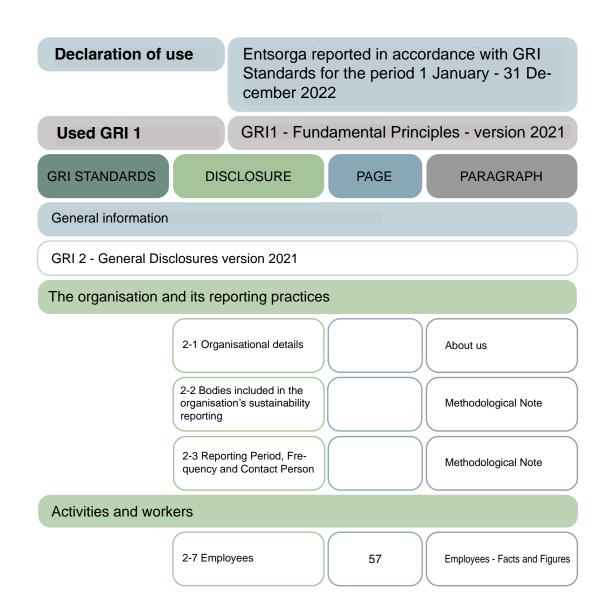


The first 'Bugsfarm' pilot plant was set up in Casalnoceto (AL), to field test the process and technology. The system is based on small-scale modular
plants that use organic waste and residues recovered from the territory as a nutritional substrate for
soldier fly larvae that, once grown, can be used as
an alternative protein source directly in the poultry
sector or, by transforming them into meal and fat, in
various feed sectors (from pet food to pig farming).
The use of renewable energy sources or recovered
energy sources makes the system asa whole a
model of circular economy and environmental sustainability, which also contributes to a positive boost
in the economic and social development of the area.

In 2022, the start-up, also thanks to the entry of Entsorga, began the phase of consolidating the organisational structure for corporate development and the realisation of the first plants. The business plan foresees the start-up of the first farms by 2023 and development in Italy and abroad in the following years.



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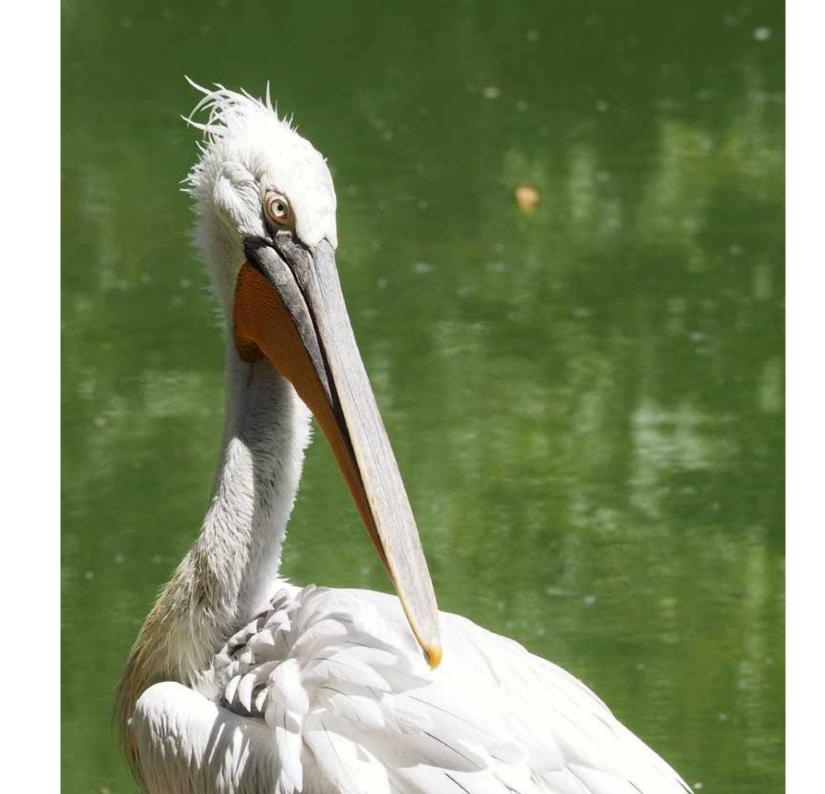
Consumption and emissions

305-5 Reducing GHG emissions

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Consumption and emissions





The photos were taken a few kilometres from our headquarters in the Scrivia Park (Tortona).

Photographs by

Franco Arcesati, Paolo Udina

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