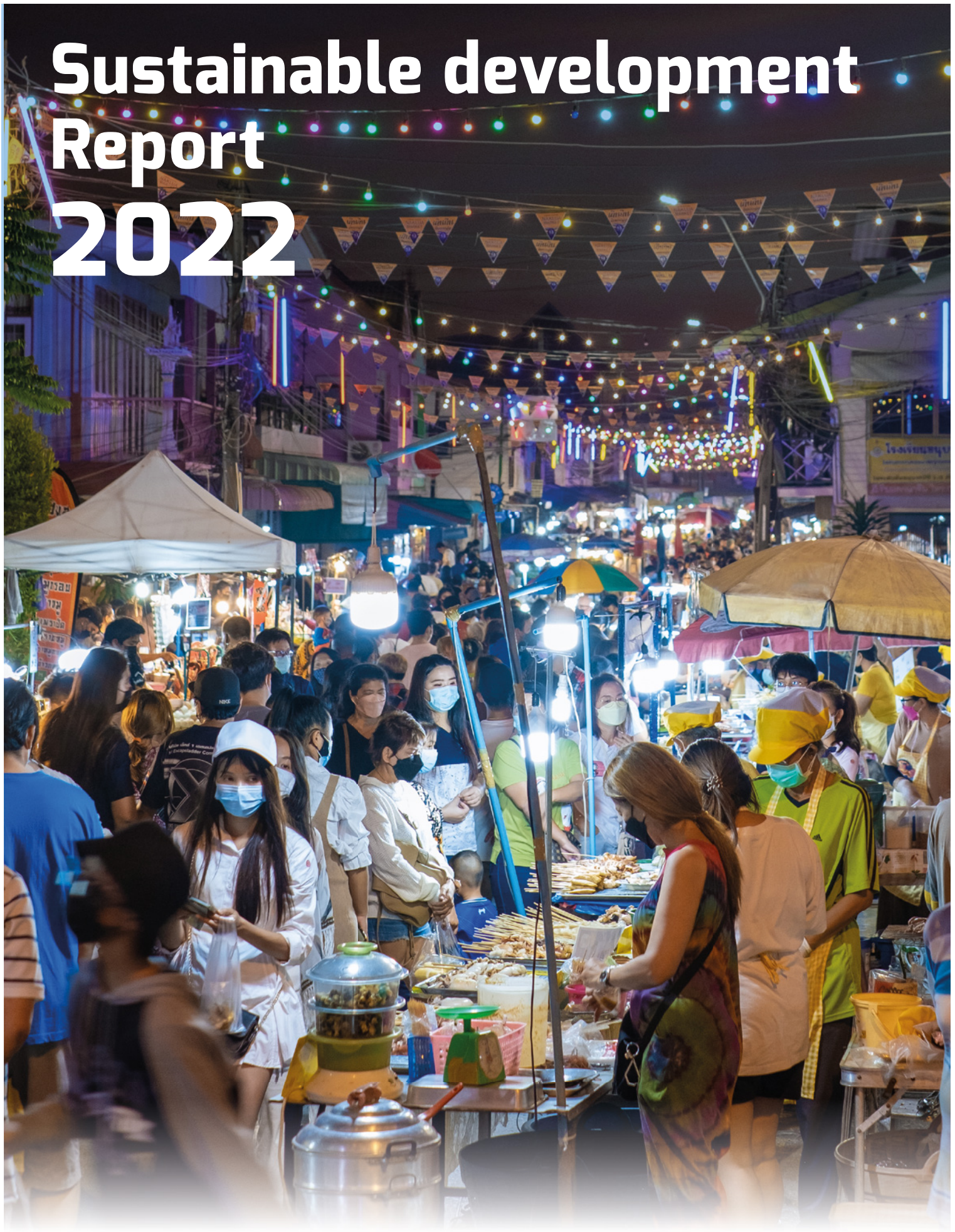


# Sustainable development Report 2022



[www.adisseo.com](http://www.adisseo.com)

**ADISSEO**  
A Bluestar Company





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**RESPONSIBLE CARE®**  
OUR COMMITMENT TO SUSTAINABILITY

Adisseo is a signatory to the Responsible Care global charter and, as such, is committed to safe management of its products throughout their lifecycle, the promotion of their role in improving quality of life and their contribution to sustainability.

Adisseo has voluntarily followed the Global Reporting Initiative Guidelines in preparing this report  
Find out more at [www.globalreporting.org](http://www.globalreporting.org)

# Conversation with

**Jean-Marc Dublanc**

Chairman and CEO of Adisseo



## **What is your assessment of Adisseo in 2022?**

The word that comes to mind to characterise 2022 is "chaotic": the pandemic that lasted in China throughout the year, the war in Ukraine, the unprecedented energy crisis in Europe, the crisis in agricultural raw materials, inflation, etc.

Under these conditions, Adisseo has shown resilience and a strong capacity to adapt, which has enabled us to get through this succession of crises while limiting the damage.

This has been possible thanks to our Vision and our Mission, which are very clear and haven't changed. Of course we have had to adapt our strategy and tactics, but we have stayed the course: as an example, I would like to mention the remarkable start-up of our new liquid methionine unit in Nanjing, built without accidents, on time and on budget, and with product on specification from the very first batch.

We have also completed the construction of the first Calysseo site in Chongqing (China), which is now operational and will start supplying FeedKind® (single cell protein) for the Chinese farmed fish feed market in the first half of 2023.

## **On what fundamentals is your governance based?**

Fundamentally, Adisseo's governance is rooted in its Mission, i.e. to feed the planet by providing high quality, affordable, safe and sustainable products and solutions.

Our priority is safety in all its aspects: safety of people, processes, our products, transport and the environment.

Adisseo also aims to ensure the sustainable development of its activities in economic, social and environmental terms. To this end, in 2022 we created a Strategy and Sustainable Development Department within the Executive Committee, which is responsible for ensuring the alignment of the company's strategic and environmental objectives.

From an operational point of view, this commitment translates into responsible governance and management, responsible purchasing, responsible production, and the development and marketing of sustainable products and services.

Adisseo also pays particular attention to ensuring that added value is distributed fairly among our various stakeholders.

## **What are Adisseo's major objectives in the short and medium term, particularly in terms of sustainable development?**

Our priority is to meet the needs of our customers, regardless of the uncertainties and external challenges we face. We ensure that every innovation idea or project has a sustainable development component and that our new products and services provide our customers with solutions that also enable them to reduce their carbon footprint.

Adisseo has also joined the collective goal of carbon neutrality as defined in the COP21 conclusions, adopting ever more ambitious short, medium and long-term environmental targets.

Furthermore, Adisseo is committed to contributing to the United Nations' sustainable development goals with a particular focus on objectives 2 (zero hunger), 8 (decent work and economic growth), 12 (responsible consumption and production) and 13 (measures to combat climate change).

To achieve its sustainability ambitions, Adisseo relies on the extraordinary collective commitment of its staff, which we aim to continuously develop by improving the attractiveness of the company and by promoting diversity, inclusion and mutual respect in the service of a motivating Vision and Mission.



# COMMITTED TO OUR STAKEHOLDERS

Thanks to regular meetings, constant monitoring and transparent communication, Adisseo has developed and maintained long-term relationships of trust with all its stakeholders, whether employees, business partners, shareholders, authorities or members of the general public.

## CERTIFIED ACTIVITIES, A PLEDGE OF CONFIDENCE

*Adisseo's activities are certified to meet the needs and expectations of its stakeholders (staff, customers and prospects, applicants, authorities, media, etc.) in terms of product quality, personal safety, environmental protection, risk management and customer satisfaction.*

All of its production units and research & innovation centres are **ISO9001** certified in the area of quality management, **ISO14001** in the area of environment and **ISO 45001** in the area of safety.

Its sales activities are also **ISO9001** certified.

Operating in the field of animal nutrition, Adisseo has chosen the FAMI-QS (Feed Additive and preMixture Quality System) certification to demonstrate its high standards in the field of health safety.

In the last two years, the company has also had the energy management system of all its major industrial sites certified to **ISO50001**, which covers more than 95% of its energy consumption.

All of these certifications are a source of progress and confidence and are audited every year.





## RELYING ON A **MATERIALITY ANALYSIS**

*Identifying CSR (Corporate Social Responsibility) issues, their importance for external stakeholders and their impact on the company's overall performance and sustainability helps to give meaning to the Group's strategy.*

The mapping of these challenges is established in **five areas**:

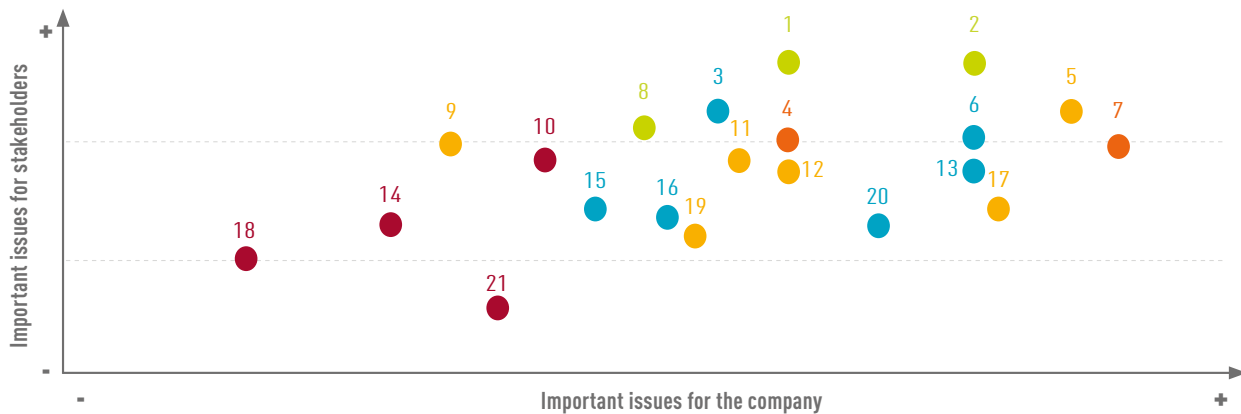
- Environment,
- Social matters & management,
- Society,
- Products & services, and
- Governance, and is regularly reviewed.

This helps identify the priority issues on which Adisseo must focus, based on **four axes**:

- Safety & sustainable development,
- Commercial development,
- Competitiveness & operational efficiency, and
- Employee commitment.

### *Materiality map updated in 2022*

(based on the findings of the Sustainable Development Working Group)



#### ● Social matters & management

- 1 Personal safety
- 7 Talent management, training

#### ● Products & services

- 2 Long-term investments, external growth
- 8 Innovation, medication reduction
- 9 Product quality, health safety

#### ● Environment

- 3 Respect for the local environment, control of nuisances
- 6 Control of environmental risks

#### ● Governance

- 4 Responsible value creation
- 5 Ethics, compliance
- 10 Crisis management preparation

#### ● Society

- 11 Contribution of our products to sustainable development along our value chain
- 12 Relationship with local authorities and communities



## ADISSEO AWARDED A SILVER MEDAL BY ECOVADIS

At the beginning of 2023,  
Ecovadis awarded Adisseo

### The silver level

for its CSR (Corporate Social  
Responsibility) performance



with an overall score of

**68/100**

On the  
**Social and  
Human  
Rights  
criterion**



Adisseo is in the  
**Top 8%**  
of companies assessed  
in the animal feed  
manufacturers sector.

On the



**Environmental  
criterion**

Adisseo is in the  
**Top 13%**  
of companies  
evaluated in the same  
sector.

On the  
**Responsible  
Purchasing  
criterion**



Adisseo is in the  
**Top 4%**  
of companies evaluated  
in this sector.

On the

**Ethical  
criterion**



Adisseo is in the  
**Top 25%**  
of companies evaluated  
in this same sector.

*The overall result places Adisseo in the top 4% of companies assessed, well above the industry average of 47/100.*

Ecovadis is a **recognised assessment body**, which aims to encourage and accelerate ethical, social and environmental performance throughout the supply chain.

**This recognition encourages Adisseo to continue its efforts in terms of sustainable development.**

The control of environmental impact, social policy and responsible purchasing are now the company's strong points.

The detailed analysis of the results will help define the areas for progress in the field of ethics.

### CSR performance





## OTIF : KEY PERFORMANCE INDICATOR

OTIF (On Time In Full) measures the frequency with which customers receive their orders on the requested date and in the expected quantities.

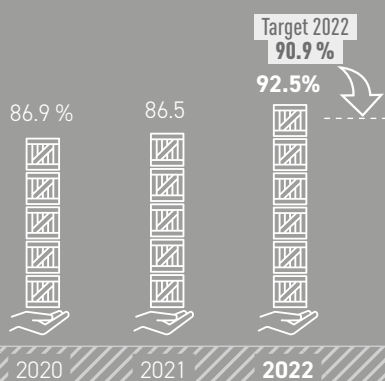
Transport as a whole (maritime, road) experienced significant availability and reliability problems in 2020 and 2021.

However, 2022 marked a gradual decrease in tensions on supplies and transport in an economic environment that remains tense.

In order to steer and manage OTIF objectives as closely as possible to the teams on the ground, targets were set in the first half of the year, then reviewed and adapted in the second half of 2022.

This adaptive strategy enabled us to **stabilise the performance of our supply chain in the first half of the year and then improve it in the second half.**

The concrete actions implemented throughout the year enabled a positive evolution of the indicator and to exceed the targets that had been set.





## 2022 A STEP FORWARD TOWARDS SUSTAINABLE DEVELOPMENT AT ADISSEO

*In May 2022, the Executive Vice President Sales and Marketing, a member of Adisseo's Executive Committee, was appointed Vice President in charge of Strategy and Sustainable Development.*

This appointment of a member of the Executive Committee, with a long experience in the Group, is a clear demonstration of Adisseo's commitment to sustainable development and its integration into the Group's strategy.

The sustainable development objectives and priorities have been formalised in a Group sustainable development roadmap, which was validated by the Executive Committee in June 2022 and then widely communicated to all employees.



This roadmap is consistent with the company's vision, missions, values and behaviours, which were defined some years ago:

It is also based on 4 of the 17 UN (United Nations) Sustainable Development Goals on which Adisseo has decided to focus:



### VALUES & BEHAVIORS

Integrity, crativity, team spirit, responsibility, results-focused culture, committed, courageous, customer focus, simple, respectful.



### VISION

Offering our world healthy, sustainable, affordable, high-quality food.



### MISSIONS

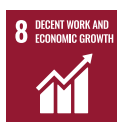
We, Adisseo, **contribute** to the sustainable growth of the planet

We deliver **innovative** products and services to the feed and food industry

We are **committed** to a fair balance of the value we are creating between our customers, employees and shareholders.



Contribute to the development of resilient agricultural practices that lead to a positive impact for available, quality, affordable, safe and sustainable food.



Protect labour rights and ensure safe and secure working conditions for all workers.

Focus on developing sustainable products and solutions.



Develop and deploy New Production Practices to reduce Adisseo's environmental carbon footprint.

Develop solutions that contribute to the reduction of the environmental carbon footprint throughout our value chain.



Align Adisseo's environmental carbon footprint targets with the Paris COP21 agreement.

Adisseo's ambition in this respect is to:

- Place sustainable development at the heart of Adisseo's strategy to ensure sustainable growth.
- Align its environmental footprint reduction objectives with those of the Paris Agreement.



## FROM AN OPERATIONAL POINT OF VIEW, THIS STRATEGY IS BROKEN DOWN INTO **4 PRIORITY PILLARS**:

**1**



**Reduce**  
Adisseo's environmental  
footprint.

Adisseo's commitments in terms of reducing its greenhouse gas emissions and its energy and water consumption in 2025 are:

**Absolute greenhouse gas emissions:**

**-21% between 2020 and 2025.**

**Absolute energy consumption:**

**-13% between 2020 and 2025.**

**Water use intensity:**

**-20% between 2015 and 2025.**

⇒ In parallel, Adisseo is working on defining new sustainable development objectives for 2030 and 2050 in line with the Paris Agreement.

**2**



**Contribute to the reduction of the environmental footprint throughout our value chain.**

In addition to reducing the carbon footprint of its own activities, Adisseo is committed to contributing to reducing the carbon footprint of its customers in various ways:

⇒ **By enabling our customers to benefit from our knowledge and our support in reducing their scope 3 emissions.** This

is reflected in the adoption of low-protein diets for monogastric animals, Net Energy formulations for poultry and amino acid balancing for ruminants.

⇒ **By focusing our research and innovation** efforts on developing new products and services that will have a positive environmental impact on our customers.

**3**



**Behave responsibly towards our employees, our stakeholders and society at large.**

Adisseo's priority is to ensure safe working conditions for its employees, but also to guarantee to local communities and authorities that our production sites operate safely, and to engage in a dialogue with them on our sustainable production roadmap.

**Beyond that, Adisseo is committed to:**

⇒ Ensuring good working conditions for all its employees and subcontractors.

⇒ Leveraging Adisseo's values and behaviours to develop team spirit and effective collaboration.

⇒ Developing skills and talent and increasing diversity for sustainable growth.

Finally, Adisseo is committed to developing its « **We Care** » social action programme.

**4**



**Strengthen governance and reporting on sustainable development, including by:**

⇒ **Strengthening** responsible corporate governance, with compliance and ethics as cornerstones of our sustainability roadmap.

⇒ **Preparing** Adisseo for the implementation of the EU Sustainability Reporting Directive and future Chinese non-financial reporting requirements.

⇒ **Structuring and improving** the dialogue with our stakeholders and adjusting our priorities accordingly.

⇒ **Integrating** the sustainability commitment component in the selection of our suppliers and business partners.

*In this sustainability report, you will find many examples of our progress. We are aware of the work that still lies ahead to collectively achieve carbon neutrality. However, we can rely on a clear and shared vision of where we want to be, which is a crucial step in engaging the entire Adisseo community.*

## INNOVATING TOGETHER

*Convinced that a company's growth depends on its ability to innovate, Adisseo constantly invests in research and innovation, through university partnerships or by taking stakes in new projects.*

In May 2022, Adisseo **formalised its collaboration** with Singaporean company Entobel, a specialist in the production and processing of insects. The common objective is to optimise insect breeding by better understanding their nutritional needs.

**Insect protein** is a viable alternative for feeding animals and humans and for coping with demographic change.

At the end of 2022, Adisseo announced its participation in the new round of the first agri-food technology venture capital Bits x Bites in China, a venture capital fund investing in early-stage start-ups with transformative technologies, to address the most important challenges of the food industry in China.

This investment is in line with Adisseo's strategy which focuses on activities at the forefront of agriculture and livestock transformation: animal health, food and nutrition and digital technologies for livestock.

**Jean-François Rous, Executive Vice President Research & Innovation** of Adisseo, said: "Adisseo is a unique company that is committed to strategic investments in new disruptive technologies to enhance our R&D innovation portfolio while following a sustainable growth path."



## INTERVIEW WITH SÉVERINE DESCHANDELLIERS

President of FEFANA (European Feed Additives Manufacturers Association for animal nutrition) and Adisseo Market Access Director

**“ You were re-elected in 2022 as president of FEFANA. Can you describe the role of this association? ”**

FEFANA is a European association that represents and defends the interests of the specialty feed ingredient and feed blending industry in Europe.

This association fosters dialogue and a cooperative approach between European institutions and our companies. In practice, FEFANA contributes to the decision-making process for new European laws and regulations that apply to our industry, so that the

European regulatory framework is proportionate and **favourable to the competitiveness and innovation of our companies** on the single and on the global market, in particular in this period of profound ecological transformation embodied in Europe by the Green Pact.

FEFANA's members represent more than 90 companies, from multinationals to SMEs, with production, pre-mixing and distribution sites located throughout Europe.





### What is the advantage for Adisseo to be represented there?

Adisseo is a world leader in the production of additives and nutritional solutions for animal feed. As a key player in the animal protein production chain, **we are committed to providing safe, profitable and sustainable nutritional solutions to our customers.** As a FEFANA member, we can actively advocate for our industry and fight for what's best for our company and our customers, especially with regard to laws, regulations and policies that may influence the profitable release of our most innovative products and solutions into the market. In addition, it's good to keep abreast of emerging trends affecting our industry and to keep abreast of the information we need to remain a leader in our industry, to access important networks and educational resources. Also given Adisseo's current strategic role in FEFANA's governance, **it helps to strengthen our reputation and standing as a global leader committed to quality, growth and innovation.** This message can resonate strongly with our Adisseo colleagues, prospects and customers. All in all, there are many benefits to joining FEFANA. When you put them together, they add up to what is probably the most important and beneficial reason for Adisseo to be part of FEFANA – and that is the fact that our membership helps us gain a competitive edge in our market.

### You're in charge of the Market Access department at Adisseo. What are the challenges you face?

As a global food additive company, Adisseo is affected by national regulations on market registration and feed safety, as well as by trade barriers and inefficiencies resulting from trade policy, i.e. health and technical regulations, including customs regulations.

These barriers result in direct and indirect costs affecting the competitiveness of our business, including the cost of time and resources invested in registering products worldwide while ensuring product safety and quality, and in the administrative management of exports and imports, in particular tariff code activities.

Complying with regulatory and feed safety requirements and adapting to regulatory gaps between countries, as

well as anticipating emerging regulatory developments in key jurisdictions to support a competitive marketing and trade strategy are the main challenges for the market access team.

Our goal is therefore to continuously **increase our internal knowledge of applicable and emerging regulations worldwide**, as well as to ensure adequate resources dedicated to product registration, customs and feed safety compliance. Digitisation of our market access processes and documents, including the management of product data throughout the product lifecycle, is also a priority area, as **it promotes greater efficiency and compliance in our operations.**



### How does Adisseo specifically help shape the future?

Our industry is committed to facilitating industry-wide solutions to foster the development of a more sustainable feed and livestock production sector, including aquaculture. Industry associations around the world work and provide a range of tools for compound feed and premix manufacturers, helping them to successfully meet market, societal and policy demands for sustainable feed solutions.

Adisseo is actively involved in many industry initiatives: we contribute to the Global Feed LCA Institute (GFLI) to establish a database that would serve as a reference for information on the environmental performance of food ingredients, we are involved in international and European multi-stakeholder in which working groups aim **to develop a harmonised environmental footprint methodology**, based on life-cycle analysis, involving the whole chain.

”



# OUR GROUP

**Adisseo became a subsidiary of the Chinese Bluestar Group in 2006. Since then, group revenue and employee numbers have risen year-on-year. In 2015, Adisseo became the first international company to have its shares traded on the Shanghai stock market.**

## KEY FIGURES FOR ADISSEO

**Number 1** worldwide in protected methionine



**Number 1** worldwide in liquid methionine



**Number 2** worldwide in methionine (all forms)



**Number 3** worldwide in nutritional ingredients specialty for animal nutrition



**1<sup>st</sup>** international company to float on the Shanghai Stock Exchange in 2015



**+2,650**

employees worldwide



**2.04** Md€

in annual revenue

**+4,200**

customers in 100+ countries



**+290**

researchers



**+1,730** M€

invested since 2012



**2**

manufacturing centers (Europe and China) and multiple industry partnerships



**20**

production plants



**+1** Nor-Feed recently acquired

**8**

research centers



**3**

business units



**7**

sales departments





## OUR VALUES



### CREATIVITY

Which opens new paths to progress and new ways of **succeeding together**.



### TEAM SPIRIT

Which **unites us in our successes** and challenges.



### INTEGRITY

Which underpins our interaction with customers and partners, ensuring that **our actions are consistent** with our words and values.



### RESPONSIBILITY

Each of us is a stakeholder in the company and a contributor to its success. **We encourage decisiveness**, a sense of urgency, courage and delegation.



### RESULTS-FOCUSED CULTURE

Which makes our actions effective and measurable, because we understand that success is built on the quest for performance, **continuous improvement** and listening to our customers.

## OUR BEHAVIORS



### COMMITTED

Delegation  
Collaboration



### COURAGEOUS

Risk taking  
(exc. for safety)



### CUSTOMER FOCUS

Creating value  
for Adisseo customers



### SIMPLE

Agility  
Flexibility  
Speed



### RESPECTFUL

People (360°)  
Principles and values  
Commitments  
Environment  
Adisseo group  
Customers

## OUR VISION, MANY MISSIONS

Offering our **world healthy, sustainable, affordable, high-quality food**: that is the major challenge to which Adisseo is contributing through the missions it has set itself:



To play its part in the **sustainable development** of our world



To provide the animal feed and food industries with **innovative products and services**



To deliver on its commitment to **distribute the value it creates fairly** between its customers, employees and shareholders

## 4 PRIORITIES



### SAFETY & SUSTAINABLE DEVELOPMENT



### BUSINESS GROWTH



### COMPETITIVENESS & OPERATIONAL EFFICIENCY



### PEOPLE

1 NO POVERTY



2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



4 QUALITY EDUCATION



5 GENDER EQUALITY



6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



10 REDUCED INEQUALITIES



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



14 LIFE BELOW WATER



15 LIFE ON LAND



16 PEACE, JUSTICE AND STRONG INSTITUTIONS



17 PARTNERSHIPS FOR THE GOALS



# OUR GLOBAL PRESENCE





-  **Head office**
-  **Innov'IA Location**
-  **Nor-Feed location**
-  **Other location**
-  **Site Calysseo (JV)**
-  **Sales office**
-  **Production site**
-  **innov'IA site**
-  **Nor-Feed site**
-  **R&D center**





# A PREFERRED PARTNER

*With its nutritional additives and solutions, Adisseo helps to improve the effectiveness and quality of the food chain. To this end we are working to enhance the breeding performance of poultry, swine, dairy cows and aquaculture species in several fields:*



## Nutritional performance

to provide safe, quality products to final users and offer an effective alternative to antibiotics as growth promoters,



## Economic performance

to produce at the cheapest cost and feed the vast majority,



## Environmental performance

to use less water, less arable land, fewer pesticides and limit waste.

Adisseo's mission is to reinforce food security and provide food that is better quality, more economical and more respectful of the environment.



### FEED PALATIBILITY

**Stimulates animal's appetite** to satisfy daily nutrient requirement and to minimize feed waste.



### ESSENTIAL NUTRIENTS

**Help to balance diet** to avoid deficiencies and possible serious shortcomings for a good efficiency of animal growth and production



### FEED DIGESTIBILITY

**Increases the proportion of feed that can be digested** by the animal, resulting in higher usage efficiency of raw materials, contributing to a more sustainable animal production, and a more balanced gut microflora.



### ANIMAL RESILIENCE

**Reinforces the animal resilience** to cope with challenges and stress. Supports in a better way animal health and welfare and reduce need of antibiotics.



### FEED INTEGRITY

**Preserves feed from deterioration caused by micro-organisms, oxidation...** and prolong shelf-life contributing to less wasted nutrients.

Controls mycotoxins risks in feed to avoid any contamination for protecting health and production.



### AQUACULTURE

**Proposes species-specific solutions** for a sustainable and profitable aquaculture that covers fish and shrimp's health, nutrition digestion, palatability, feed quality and farm care.

## SUPPORTING CUSTOMERS WITH EXCLUSIVE SERVICES

*Adisseo offers its customers exclusive analytical and forecasting services designed to help them in using its products and give them greater nutritional control.*



### PNE

A unique service based on NIR technology to predict the nutritional quality of the raw materials used in feed. Adisseo is able to analyze all main dietary ingredients to predict in real time the multiple characteristics impacting nutritional quality, using **a reliable system based on in vivo data**.



### Adict

A **"calculator" that transforms your analytical results into nutritional values** ready to use in a formulation software. It gives you the opportunity to easily, quickly and precisely integrate the PNE data into a feed formulation software.



### Nestor

The most recent nutritional recommendations for poultry & swine in **net energy and nutritional values of raw materials in an unique platform**: NESTOR.

Net Energy system is the most appropriate energy system to be closer to the animal needs. With these two sets of data, formulation in Net energy gets easy.



### E.lab

Reliable and specific analytical services in various fields of activity. It is directly accessible online through E.lab, **a web platform** that allows customers to submit analytical requests, follow the progress of samples from submission to results and **directly access results including certificate of analysis and comments** from Adisseo technical managers.



### DiM

**Comprehensive service and assistance program**, is here to let you enjoy all the benefits of Rhodimet® AT88 in total peace of mind.



Predictor

### Feedase Predictor

**An accurate algorithms to predict the potential uplifts of nutrient value** created by feedase in a diet.

The new interface was designed to be intuitive and user-friendly.

This new functionality allows comparing the enzymatic potential under different feed programs, build your own customized matrix with Rovabio® products by taking into account the substrate quantity in the feed, and export simply the matrix created in pdf or Excel



### My Poultry Care

**A digital and mobile service** designed for poultry integrators to monitor their flock's digestive performance and gut health. On the basis of the analysis of the main mycotoxin levels, the app shows you directly how serious the impact on the animal will be, which Adisseo product is most appropriate, and what dosage is required.



### Mycoman

A perfect tool to practically manage the negative effects of **moulds and mycotoxins**.

## REDUCING THE ENVIRONMENTAL IMPACT OF LIVESTOCK PRODUCTION

Livestock farming accounts for about 14.5% of all greenhouse gas emissions and about 65% of ammonia emissions.

Through animal feed, the nutritional solutions developed by Adisseo have a positive effect on animal excretion and greenhouse gas emissions, thanks to **four different modes of action**:



### 1. REFORMULATION OF THE FEED

Better use of local feedstuffs.

**Enzymes,  
amino acids,  
NIR analysis,  
palatants**



### 2. IMPROVING FEED EFFICIENCY

Better feed conversion

**Enzymes,  
feed preservatives**



### 3. REDUCE EXCRETION

Less nitrogen and phosphorus emission

**Enzymes,  
amino acids,  
sodium sulphate**



### 4. IMPROVED ANIMAL HEALTH STATUS

Fewer sick animals,  
lower mortality  
Better fertility  
and longevity

**Probiotics,  
selenium,  
vitamins,  
butyrate, mycotoxin  
deactivators,  
amino acids**

## EXAMPLES IN ALL AREAS

### MONOGASTRICS

**Rhodimet® AT88 helps to reduce the nitrogen excretion of animals**

Rhodimet® AT88 allows for a lower excretion of nitrogen in the form of uric acid for poultry or urea for pigs, compared to other methionine sources.

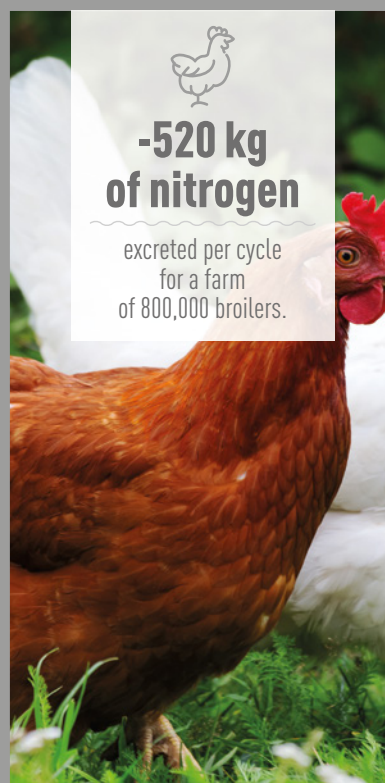
A scientific trial conducted by the Adisseo Nutrition Expertise and Research Centre (CERN) on broilers fed with a diet incorporating Rhodimet® AT88 showed a reduction in nitrogen excretion of about 2% compared to the DL-Methionine group. This represents a reduction of 520 kg of nitrogen excreted per cycle for a farm of 800,000 broilers.

**Rovabio® helps reduce the carbon footprint of broiler production**

Raw materials contribute 50% to 80% of the carbon footprint generated by broiler feed.

A study focusing on the environmental impact of these raw materials and comparing two broiler diets – with and without Rovabio® – demonstrates the optimisation of diets formulated with Adisseo enzymes, in particular by improving the digestibility of raw materials for animals. The use of raw materials with

a high economic impact is reduced. In a context of ecological transition, this new way of consuming presents two major benefits: **increased profitability and a reduction in the carbon impact generated by chicken production, estimated at 7%, according to a scientific study conducted in Brazil.**



### RUMINANTS

**Smartamine® M (protected methionine) reduces nitrogen excretion and carbon footprint while improving ruminant health and reproduction.**

To enable sustainable development, dairy production aims to optimise the use of available resources, including feed, to contribute to two objectives: minimising environmental discharge and maintaining high production. The addition of amino acids helps to balance diets and reduce nitrogen excretion into the environment, thereby increasing the production efficiency of dairy cows.

A scientific study in France shows that reformulating animal diets with Smartamine® M results in a 15% reduction in climate change impacts and a 22% reduction in freshwater eutrophication.

Smartamine® M also reduces the risk of involuntary culling of ruminants and the duration of the calving interval. Its 80% bioavailability also increases protein levels and milk yield.





## NOR-FEED

After signing an agreement at the end of 2022 to acquire Nor-Feed, Adisseo has just finalised the purchase of the company in early 2023.

Nor-Feed is a French group that designs, produces and markets plant-based speciality ingredients and plant extracts for animal nutrition.

This acquisition is part of the Group's strategy to become one of the world leaders in specialty ingredients for animal nutrition.

**The Nor-Feed project focuses on the preventive role of nutritional strategies**, using botanical extracts from agricultural co-products in animal nutrition and hygiene, in order to limit the use of antibiotics, coccidiostats and pesticides.

**For Jean-Marc Dublanc,** "This investment is a key step in our strategy to develop specialty ingredients, in particular through unique and differentiating technologies and natural and sustainable solutions for our customers. **Adisseo is positioned in an emerging market, growing by nearly 10% per year.**"

Nor-Feed will retain its organisation and continue to serve its customers directly, while benefiting from Adisseo's services, support and expertise to help it achieve its objectives and implement the synergies identified.

## SULPHUR PRODUCTS AND REGENERATION

**Adisseo secures its methionine value chain through strong upstream process integration.**

In addition to co-products such as carbon sulphide, sodium and ammonium sulphates, Adisseo produces sulphuric acid for its own needs, and also for external customers, sulphuric acid being one of the most widely used compounds in many industries.

In Europe, Adisseo is a major player in the regeneration of industrial waste sulphuric acid streams via its regeneration unit in Saint Clair du Rhône (France).

**Adisseo has thus taken a sustainable development and virtuous circular economy approach.** This service consists of taking back industrial waste sulphuric acids in order to treat and purify them and recover the sulphur they contain by transforming it back into concentrated sulphuric acid.

This provides customers with a complete, environmentally friendly and cost-effective solution for the regeneration and supply of their sulphuric acid, enabling them to reduce the environmental impact of their production activities and improve their carbon footprint.



European leader in the development and production of new additives in powder form, INNOV'IA strengthens Adisseo's expertise in shaping their additives.



**15 %  
reducing**

in climate change impacts  
of a dairy farm

## AQUACULTURE

**Sanacore® and Aqualyso® help reduce the environmental footprint of shrimp**

Adisseo's portfolio of aquaculture specialties offers functional feed additives to address problems faced by the sector, such as high raw material costs or disease risks.

Scientific studies conducted in Indonesia on shrimp have demonstrated the effectiveness of the GM Sanacore® additive in promoting good animal health, significantly improving survival and harvested biomass.

In addition, the Aqualyso® digestive enhancer promotes growth by improving the efficiency of feed conversion.

The application of these two functional additives improves the productivity of shrimp farms, thereby reducing the carbon footprint of farming. Sanacore® GM and Aqualyso® contributed to reducing the carbon footprint by 16-39% and 7-20% respectively.



**20 %  
reducing**

the carbon footprint  
of a fish farm



> More info on  
**adisseo.com**







# SAFETY IN ALL AREAS, OUR N°1 PRIORITY

« Ensuring the health and safety of people, facilities, products, transportation and the environment is Adisseo's number one priority. Reinforced action plans have been deployed to guarantee safety, through innovative systems and ongoing awareness-raising activities. Every day, all employees work hard to achieve the **“Zero Accident”** objective. »



## DID YOU KNOW?

Road traffic injuries

**-1.3 million**

deaths

**50 million**

injuries each year

Source: UN Nov 2022







## LIVING WITH THE HEALTH CRISIS

Faced with the Covid-19 pandemic, for the past three years, Adisseo has put in place measures to protect its employees, limit contamination and ensure the continuity of its activities.

For that purpose, **7 principles** have been established:



1 Reaffirming health as a top priority



2 Optimising office attendance



3 Facilitating remote working



4 Creating convivial moments



5 Limiting travel and internal business meetings



6 Collaborating safely with stakeholders



7 Learning on the move

In 2022, we still had to deal with several successive waves of contamination at all our sites, especially in Europe and Asia.

This disease is not going to disappear, but we can manage it better and better.

The company was able to meet these very important challenges, particularly with regard to the protection of its employees and service providers, to adapt and to ensure the continuity of its activities and its strategic projects.

## SAFETY PERFORMANCE ON TARGET

*After a year during which Adisseo saw its safety performance deteriorate in 2021, the situation improved in 2022.*

After a mediocre start to the year, the accident rate fell and the overall performance for the year was on target.

The accident severity rate also decreased compared to the two previous years.

Several safety initiatives were launched and bore fruit.

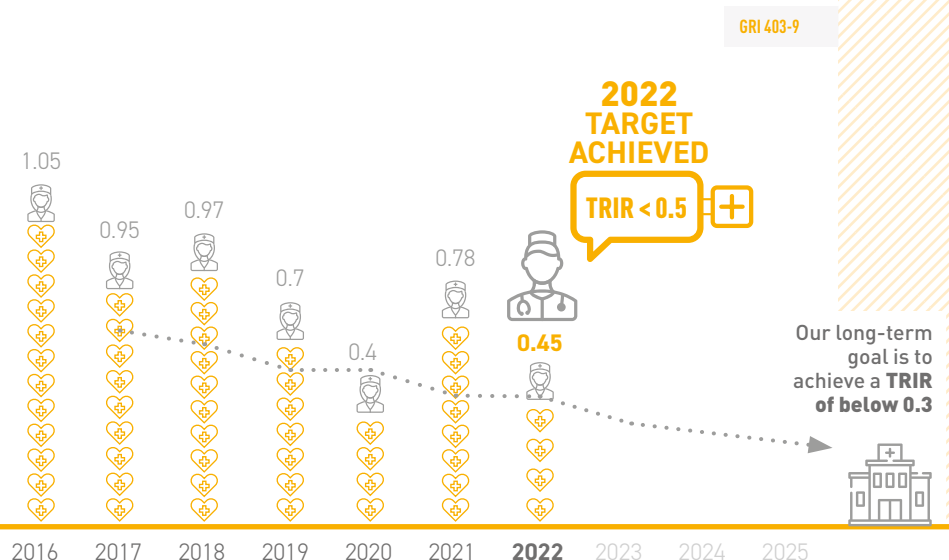
The most important of these was an assessment of the safety maturity of all our sites, which enabled us to **identify actions for immediate progress** as well as short and medium-term actions.

We also relied on the HSE (Health, Safety and Environment) management system of our shareholder, SINOCHEN Group, by using it as a reference for evaluating our practices.

The requirements of this management system, known as **FORUS**, helped **identify additional avenues for progress**. The objective is now to deploy all of its practices.

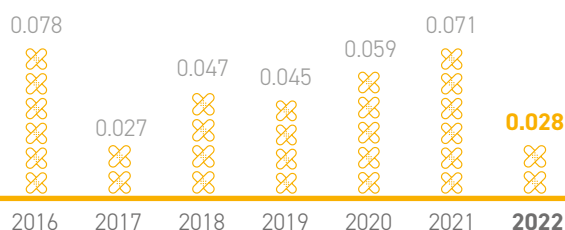
### Number of accidents per 200,000 hours worked

TRIR (Total Recordable Injuries Rate) all groups combined (employees, subcontractors...)



### Severity rate of accident

(number of days lost per 1,000 hours worked)





## THE QUEST FOR « ZERO ACCIDENTS »

*There can be no performance for a company if it has accidents in its operations. Nor is it conceivable that people should be injured or put their lives at risk in the course of their work. Achieving zero accidents is therefore Adisseo's continuous goal.*

In 2022, several examples have demonstrated that this goal is achievable.

The commissioning of a new liquid methionine production platform, adjacent to the existing plant in Nanjing (China), started in mid-2022 after 7.5 million man-hours on site and without any accidents.

The production sites of Kallo (Belgium) and Barbastro (Spain), acquired as part of the purchase of NUTRIAD, have not recorded any accidents in the last three years. The same positive results were achieved in Adisseo's commercial regions.



These remarkable performances were possible thanks to the involvement of the teams and the rigorous organisation put in place.

In the field of safety, nothing can be taken for granted and **this requires constant attention to ensure that the right operations, the right gestures are carried out in the right way**, at the right time and in complete safety.

At the end of 2021 and the beginning of 2022, Adisseo carried out a safety maturity assessment of all its sites using the DSS (Dupont Sustainable Solutions) and DNV (Det Norske Veritas) methods, two internationally recognised organisations in this field.

Their approach helped identify the strengths and weaknesses of each site.

All of our major industrial sites were also evaluated according to the FORUS reference system, the HSE (Health, Safety and Environment) management system of our shareholder, SINOCHEN.

These various initiatives are part of the « safety culture » programmes already in place at most of our sites and allow us to compare ourselves with other companies.

The results obtained have led to the development of a comprehensive improvement plan to raise our safety culture to the highest level and **achieve our goal of « zero accidents. »**

Periodic reassessments will show the progress made.



## RALLYING AROUND SAFETY

For the 10th consecutive year, Adisseo's employees rallied for Global Safety Day.

This day enabled us to develop a dialogue on the commitment of each individual to safety, to discuss possible improvements and to share best practices.

In 2022, it was enhanced by the presence of members of the Executive Committee at the various sites. The aim was to **encourage direct exchanges between Committee members and staff in the field** after the period of the health crisis had interrupted them.

Numerous workshops, webinars and activities were held at all our sites. Here are some examples of the activities carried out in 2022:







ANTONY



ANTONY



BURGOS



BURGOS



NANJING



KALLO



NANTONG



NANTONG

## North America

⇒ Discussions on improving security and ideas retained

## Antony

⇒ Ergonomics and skeletal muscle disorders  
⇒ Quality of Life at Work (QWL)  
⇒ Initiations and awareness of fire risks  
⇒ Road safety for pedestrians, bicycles, scooters, motorbikes, cars, etc...

## Burgos

⇒ Animations for the BURSAGE safety culture programme  
⇒ Practice of simulators (virtual reality, driving, etc.)

## Commentry

⇒ Multiple workshops on Personal Protective Equipment (PPE)  
⇒ Escape room safety box  
⇒ First aid procedures for cardiac arrest

## Europe and Africa/Middle East

⇒ The golden rules at home  
⇒ Conducting a safety observation  
⇒ Working and travelling during and after the health crisis

## Huesca

⇒ Sharing risk analysis at the workplace  
⇒ Chasing bad behavioural habits

## Kallo

⇒ Fire extinguishing exercise  
⇒ 5S Workshops

## Nanjing

⇒ Implementation of the FORUS management system  
⇒ Signature of safety commitment  
⇒ Root cause analysis of events  
⇒ Personal protective equipment (PPE) competition

## Nantong

⇒ Liquid leak and emergency evacuation simulation exercises

## R&I

⇒ Discussion on new ways of travelling

## Roches-Roussillon-Bayonne

⇒ Health and safety during shift work  
⇒ Awareness of chemical burns  
⇒ Noise hazards, major hazards and high-risk activities

## THE COMPANY'S SAFETY POLICY

*Zero accidents is one of the permanent objectives of this commitment in all areas.*

It is supported by a systematic and in-depth analysis of risks and losses, and the implementation of the best prevention techniques by associating all stakeholders in a commitment to Sustainable Development.

Adisseo's health and safety policy is based on the following **six principles**:



**1**

**Ensure the health and safety of people through prevention and control of risks, contributing to well-being in the workplace**



**2**

**Demonstrate leadership and example**



**3**

**Take into account risks related to processes, products and ergonomics in safety risk analysis studies, right from the design stage, in order to guarantee the safety of people and processes in the workplace**



**4**

**Help prepare the organization to manage possible emergency situations**



**5**

**Reduce risk by investigating incidents and near misses**



**6**

**Require subcontractors to manage safety in accordance with this policy.**





## ENHANCING SECURITY

*Adisseo's safety policy aims to put in place effective measures to protect people, goods, products, processes and information systems against any criminal or malicious actions (intrusion, theft, terrorism), including cyber-attacks.*

Numerous organisational provisions complement the physical protection measures already in place.

**In 2022, a special effort has been made on the security of office and industrial information systems**, with the aim of strengthening resilience and guaranteeing the continuity of essential activities:

An EBIOS Risk Manager type risk analysis was carried out with the identification of critical activities and resources.

The business continuity and IT recovery plans (BCP and IRP) were reviewed and enhanced.

A crisis exercise with activation of the BCP by the crisis unit helped validate the scenario sheets and the role of each person.

Preparing to manage an emergency situation is an essential part of risk management, whatever the risk.

All these actions were reinforced by the renewal of a user awareness campaign on cyber risks and respect for good practices, which was followed by more than 98% of the staff.



**98 %  
of the staff**

followed cyber risks and respect for good  
practices awareness campaign





- 1 NO POVERTY
- 2 ZERO HUNGER
- 3 GOOD HEALTH AND WELL-BEING
- 4 QUALITY EDUCATION
- 5 GENDER EQUALITY
- 6 CLEAN WATER AND SANITATION
- 7 AFFORDABLE AND CLEAN ENERGY
- 8 DECENT WORK AND ECONOMIC GROWTH
- 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
- 10 REDUCED INEQUALITIES
- 11 SUSTAINABLE CITIES AND COMMUNITIES
- 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
- 13 CLIMATE ACTION
- 14 LIFE BELOW WATER
- 15 LIFE ON LAND
- 16 PEACE, JUSTICE AND STRONG INSTITUTIONS
- 17 PARTNERSHIPS FOR THE GOALS

# ACCELERATING INNOVATION

« Adisseo's ambition is to be a growing, profitable company that operates in a sustainable manner. To achieve this, research and innovation are essential to stand out from the market and offer customers innovative, sustainable solutions that contribute to their growth. Adisseo's investment policy aims to strengthen its teams and their proximity to customers, improve the quality and quantity of its production, develop its research capabilities and reduce its environmental footprint »



## DID YOU KNOW?

**86 %**  
of livestock feed is not  
suitable for human  
consumption

(grass, straw, crop residues...)

Source : FAO (Food and Agriculture Organization of the United States), published December 2018



## ANTICIPATING THE FUTURE OF ANIMAL NUTRITION

Each year, Adisseo launches a € 1 million research grant to support the development of animal nutrition.

In 2022, the challenges to be taken up concerned alternatives to medication of all kinds and the nutritional evaluation of new raw materials.

A scientific committee, consisting of 5 university professors and 10 representatives from the feed industry, **chose to support 3 new topics.**

These topics were announced at the WPC World's Poultry Congress dinner in August 2022 in Paris:

« **Using black soldier flies** to transform organic waste contaminated with low-value *Fusarium* mycotoxins into high-value edible food, » presented by Professor Gunther Antonissen (Ghent, Belgium).

« **Improving pig resilience** and production chain sustainability through mineral nutrition, » presented by Professor Marie-Pierre Letourneau-Montminy (Laval, Canada).

« **Evaluation of the nutritional variability of corn distillers' grains with solubles (DDGS) and flours of products derived from animal raw materials,** » presented by Professor Ines Andretta (UFRGS, Brazil).

The first results of this research will be presented to the scientific committee in August 2023 at the Joint International Congress on Animal Science in Lyon, France.

## ENSURING RESPONSIBLE PURCHASES

*In its CSR (Corporate Social Responsibility) approach, Adisseo attaches great importance to its responsible purchasing approach, by developing its selection criteria and practices with its suppliers, service providers and subcontractors, in order to be more exemplary.*

To do this, Adisseo relies on a responsible purchasing charter, which defines its expectations for supplier partners and **its own commitments on the environment, social issues, business ethics and supply chain management.**

This charter is referenced in all order forms and incorporated into each new contract.

Suppliers are required to confirm and, where necessary, demonstrate their alignment with and commitment to the principles set out in the charter.

Adisseo has also chosen the ISO20400 standard as a reference for its practices. An evaluation is carried out annually with the support of the French Agency for Standardisation (AFNOR).

CSR risk mapping of all its purchasing segments is at the heart of these practices. In addition to identifying risk factors among its suppliers, this tool is essential in the selection and proper evaluation of suppliers. In addition, a self-assessment is carried out, if necessary, by a field audit.

This external and objective view helps to define areas for improvement and to measure the effectiveness of the actions taken.

**Taking societal and environmental issues into account** in the purchasing process strengthens the company's relationship with its suppliers and subcontractors in the long term.



**€ 1 million  
research grant**

to support the development  
of animal nutrition





## START-UP OF CALYSSEO'S 1ST **FEEDKIND®** PLANT IN CHONGQING (CHINA)

*The world's first industrial-scale facility to produce FeedKind®, a microbial protein that has been developed to replace the use of fish meal in aquaculture feeds, was commissioned in October 2022.*

Calyseco, a joint venture between Adisseo and Calysta, will initially produce 20,000 tonnes of protein per year from **the plant in Chongqing, China**. Once start-up operations are complete, the fermenter **will become the largest FeedKind® protein production facility in the world**.

This protein offers aquaculture companies a high quality, biodiversity friendly solution to the growing needs of the Chinese market.

The first deliveries of FeedKind® Aqua to customers will take place in the coming weeks, making FeedKind® the first alternative fermented protein to be offered on a large scale to the aquaculture sector.

Jean-Marc Dublanc, CEO of Adisseo, said: "Food safety has been increasingly in the spotlight in recent months, but we're now entering a new era of sustainable food production. Calyseco brings to the market a new way of producing high quality proteins from a non-GMO (non-Genetically Modified Organisms) bioprocess, which is increasingly in demand throughout the supply chain."

"We've long been committed to improving the safety and sustainability of the food ingredients market and Calyseco is fulfilling an important

part of that commitment. We'll provide Chinese customers with a reliable and domestically available protein supply that meets their specific needs; produced in China for China."

FeedKind® responds to a growing need for a sustainable source of protein to meet the demands of a rapidly increasing world population, while at the same time addressing increased concerns about biodiversity conservation.

The production of **FeedKind® requires very little water and farmland**, as it is derived from the fermentation of natural gas, an abundant energy source that creates a safe, nutritious, traceable and inexpensive protein. **Produced through a natural fermentation process**, FeedKind® is a competitive protein as it is derived from existing protein sources. In addition, it is produced to the highest quality standards.

**FeedKind® will help to reduce the pressure on wild fisheries** and meet the expected growth in aquaculture products.



**20,000  
tonnes**  
of protein per year  
from the plant in Chongqing, China.





## INVESTING IN HEALTH, SAFETY AND ENVIRONMENT (HSE)

*HSE (Health, Safety and Environment) investments aim to achieve an ambitious objective in the areas of health, safety and well-being at work, process safety and environmental protection.*

Operating expenses include the ever-increasing number of regulatory constraints such as additional studies, increased taxes, and the reduction of authorised discharge thresholds. They represent **more than € 25 million in 2022.**

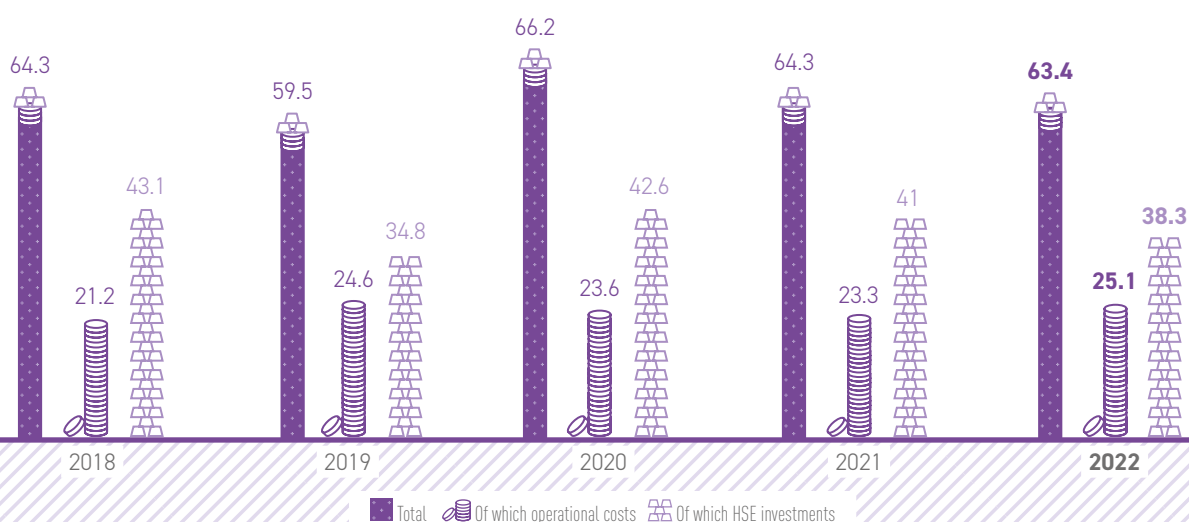
They are controlled thanks to a proactive policy of continuous improvement and supported by **nearly € 40 million/year invested in HSE** over the past few years.

More than **40% of these investments are directly targeted at the environment.**

One of our principles is that each industrial project is evaluated and carried out by integrating the company's sustainable performance in economic, social and environmental terms.



*Trend in HSE expenditure (in million €)*



1 NO POVERTY



2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



4 QUALITY EDUCATION



5 GENDER EQUALITY



6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



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17 PARTNERSHIPS FOR THE GOALS



## A RESILIENT COMPANY IN A TENSE HEALTH AND ECONOMIC CONTEXT

*In 2022, alongside the pandemic, during which protecting the health of its employees was its top priority, Adisseo, like many companies, had to face an economic crisis, particularly in Europe.*

The impact of energy and raw material price increases has been partially offset by a competitiveness project, initiated in 2019, which has generated significant savings.

In addition, **in 2022 an additional cost control action plan was implemented**, focusing on a number of areas such as the optimisation of industrial processes to improve productivity, the reduction of energy consumption and recycling, the renegotiation of contracts, the optimisation of the supply chain, the use of digital in animal testing, marketing, data management and manufacturing.

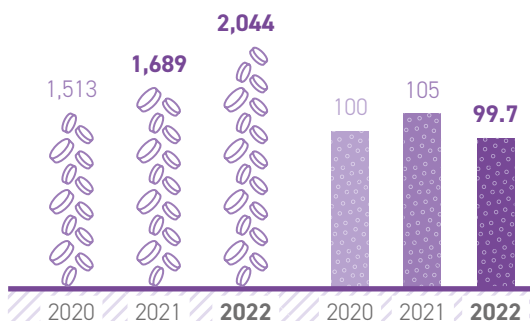
Adisseo continued to invest in long-term projects, innovation and external growth opportunities **to support the sustainable and profitable growth of its business for the future.**



### Economic value

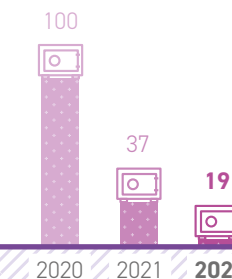
**Revenue**  
(Direct economic value created)  
(in millions €)

**EBITDA**  
(Undistributed economic value)  
(Base 2020)



### FCFAT

(Free cash flow after tax)  
(Base 2020)

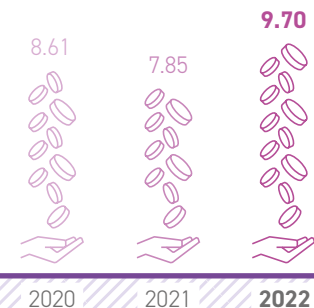


### Public subsidies received

(in millions €)

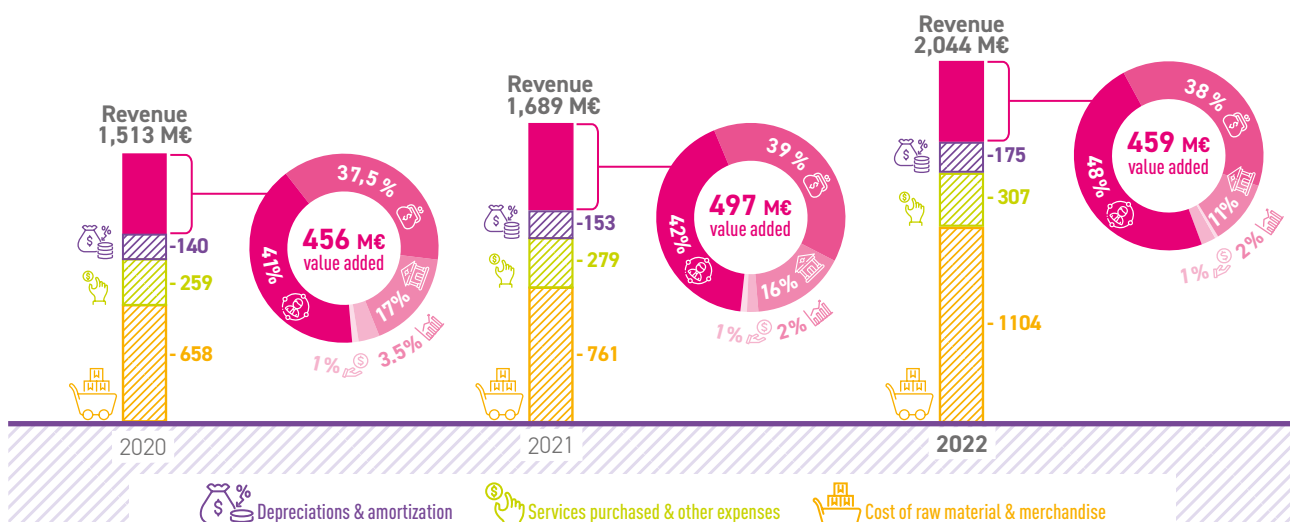
Adisseo is committed to distributing added value as fairly and equitably as possible.

GRI 201-4



### Value added distribution (in million €)

Employees Economic value retained Government Non-controlling interests Creditors



## TOWARDS THE **DIGITAL TRANSITION**

*For several years, Adisseo has been committed to a digital transformation process, particularly in its industrial activities, to improve its competitiveness and efficiency, in particular through data processing.*

A project was launched in 2021 to test the use of connected objects or IoT (Internet of Things). These objects, which are wireless, **will help enhance our data sources (data lake)** while being easily installed and parameterised within our factories and our supply chain, and guaranteeing the security of the information.

The data, which comes back via a specific frequency (different from Wi-Fi or 4G), can be used directly in Optimistik's OI Analytical tool. This tool, which has been in place since 2019 as part of the DISPLAY 4.0 project (Data Intelligence Simplification Process under control by AnalYsis), **offers a single connection gateway to access all our data.**



The IoT project started with the launch of several PoCs (Proof of Concept) in different areas:

- ⇒ Digitalisation of wagon flows between our various European sites with a particular focus on optimising the temperature of liquid sulphur wagons (energy efficiency objective).
- ⇒ Testing of wireless IoT vibration sensors in the factory.
- ⇒ Development of IoT sensors to measure energy consumption in laboratories (Smart Building concept).

The infrastructure, validated during these first PoCs, is now being deployed at our various sites. **A hundred or so IoT sensors are currently being tested at eight different sites,** enabling us to validate a dozen different technologies. Initial feedback has demonstrated the strong potential of IoT in the context of sustainable development, to optimise our energy and water consumption, thanks in particular to **more complete and accurate measurements.**

The IoT sensor market is booming and is being enhanced daily with new innovative technologies that could meet the needs of industrial sites, for example:

- ⇒ With IoT acoustic sensors to monitor leaks in underground networks.
- ⇒ By monitoring the proper operation of online steam traps to limit steam consumption.
- ⇒ By tracking, with RFID chips, our product pallets wherever they are in the world.







## COMMISSIONING OF A NEW LIQUID METHIONINE UNIT


*Despite the health and economic crisis, Adisseo has been able to maintain its industrial investment plan, and thus to develop its activities.*

In September 2022, the successful start-up of the new 180,000 tonne liquid methionine unit makes the Adisseo plant in Nanjing (China) one of the largest liquid methionine production platforms in the world.

It consolidates **Adisseo's world leadership position** in methionine while establishing a solid industrial base to accelerate the use of liquid methionine in the Chinese market and worldwide.

François Mailhos, project director, said: *"The project was officially launched in early 2018. Despite the twists and turns, such as the Covid-19 epidemic waves, it was completed as planned and on budget, thanks to the support of the various stakeholders. The project reached 7.5 million working hours without any accidents, which shows that Adisseo attaches the utmost importance to safety and sustainability. In addition, the new plant has successfully passed its process validation, and the first batch of liquid methionine has successfully rolled off the production line and been delivered to our customers."*



  
**180,000 tonnes**  
of liquid methionine  
plant in Nanjing (China)

The official launch of this second unit means that Adisseo's Nanjing (China) plant **has doubled its liquid methionine production capacity** to 350,000 tonnes/year. Such an expansion provides a significant competitive advantage in terms of cost and global coverage, allowing Adisseo to aim for a larger market share on the international scene. In addition, **Adisseo now has more scope and flexibility to optimise its production**, thus cushioning the sometimes-regional impact of fluctuating raw material and energy prices.

With this new capacity, its global market coverage and its expertise in digital spraying systems, Adisseo is well positioned and confident to pursue the development of liquid methionine in China and worldwide.

Each industrial project is used to improve safety, environmental protection, the performance and reliability of our installations, and the quality of the product manufactured, by implementing the best available techniques and optimising processes.

In addition to the use of energy-efficient motors, energy recovery from our processes is maximised. The construction of a 30 MW turbo-alternator to produce more than 31,000 kilowatts per hour of electricity from excess steam has been integrated into this new liquid methionine plant project.



## ENSURING THE DEVELOPMENT OF OUR SUBSIDIARY INNOV'IA

**In 2022, Innov'IA took a further step towards sustainable growth with the start-up of a new industrial fluidised bed drying unit at its Inodry plant in Collombelles (France).**

This € 10 million investment corresponds to an annual production capacity of 2,000 tonnes of shaped products and will create 30 new jobs.

A second investment of € 42 million was made in Ségre (France) for the construction of a new factory with several atomisation lines and a packaging line.

This has created 15 new jobs in 2022 and 45 are planned by 2025. It is scheduled to start in March 2023.

On these new sites, the latest technologies in terms of hygiene, health, safety, environment, energy efficiency and food protection (food defence) are systematically implemented.

This industrial investment strategy will meet the needs of the growing formulation market and improve customer satisfaction.



### New European R&I centre

in St Fons (France)



### € 42 million investment in SÉGRÉ

for the construction of a new factory



INNOV'IA 

## DEVELOPING THROUGH INNOVATION

**To pursue its strategy of profitable and sustainable growth, Adisseo is strengthening its resources devoted to research and innovation throughout the world.**

In a quest for synergy and efficiency, Adisseo has launched the construction of a new European R&I centre in Saint Fons (France), where teams from various existing entities in France will be grouped together.

It will complement other existing research centres such as CAPSULAE in La Rochelle (France) specialising in industrial galenics, ASA (Aquaculture Station by Adisseo) in Singapore dedicated to aquaculture and finally RICA (Research Innovation China Adisseo) in Nanjing (China).

Adisseo is convinced of the need to pursue its commitment to development through innovation with the most advanced technologies, products and services adapted to meet the expectations of its customers, and the current and future societal and environmental challenges.





# ATTENTION & SOLIDARITY

« As a company committed to CSR (Corporate Social Responsibility), Adisseo aims to ensure the satisfaction and commitment of its staff through actions in favor of well-being and health at work, diversity and solidarity (local events, support for humanitarian organizations, etc.). »



## DID YOU KNOW?

**1 of 6**

**1.3 billion people live with a significant disability**

in the world.

Source WHO (World Health Organization) December 2022



## GETTING INVOLVED WITH PEOPLE WITH DISABILITIES

Adisseo is committed to the professional integration and retention of people with disabilities. Each year, numerous awareness-raising actions are carried out for the company's employees. The European Week for the Employment of People with Disabilities from 14 to 18 November 2022 was an opportunity to reinforce these messages.

Several of the company's entities set up a wide variety of activities such as escape games, quizzes, virtual reality presentations of disability situations, or accounts by employees or external people such as young influencer Timothé Griseri. A Duo Day allowed people with disabilities to immerse themselves for a day in the life of Adisseo and in the daily life of its employees.



Number of employees  
receiving training related  
to ethic and compliance



**168**  
Compliance  
knowledge

in 2022



**468**  
Competition law  
and antitrust rules

in 2022



**1,262**  
Diversity and inclusion

from 2020 to 2021



**1,378**  
Professional behavior  
mutual respect

from 2020 to 2021



**1,296**  
ABC: antibribery  
and corruption

from 2020 to 2021

A toy collection for children with disabilities or suffering from serious illnesses was launched with the association Nos Combats, Nos Héros. Adisseo also relies on establishments and services providing

## VALUES, BEHAVIOURS AND ETHICS AT THE HEART OF ADISSEO'S ACTIONS

*Adisseo operates in complex environments. Its values and behaviours are pillars on which the company can rely to fulfil its mission of providing the world with healthy, sustainable, affordable and quality food. Integrity is one of Adisseo's core values and is structured and formalised in its Code of Ethics.*

The Code of Ethics sets out the principles and rules of conduct that all Adisseo employees, whatever their position, undertake to respect and implement on a daily basis. It is intended to guide everyone in situations where they may feel the need to be reassured about their choices.

The company also provides employees with **an alert platform to inform the company** of a possible or proven breach of legal and regulatory provisions. This system allows them to make a report **in complete confidentiality** (concerning customers, employees, suppliers). A new mapping of Group risks was carried out in 2022, which has enabled the company to specify its means of controlling several of the risks relating to ethics. In order to raise awareness of these issues among all its employees, Adisseo provides mandatory training on compliance and ethics.

This training approach is based on an analysis of the risks to which employees are potentially exposed in their jobs.

Thus, in addition to a general compliance training course given to the 168 new employees joining the company in 2022, specific training on competition law and antitrust rules was given in 2022 to 468 people who could potentially face this risk. Regular communications complement these courses to raise awareness of good practices.

Adisseo considers that **the success of a company is largely based on trust**, not only that of its business partners and shareholders but also and above all that of its employees.

assistance through work (ESAT) for several services (supply of office supplies and reams of paper, supply and maintenance of green plants, archiving of documents, breakfasts, meal trays, buffets, etc.).

**These workshops enable people with disabilities to carry out a professional activity while benefiting from medical and educational support in a protected environment.**

Adisseo's employees with disabilities are identifiable thanks to armbands manufactured by AFIPH, a company in Isère Rhodanienne that employs people with disabilities. Adisseo has also become a driver of progress in a community of companies committed to inclusion.

Other initiatives supported by Adisseo include the Bercail Paysan association, Ferm'Avenir for mentally handicapped adults and the sponsorship of Pauline Déroulède, a wheelchair tennis champion whose goal is to participate in the Paris Olympics in 2024. Adisseo also took part

in the Inclusiv'Day trade fair for inclusive companies and social innovations.

Several hundred employees were able to take part in this solidarity initiative by participating in a second Squadeasy challenge. The aim was to collect points by covering as many kilometres as possible through individual and collective sporting challenges (walking, running, cycling, etc.). In total, more than 200,000 km were covered, and were converted into donations from Adisseo, ranging from € 500 to 1,000, paid to 6 European associations (FEDISFIBUR, Bercail Paysan, L'Addapt, Les Restos du Coeur, School&Trees and FEAD).

Adisseo's commitment to this cause illustrates **one of the company's four priorities in terms of diversity: disability, gender equality, cultural diversity and social inclusion.**



## RAISING AWARENESS AND INVOLVING EMPLOYEES IN SUSTAINABLE DEVELOPMENT

Each year, Adisseo encourages all its entities around the world to organise activities as part of Sustainable Development weeks **in order to raise employee awareness of sustainable development issues** and involve them in actions for progress.

A wide range of local activities were carried out from 18 September to 8 October 2022, such as an online escape game focusing on energy and tips & advice on how to reduce one's impact and limit consumption. Videos, guides and quizzes were also published on the company's intranet.

Throughout the year, particular emphasis was placed on the carbon footprint of digital activities. "Digital fresco" workshops were used to raise awareness and train participants in the environmental challenges of digital technology, to explain the broad outlines of the actions to be taken to move towards a more sustainable digital environment, and to enable participants to understand and commit to one or more actions.

**The aim is always to encourage everyone to voluntarily adopt more responsible behaviour at work and at home.**



## REINFORCING **GENDER EQUALITY** WITHIN THE COMPANY

*Through its CSR approach, Adisseo is involved in several fundamental social issues.*

In particular, it is committed to promoting professional equality between men and women by setting the following objectives:

- Guaranteeing fairness in terms of remuneration policy.
- Ensuring equality between men and women in career paths.
- Developing gender diversity in employment and recruitment.

Adisseo's gender equality index has reached 84 in 2022, two points higher than in 2021.

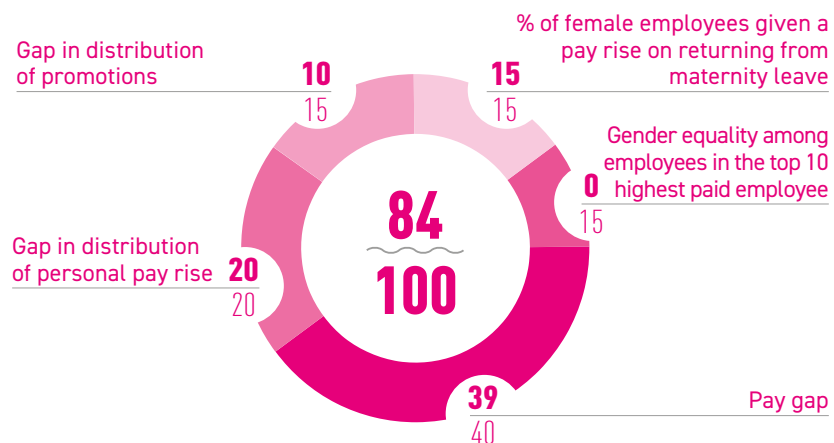
**The company is committed to continuing its efforts** to further reduce inequality in the coming years.

For several years, Adisseo has supported several associations such as "Elles Bougent" and "STEM talent Girls", to promote gender diversity and strengthen gender balance in sectors where women are still too few in number, such as industry and technology.

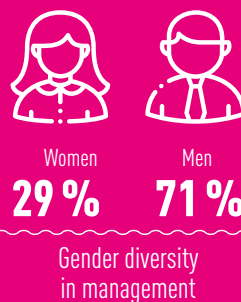
On 8 March 2022, Adisseo celebrated International Women's Rights Day by honouring its female employees, mobilising all employees through awareness-raising messages and a quiz.

Adisseo thus reaffirmed **the importance of professional equality between women and men.**

### Gender equality 2022 index within Adisseo in France



GRI 405-1



## DEVELOPING **SOLIDARITY**

*Adisseo sponsors and encourages the We Care programme, which is made up of societal, collective and individual initiatives carried out by its employees. Each project aims to benefit local communities. Their implementation respects the company's values and behaviours and leads to concrete actions on the ground.*

Here are a few examples of local projects carried out in 2022. In September 2022, Adisseo supported the Running Challenge of a French association based in the AURA region (SCA, Saip Comaplex Association). Five hundred participants took turns to run 3,660 km. This number of kilometres was converted into euros and donated to APPEL (The Philanthropic Association of Parents of Children with Leukaemia and other forms of cancer).

In October 2022, **5 teams of 4 Adisseo employees** brilliantly took up the Oxfam Trailwalker challenge, **walking 100 km in less than 30 hours, without a relay!**

In addition to being a remarkable sporting challenge, this event is an important lever to support Oxfam's actions in favour of a more just, sustainable and united world and against inequality and poverty.

**Thanks to its 5 participating teams, Adisseo raised over € 10,920 for Oxfam!**

Employee involvement is a strategic issue in the company's CSR approach. Encouraging initiatives that combine employee health and well-being with international solidarity is one of the levers for achieving this.



**100 km**

in less than 30 hours



## **GROWING AND DEVELOPING TOGETHER**

Every two years, Adisseo organises a global internal survey, "Adisseo & I", among its employees to assess their satisfaction and commitment.

The 2022 survey, conducted at the end of the health crisis, shows **a sustainable employee commitment rate (77%) that is higher than the 2020 survey (+ 1%)**. This very good result shows that in a totally new context generated by the Covid pandemic, Adisseo has succeeded in setting up a hybrid work organisation that integrates the new normality in work modes and organisation.

**This new work organisation is the result of the adaptability and experience acquired by its employees** and is a long-term solution. It harmoniously integrates the operational needs and aspirations of employees in terms of well-being and commitment to work.

The "Training & Development" and "Working Conditions & Well-being" categories have made further progress, demonstrating Adisseo's ability to create long-term commitment from its employees.

At the beginning of 2024, a new "Adisseo & I" survey will help measure progress in the co-construction of a sustainable company.





1 NO  
POVERTY



2 ZERO  
HUNGER



3 GOOD HEALTH  
AND WELL-BEING



4 QUALITY  
EDUCATION



5 GENDER  
EQUALITY



6 CLEAN WATER  
AND SANITATION



7 AFFORDABLE AND  
CLEAN ENERGY



8 DECENT WORK AND  
ECONOMIC GROWTH



9 INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



10 REDUCED  
INEQUALITIES



11 SUSTAINABLE CITIES  
AND COMMUNITIES



12 RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION



13 CLIMATE  
ACTION



14 LIFE  
BELOW WATER



15 LIFE  
ON LAND



16 PEACE, JUSTICE  
AND STRONG  
INSTITUTIONS



17 PARTNERSHIPS  
FOR THE GOALS



## DEVELOPING **EMPLOYMENT**

*In 2022, Adisseo pursued its growth and diversification strategy in order to meet the growing needs of the world's population for animal proteins and to expand its range of services in order to accelerate the ecological transition of food chain manufacturers.*

During 2022, nearly 250 people were recruited, including 214 on permanent contracts and 79 new positions. These recruitments largely concerned production activities, particularly with the commissioning of new units in China and Europe.

The contractual conditions offered in all countries ensure that Adisseo employees are paid above the market average, have minimum social security coverage regardless of the country's practices and enjoy a **working and management environment that respects individuals** and is clearly committed to combating any form of discrimination or harassment.

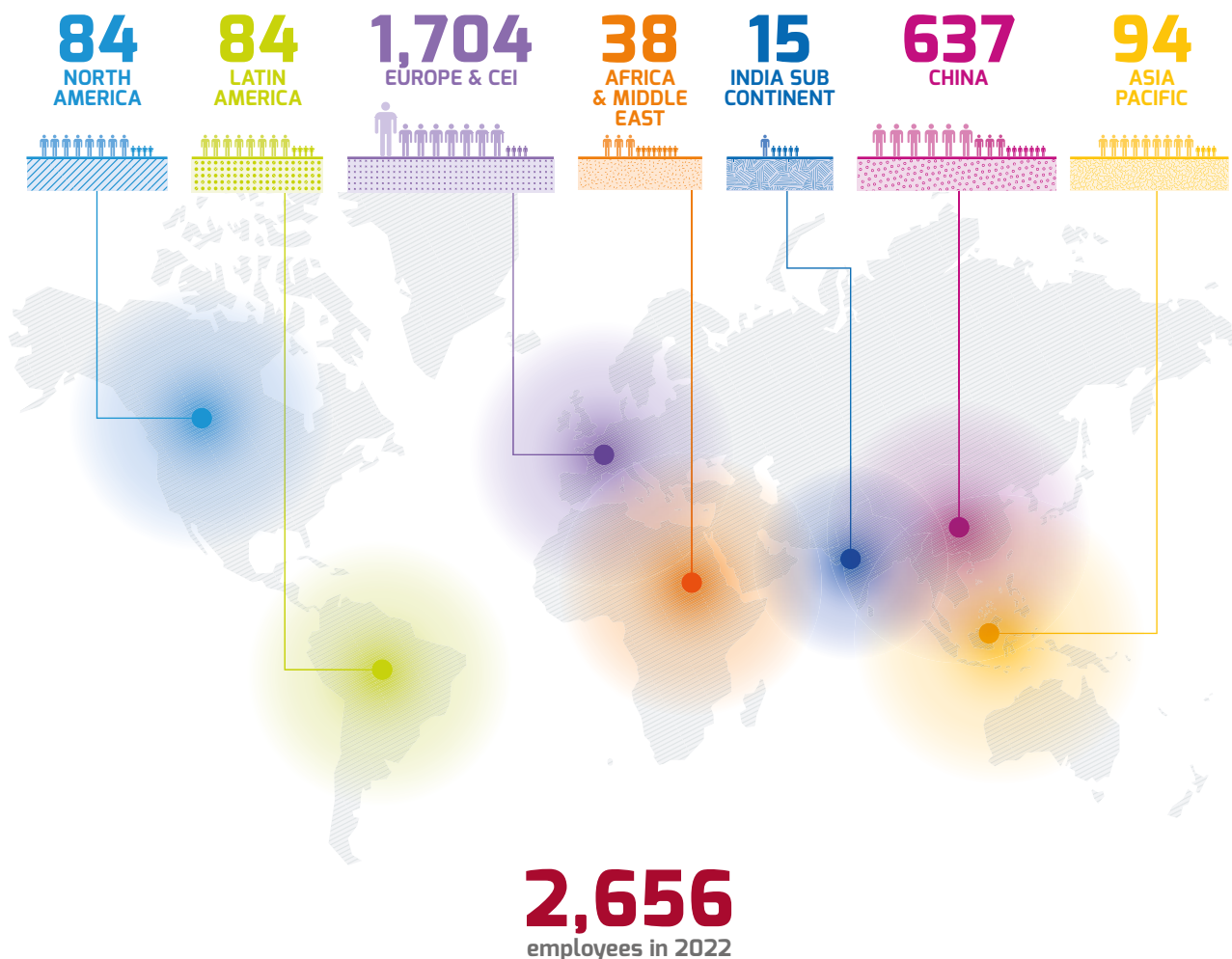
In 2022, Adisseo also welcomed 40 young people on work-study contracts, as part of its participation in the French government's "1 Young Person, 1 Solution" plan.

This training policy has led to similar initiatives in many of the Group's countries, including China.

Adisseo has participated in numerous job fairs and has been able to establish links with new schools to **anticipate the company's future needs**. Particular attention is being paid to extending this practice to fairs that bring together companies and talented people with disabilities.

## TOTAL LABOR FORCE BY REGION IN 2022\*

GRI 102-7



**2,656**  
employees in 2022



Labor force 2021 → **2,523**  
Labor force 2020 → **2,345**



\*Full-time equivalent staffing

>350 employees  
>30 years of formula-  
exp  
+70 M€ of investments in 10 years of which:  
7 M€ for the environment  
protections  
Leader of roencapsulation  
R&I Center



## INVESTING IN SKILLS DEVELOPMENT: INNOV'IA

Committed to strong growth, Innov'ia, a subsidiary of Adisseo, has shown a strong job creation dynamic.

In a sustainable approach to talent management, Innov'ia has implemented a series of measures aimed at securing its human resources needs over the long term, including:

collaboration is in line with the company's desire to integrate new employees from this school.

- Development of in-house training programmes:

- A programme dedicated to production and pilot operators (beginners to experienced), on all technologies used by Innov'ia and its subsidiaries.

- A programme dedicated to production support professions.

**Innov'ia Academy has already trained 80 people through these programmes.**

100% of learners remain after the course, with a success rate of 82.5% in the evaluations. The training evaluation questionnaire shows a satisfaction rate of 89%. Innov'ia Academy has been QUALIOP1 certified since January 2022, a guarantee of the quality of its course.

### Training at Adisseo in 2022

(In Europe by employee and professional category)

Numbers of training hours



34,688 h

10,855 h  
Managers

23,833 h  
WTS\*

vs 32,018 h in 2021 - vs 29,930 h in 2020

Number of employees receiving training



955  
employee  
in total

324  
Managers

631  
WTS\*

vs 986 in 2021 - vs 977 in 2020

Average number of training hours



29.7 h  
in total

33.4 h  
Managers

28.2 h  
WTS\*

vs 22.4 h in 2021 - vs 19 h in 2020

## DEVELOPING SCIENTIFIC AND TECHNICAL EXPERTISE

Adisseo has significant know-how in many areas and, in order to help extend and develop it, has launched an Expert Programme in 2021, consisting of a community of scientific and technical experts. These experts were identified through a selection process led by representatives of different entities and the Executive Committee. The Executive Committee underlined the importance of expertise for Adisseo during the nomination ceremony.

**One of the objectives of the Expert Community is to ensure the transfer of knowledge and skills and to develop mentoring.**

Supporting the company's activity, playing an ambassadorial role with external

stakeholders (customers, authorities, potential partners, suppliers, industrial partners, academic collaborators, etc.), preparing for the future by identifying potential experts and fostering their development are some of the missions of this community of experts.

The first 14 experts were appointed in 2021 and worked in 2022 to define their community's roadmap, define its operating mode and identify how to enhance its reputation.

In 2022, Adisseo's Experts Community welcomed 4 new members from all over the world. The ambition is to continue to make this community grow year after year and to perpetuate it.

## REPUTATION AND RECOGNITION

In 2022, Adisseo was listed in the top 10 Companies with the Best Governance for the Golden Responsibility award given by Sina.com, which evaluated 1500 companies.

Sina.com, one of China's leading media, conducts an annual ESG (Environment, Social & Governance) assessment based on the company's public information, media and authoritative ESG databases.

In 2021, Adisseo was already ranked by the financial magazine Securities Times in the top 100 ESG rankings among more than 4,000 listed chemical companies in China.

In France, the magazine Le Point evaluates the CSR (Corporate Social Responsibility) commitment of nearly 2,000 companies every year. **It publishes a list of the 250 most responsible companies in France**, in which Adisseo has been included for the past three years.

These awards are a recognition of Adisseo's good performance in terms of financial health, social responsibility, corporate governance and environmental performance.



\*WTS = Workers, Technicians, Supervisors (non-management)





# TO WORK TOWARDS ZERO ENVIRONMENTAL IMPACT



## DO YOU KNOW?

### The earth is 1.1°C warmer

than it was at the start of the industrial revolution.

On the current path of CO<sub>2</sub> emissions, the global temperature is expected to increase by 3 to 5°C by the end of century.

Source: UN December 2020

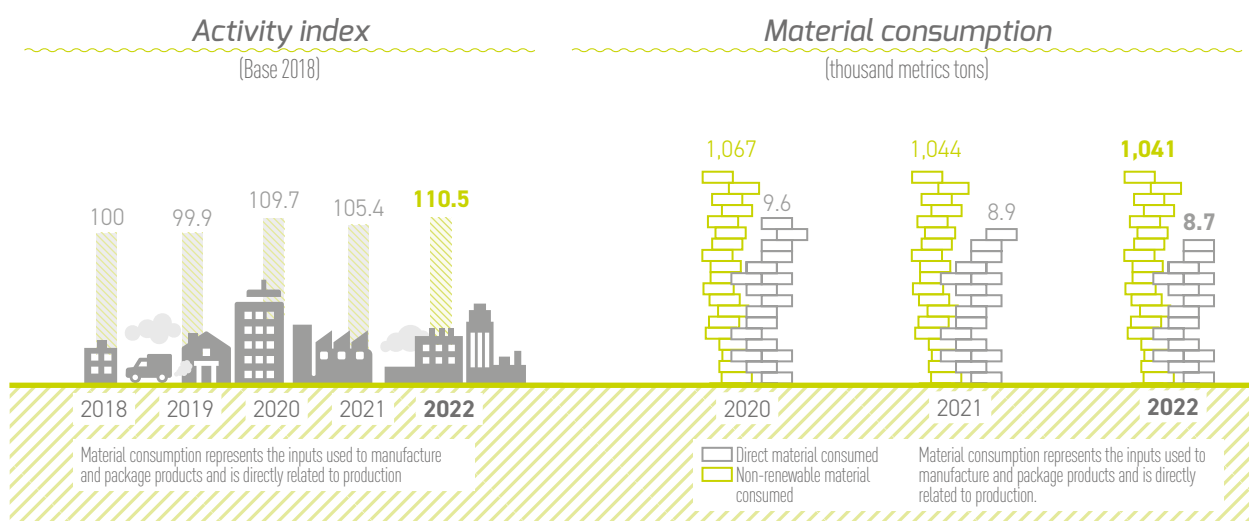
*Adisseo is constantly aiming to reduce the impact of its activities on the environment. With this in mind, the company has rallied to achieve its public environmental objectives established in 2018, while contributing to the Sustainable Development Objectives defined by the United Nations.*

## A SLIGHTLY HIGHER ACTIVITY RATE THAN IN 2020

*The activity index reflects changes in the quantities produced at our major industrial production sites.*

In 2022, it returned to a value higher than that of 2020, 2021 having been set back due to the completion of a long technical shutdown of European units, during which various periodic regulatory inspections of the installations were carried out as well as **significant process modifications linked to improvements in**

**working conditions, environmental protection and production performance.** The situation was very different in 2022 with the start-up of a complete, new liquid methionine production line at the Nanjing site and a slowdown in production levels in Europe due to the economic crisis in particular.



## DECARBONISING ADISSEO'S INDUSTRIAL SITES

**The objectives of decarbonisation of industry cannot be achieved without the implementation of breakthrough technologies such as the use of hydrogen or carbon capture and sequestration.**

These new technologies are part of the research process conducted by Adisseo in its strategy to decarbonise its industrial activities.

The possibility of boosting its hydrogen sulphide (H<sub>2</sub>S) production workshop at the Saint Clair du Rhône site (France) with hydrogen has been demonstrated in order to replace some of the methane used until now

as a raw material. This technology limits the production of sulphur co-products and reduces energy consumption. **Overall, the site's greenhouse gas emissions have been significantly reduced.**

At the end of 2022, Adisseo signed a partnership agreement with Air Liquide to create an underground pressurised hydrogen pipeline to supply the Saint Clair du Rhône site. This pipeline will be commissioned in early 2024.

In addition, Air Liquide is committed to the construction of a new Hydrogen production workshop at the nearby Roussillon (France)

platform. This SMR-type unit (Steam Methane Reforming) will be equipped with a carbon dioxide (CO<sub>2</sub>) capture system to reduce emissions to a minimum. The carbon dioxide will then be reused directly as a raw material in the methionine production workshop at the Roussillon plant and in the other workshops of the platform.

**With a strategy based on the use of hydrogen, Adisseo confirms its commitment to sustainable, low-carbon development for its European production platform.**





## COMMITTED TO CLIMATE PROTECTION

*Climate change is one of the major challenges facing society and one on which we must act as quickly as possible. This global challenge is at the heart of Adisseo's concerns.*

In 2021, Adisseo committed to contribute to the collective goal of carbon neutrality by 2050.

In 2022, Adisseo revised its short-term environmental objectives, namely:

- A 21% reduction in its greenhouse gas emissions in absolute terms between 2020 and 2025. This target is aligned with the 1.5°C SBT (Science Based Targets) trajectory and the Paris Agreement.
- A 13% reduction in its absolute energy consumption between 2020 and 2025 including business growth.

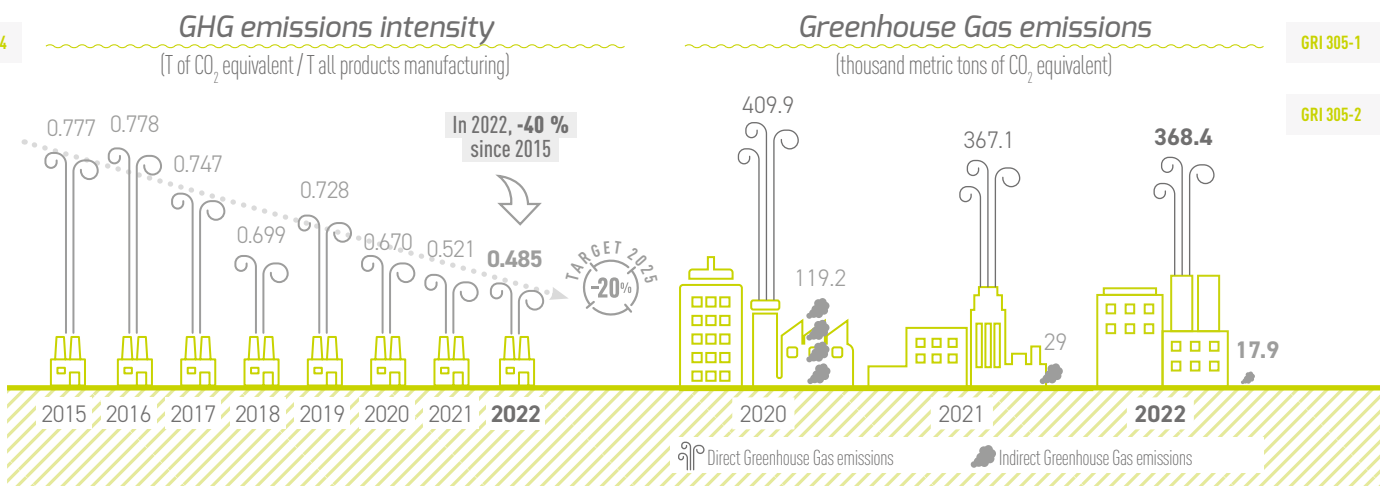
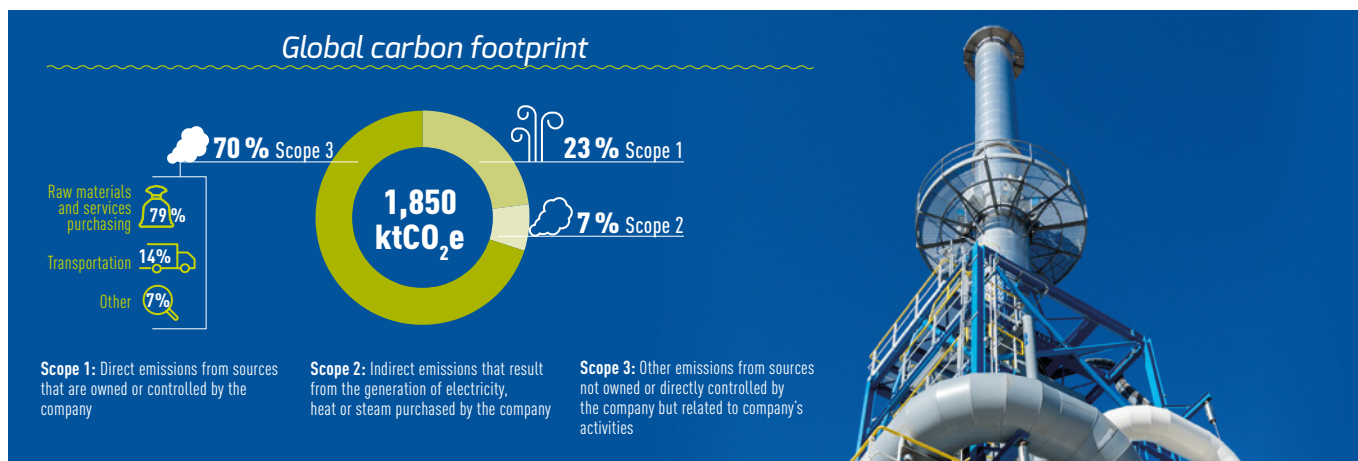
In 2022, **Adisseo initiated a process with Carbone 4** (a leading French sustainable development consultancy) to establish its carbon reduction roadmap to 2050.

This work consisted first of all of a critical review of the measurement of the company's carbon footprint on all its perimeters. It confirmed Adisseo's estimates and refined them by looking in greater depth at regional data according to the countries where the company's activities are located.

Within the framework of a project group, 4 themes were analysed in detail:

- **Raw material purchases**
- **Energy**
- **Logistics and transport**
- **Processes**

This approach has already enabled Adisseo to verify that its short-term objectives for greenhouse gas emissions and energy consumption were relevant.



Greenhouse gas emissions (the sum of direct emissions from our industrial activities and indirect emissions from our energy purchases) have decreased significantly since 2020 (by 40 kt). Despite the fact that the company's activity rate is close between 2020 and 2022, this has contributed to a decrease in direct emissions. At the same time, the switch in January 2021 to decarbonised power supply for the Nanjing (China) site has significantly reduced indirect emissions.



## FAVOURING RENEWABLE ENERGIES

The issue of sustainable development and energy transition is central to energy purchasing.

**Favouring renewable energy supplies is the strategy favoured by Adisseo,** acting in three ways:

- By pursuing its policy of purchasing energy of renewable or at least decarbonised origin (nuclear origin in particular), as is already the case at major production sites such as Burgos (Spain) or Nanjing (China).
- By encouraging the use of biomass steam, as is the case at the Commentry site (France).
- By benefitting from steam suppliers' decarbonisation projects, such as the OSIRIS Economic Interest Group at the Roussillon chemical platform (France). In 2022, there was no coal consumption among the required fuel sources.

In total, more than 55% of the company's electricity purchases are of renewable or decarbonised origin. Most of the remaining purchases are related to electricity purchases in France, whose energy mix has a significant share of renewable or decarbonised energy and therefore a lower environmental impact.



**55%**

**of the company's electricity purchases**

are of renewable or decarbonised origin

## OPTIMISING TRANSPORT FLOWS

*Adisseo is constantly seeking to optimise the logistics flows and modes of transport for its products, favouring the safest means of transport, improving customer service and minimising its environmental impact.*

Some of Adisseo's products are classified as hazardous and delivered in bulk. This is the case for carbon sulphide, for which transport methods were revised in 2022.

Rail transport is systematically favoured, and at least multimodal transport, since access to the first or last kilometres is only possible by road sometimes, as the facilities of certain customers do not allow for the use of wagons.

**The best available techniques are used for the design of wagons or containers.**

The authorisation of any new transport flow is subject to a transport risk analysis which requires the implementation of the necessary practices to control the risk of leakage or traffic accidents.

Preparations for managing emergency situations are defined and formalised so that assistance can be provided in the event of an accident.

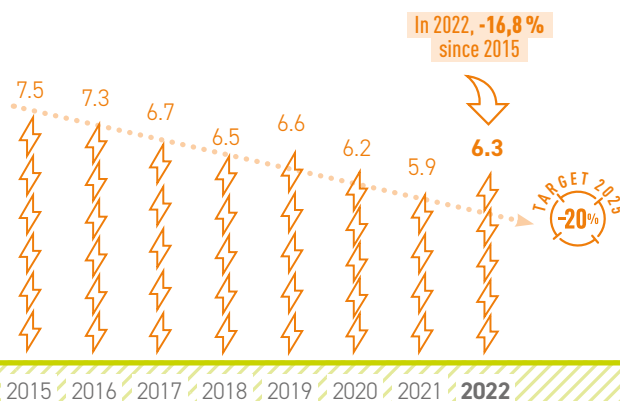
In most cases, the safest means of transport are also the least polluting. The transport of Adisseo products to customers constitutes, along with the transport of raw materials, the second most important element of scope 3 of the company's overall carbon footprint.

The adoption of these different actions has enabled Adisseo to implement **a real sustainable transport policy on all levels.**

### Energy use intensity

(GJ/t all products manufacturing)

GRI 302-3



Energy consumption intensity represents the amount of energy used to manufacture one ton of product, all products combined. In 2022, we deviated from the objective due to the energy crisis in Europe forcing our production units to unfavorable operating conditions, and the start-up of the new liquid methionine unit in Nanjing (China). A plan to optimize our energy consumption has already been launched and a new steam turbine will be operational in China from mid-2023, allowing internal electricity production by recovering steam co-produced by the process.





## SAVING ENERGY RESOURCES

*Energy crisis, risk of shortage, economic weight... Energy efficiency has become a major issue for society, whether for individuals or companies.*

Adisseo has always paid particular attention to its management of energy resources.

In 2022, the company was a signatory of the ECOWATT charter in France. This charter is offered by RTE (electricity transmission network manager) and Ademe (Agency for Ecological Transition).

By signing this charter, Adisseo has committed to implementing good practices in terms of electricity consumption:

- As an employer – through actions to raise employee awareness.
- As a consumer – through actions to moderate electricity consumption (lowering the heating temperature/modernising lighting/automating shut-offs, etc.)..

These measures, which are mainly aimed at Adisseo's administrative buildings, complement the company's efforts to reduce consumption at its industrial sites around the world.

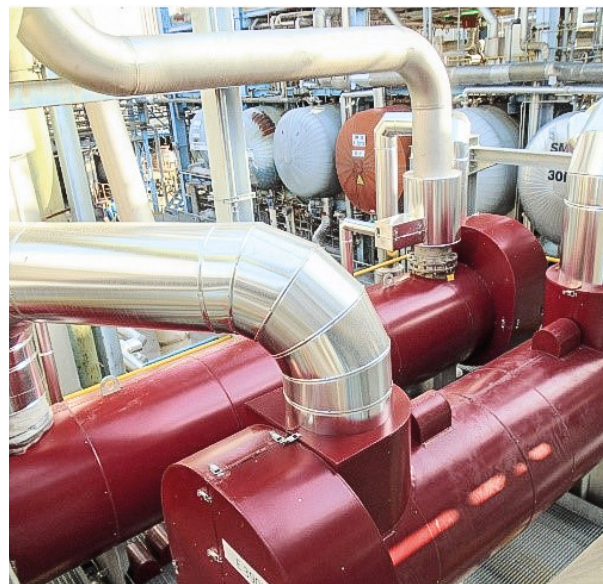
The Sunflower project, which began in 2020, is an example of an initiative that fits perfectly with **Adisseo's desire to limit its energy consumption, increase its efficiency and indirectly reduce its greenhouse gas emissions**. In its production workshops, the company's energy performance is closely monitored to adapt operating parameters in order to constantly optimise consumption. Any loss of energy is identified, and each employee proposes ideas to remedy the situation.

Several savings projects have been carried out.

The Venus project, representing an investment of nearly € 1 million, was commissioned in Q1 2022 at the methionine production site in Commentry (France). It involves the installation of process energy recovery exchangers. The same improvement idea was implemented at the Roussillon plant in 2021.

In 2022, the ARES project was also defined for the methionine production plant in Roussillon (France) for **an investment of € 800 k, leading to an energy recovery of a process flow equivalent to more than 2t/h of steam**.

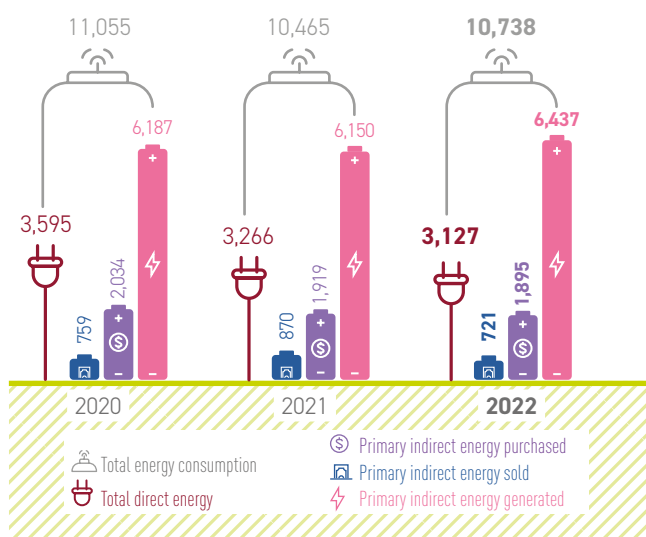
This type of equipment already exists on the same process unit at our Nanjing site (China).



### Energy consumption

(in terajoules)

GRI 302-1



Direct primary energy corresponds to the total consumption of fuel (e.g. natural gas or fuel oil purchased and used for combustion).

Indirect energy refers to the quantities of electricity, heat, cooling or steam purchased for consumption, self-produced (by the process for example) and sold.

The total energy consumption within the company is the sum of the direct energy of fuel consumption, the indirect energy purchased and the indirect energy self-produced, minus the indirect energy sold.

Total direct energy consumption is directly linked to the rate of activity and is controlled through our improvement actions aimed at reducing it (optimization of natural gas consumption for combustion in particular).

Various continuous improvement actions in the field of energy have enabled us to maintain our energy consumption at the same level in 2022 despite slightly higher activity than in 2020.

## REDUCING ENVIRONMENTAL IMPACTS

*To ensure sustainable growth, Adisseo is constantly working to reduce the impact of its activities on the environment and has invested nearly € 100 million in this area over the last 7 years.*

The new Odisseo wastewater treatment plant at the Commentry site (France), which represents an investment of € 20 million, was operational throughout 2022 and has demonstrated that its performance meets the most stringent regulatory requirements.

**€ 2 million were invested in the Innov'ia site in La Rochelle (France) as part of the EKEAU project to ensure total control of its aqueous effluents.** The installation of a hydraulic regulation basin and a safety basin, coupled with a complete overhaul of all the rainwater collection and treatment facilities, made it possible to respond to another, older problem.

Adisseo is also very attentive to the possible nuisances generated by its activities wherever they are located and applies a policy of continuous improvement to control them.

The ODORLESS project is now operational at the Innov'ia 3I site in Pontaurmur (France), a site that manufactures potentially odorous food and feed products.


This innovative process, which required an investment of nearly € 1 million, consists of treating its atmospheric effluents with micro-organisms to destroy odorous organic compounds.

The number of odour episodes reported by the odour observatory created in 2019 has decreased by 90% and this progress has been recognised by the surrounding communities.

This project has also **enabled the mastery of this biotechnological process**, which will be deployed on other production sites.

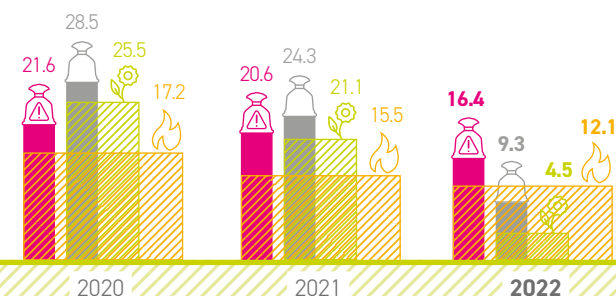
Like odours, noise from our installations can also be a source of nuisance for local residents. In this respect, the operation of the effluent treatment furnaces of the production units at the Saint-Clair du Rhône site (France) is particularly monitored. In consultation with the authorities, **numerous design changes have already been made but without achieving the desired improvement, as the problem is very complex.** New, relatively heavy modifications have therefore been programmed and will be carried out during the next technical shutdown in 2023. This work will continue until conclusive results are obtained and the objectives are achieved.

All Adisseo entities are committed to reducing the environmental impact of their activities.

  
**-90 %**  
decrease  
of odour episodes

### Waste

(in thousand metric tons)



 Non-hazardous waste  Hazardous waste  Incinerated waste (D10)  Waste spread in agriculture (R10)

All the indicators relating to the quantities of waste have been significantly reduced following the very efficient operation of the new wastewater treatment unit at the Commentry site (France), which reduced the volume of associated sludge in particular. Progress was also made at the other industrial sites and contributed to this significant reduction.

GRI 306-3

GRI 306-5

## WATER, A VALUABLE RESOURCE

*Water conservation is a major global issue. Adisseo, a responsible company, is aware of this and has been working for a long time to optimise its consumption.*

Food industry activities consume water, mainly in the cleaning phases of formulation installations, between production campaigns.

The search for water savings is based on 3 axes:

- Research into increasing the size of production batches to reduce the number of cleaning operations
- Optimising production planning according to product families to favour dry cleaning
- Getting the right result on the first go to avoid reprocessing

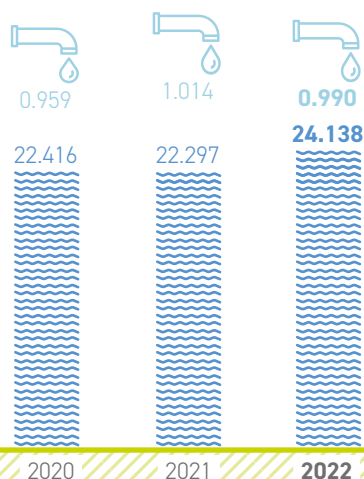
Within our subsidiary Innov'ia, water consumption has been reduced by 10% between 2020 and 2022.

Adisseo has set a target of **reducing its water consumption intensity** (quantity of water used per ton of product manufactured) **by 20% by 2025, compared to 2015.**

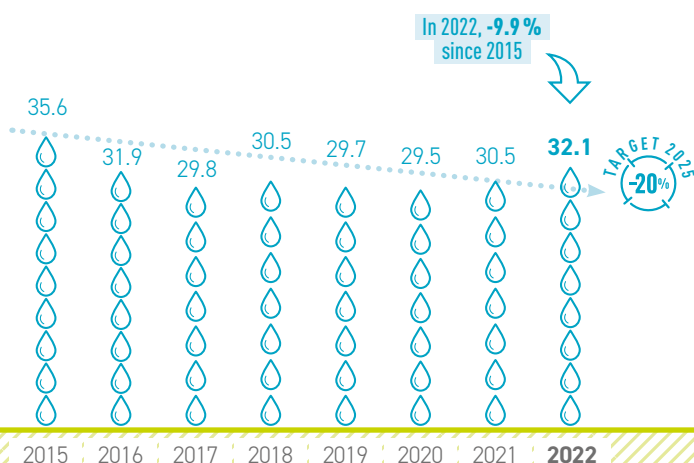
A working group on the reduction of water consumption is now operational for the GREEN project, which also aims to reduce aqueous effluents and waste volumes generated by our activities. In addition to seeking direct savings, recycling is the other preferred solution.



**Water abstraction**  
(in million m<sup>3</sup>)



**Water use intensity**  
(m<sup>3</sup>/t all products manufacturing)



GRI 303-3

Drinking water

Process water (untreated/groundwater)

Water consumption remains at a high level. Most of the water withdrawn is used to meet cooling needs and is returned directly to the natural environment without any risk of pollution. This is particularly the case at the Saint Clair du Rhône site (France) where

the historical configuration of the network leads to a high consumption of groundwater, the level of which remains stable because it is recharged by the nearby Rhône River. The GREEN project has already identified various avenues for progress in water saving which will require significant investment. The intensity of water consumption has also deteriorated in 2022 due to a long-term technical shutdown during this year of the most modern and most efficient site in this area.





10 %

water consumption  
reduction

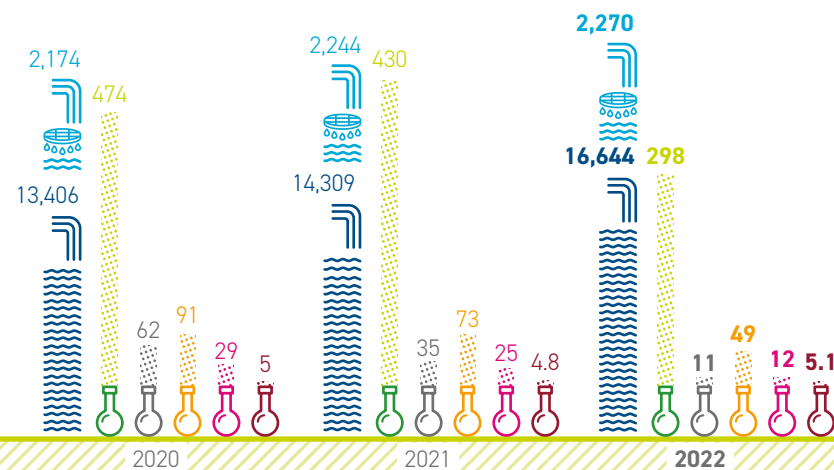
between 2020 and 2022 at INNOVIA.



### Water discharges by destination and type

(in million m<sup>3</sup>)

GRI 303-4



- Volume of water discharged into surface water after treatment
- Volume of water discharged directly into surface water (in million m<sup>3</sup>)
- COD (Chemical Oxygen Demand)

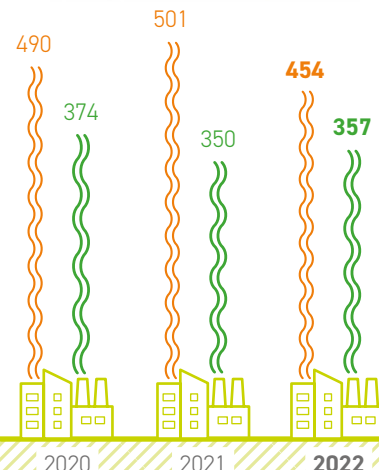
- BOD5 (Biological Oxygen Demand) (in metric tons)
- SM (Suspended Matter) (in metric tons)
- Total nitrogen (in metric tons)
- Total phosphorus (in metric tons)

All substance discharges decreased significantly by 2022. Investments to improve the operation of wastewater treatment units at our industrial sites have led to significant results, particularly in Nanjing (China), Burgos (Spain) and, above all, Commentry (France), where a new treatment plant will come on stream in late 2021. We have also noted an increase in our overall discharges. This is due to a higher consumption of cooling water which is returned directly to the natural environment without any pollution.

### NOx and Sox emissions

(in metric tons)

GRI 305-7



NOx emissions  
(nitrogen oxides)

SOx emissions  
(sulphur oxides)





In 2022, NOx (nitrogen oxides) emissions fell by 10% while SOx (sulphur oxides) emissions remained stable. This is the result of various actions to improve the reliability and control of our emissions at several industrial units.



# GRI INDEX

GENERAL DISCLOSURES ECONOMIC SOCIAL ENVIRONMENT

Adisseo is based on the most recent recommendations of the **Global Reporting Initiative (GRI)**. In association with the United Nations Environment Programme (UNEP), GRI develops globally applicable sustainable development guidelines to report on the economic, environmental and social performance of companies and organizations.

ASPECT	REF. GRI	DESCRIPTION	STATUT	REF. SHEETS	COMMENTS
Strategy	102-14	Déclaration du décideur haut placé	Complete	1	
	102-15	Statement from senior decision-maker	Partial	All report	
Organizational profile	102-1	Key impacts, risks, and opportunities	Complete	3	
	102-2	Name of the organization	Complete	14-17	 <a href="https://www.adisseo.com/en/products-and-services/">https://www.adisseo.com/en/products-and-services/</a>
	102-3	Activities, brands, products, and services	Complete	12-13 4th cover	
	102-4	Location of headquarters	Partial	12-13	
	102-5	Location of operations	Partial	10 4th cover	The Adisseo Group is made up of 49 legal entities controlled by Bluestar Adisseo Company, a company listed on the Shanghai stock market (headquartered at 9 West Beitucheng Road, Chaoyang District, Beijing), and which is owned by its majority shareholder China National Bluestar (Group) Co., Ltd (China) as of 31st Dec 2022.
					
					Adisseo teams are located in more than 110 countries on all continents. Customers:
					<ul style="list-style-type: none"> <li>• <b>Integrators:</b> these are poultry meat producers who have full control of the entire production chain from the manufacture of complete feeds through to poultry slaughter and processing.</li> <li>• <b>Pre-mixers:</b> these are manufacturers of premix products containing micro-ingredients (vitamins, trace elements, etc.), which will be incorporated into complete feeds by feed mill operators.</li> <li>• <b>Feed manufacturers:</b> these are producers of complete feed products for all types of livestock.</li> <li>• <b>Distributors:</b> these intermediaries distribute feed ingredients (amino acids, vitamins, enzymes, etc.) at national level or within a particular market segment.</li> </ul>
	102-6	Markets served	Complete	10, 12-13 4th cover	
	102-7	Scale of the organization	Complete	10, 36	
	102-8	Information on employees and other workers	Partial	31	
	102-9	Supply chain	Complete	4th cover	The supply chain structure is based on a community led by company managers for each product range. These are supported by local contacts at each manufacturing site and in each sales region. Network coordination is based on the sales and operations planning process.
	102-10	Significant changes to the organization and its supply chain	Partial	All report	Implementation of the organization by SBU (We Move project).
	102-11	Precautionary Principle or approach	Complete	All report	
	102-12	External initiatives	Partial	All report	
	102-13	Membership of associations	Partial	8-9	 Adisseo is a member of the IFIF (world), the FEFANA (EU), SYNPA (FR), Sindirações (BR) and UIC (of which JM Dublanc is a board member)...
Stakeholder Engagement	102-40	List of stakeholder groups	Complete	2	List of main stakeholders included: customers, employees, trade unions, shareholders, civil society and media, as well as suppliers, public authorities, local and regional communities, etc.
	102-42	Identifying and selecting stakeholders	Complete	All report	Initiatives implemented with stakeholders during the reference period and illustrated in report articles.
	102-43	Approach to stakeholder engagement	Partial	2-9	The methods and frequency of engagement are integral to the company management system.
	102-44	Key topics and concerns raised	Partial	All report	Environmental considerations have become integral to the basic tenets of the company, in the same way as safety and financial results.
Reporting Practice	102-45	Entities included in the consolidated financial statements	Partial	10	
	102-46	Defining report content and topic Boundaries	Complete	12-13	The report content is determined in accordance with the recommendations from the GRI.
	102-47	List of material topics	Complete	11	
	102-49	Changes in reporting	Complete	All report	

ASPECT	REF. GRI	DESCRIPTION	STATUT	REF. SHEETS	COMMENTS
Reporting Practice	102-50	Reporting period	Complete	Cover	
	102-51	Date of most recent report	Complete		2021 Sustainable Development Report : March 2022
	102-52	Reporting cycle	Complete		Annual
	102-53	Contact point for questions regarding the report	Complete	4th cover	Contact <a href="http://www.adisseo.com">www.adisseo.com</a>
	102-55	GRI content index	Complete	46-47	
Governance	102-18	Governance structure	Complete		Governance of the group is divided into committees (the executive management and management committees), as detailed in our ISO 9001, ISO 14001, ISO 45001, ISO50001 and FAMI-QS certified management manual <a href="https://www.adisseo.com/en/our-company/">https://www.adisseo.com/en/our-company/</a>
Ethic and integrity	102-16	Values, principles, standards, and norms of behavior	Complete	11	
	102-17	Mechanisms for advice and concerns about ethic	Complete	25, 33	
Economic performance	201-1	Direct economic value generated and distributed	Partial	28	
	201-4	Financial assistance received from government	Partial	28	
Employment	401-1	New employee hires and employee turnover	Partial	36	
Occupational health and safety	403-1	Occupational health and safety management system	Complete	2, 19	ISO 45001 certification implemented
	403-2	Hazard identification, risk assessment and incident investigation	Complete	All report	
	403-9	Work-related injuries	Complete	19	
Training and education	404-1	Average hours of training per year per employee	Partial	37	Development of eLearning and digital training resources
	404-3	Percentage of employees receiving regular performance and career development reviews	Partial		In 2022, 100% of employees in France and 100% of managers in Spain received at least one performance review.
Diversity and equal opportunity	405-1	Diversity of governance body and employees	Partial	34	Based on leader Council committee
Local communities	413-1	Operations with local community engagement, impact assessments, and development programs	Partial	All report	Engagement in dialog with immediate local residents, sustainability day(of discussion with authorities, nonprofit associations, etc.), environmental and social commitment through partnerships, public meetings, emergency communication, etc.
	413-2	Operations with significant actual & potential negative impacts on local communities	Complete	All report	
Materials	301-1	Materials used by weight or volume	Complete	39	
Energy	302-1	Energy consumption within the organization	Complete	42	Certification ISO50001 implemented
	302-3	Energy intensity	Complete	41	
Water and effluents	303-1	Interactions with water as a shared resource	Complete	44	
	303-3	Water withdrawal	Complete	44	
	303-4	Water discharge	Complete	45	
Emissions	305-1	Direct (Scope 1) GHG emissions	Complete	40	
	305-2	Energy indirect (Scope 2) GHG emissions	Complete	40	
	305-4	GHG emissions intensity	Complete	40	
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	Partial	45	
Waste	306-3	Waste generated	Complete	43	
	306-5	Waste directed to disposal	Partial	43	



1 NO  
POVERTY



**End poverty** in all its forms everywhere

2 ZERO  
HUNGER



**End hunger**, achieve food security and improved nutrition and promote sustainable agriculture

3 GOOD HEALTH  
AND WELL-BEING



**Ensure healthy lives** and promote well-being for all at all ages

4 QUALITY  
EDUCATION



**Ensure inclusive and equitable quality education** and promote lifelong learning opportunities for all

5 GENDER  
EQUALITY



**Achieve gender equality** and empower all women and girls

6 CLEAN WATER  
AND SANITATION



**Ensure availability and sustainable management of water and sanitation for all**

7 AFFORDABLE AND  
CLEAN ENERGY



**Ensure access to affordable, reliable, sustainable and modern energy for all**

8 DECENT WORK AND  
ECONOMIC GROWTH



**Promote sustained, inclusive and sustainable economic growth,**  
full and productive employment and decent work for all

9 INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



**Build resilient infrastructure**, promote inclusive and sustainable industrialization and foster innovation

10 REDUCED  
INEQUALITIES



**Reduce inequality** within and among countries

11 SUSTAINABLE CITIES  
AND COMMUNITIES



**Make cities and human settlements inclusive**, safe, resilient and sustainable

12 RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION



**Ensure sustainable consumption and production**

13 CLIMATE  
ACTION



**Take urgent action to combat climate change** and its impacts

14 LIFE  
BELOW WATER



**Conserve and sustainably use the oceans**, seas and marine resources for sustainable development

15 LIFE  
ON LAND



**Protect, restore and promote sustainable use of terrestrial ecosystems**,  
sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

16 PEACE, JUSTICE  
AND STRONG  
INSTITUTIONS



**Promote peaceful and inclusive societies for sustainable development**,  
provide access to justice for all and build effective, accountable and inclusive institutions at all levels

17 PARTNERSHIPS  
FOR THE GOALS



**Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development**

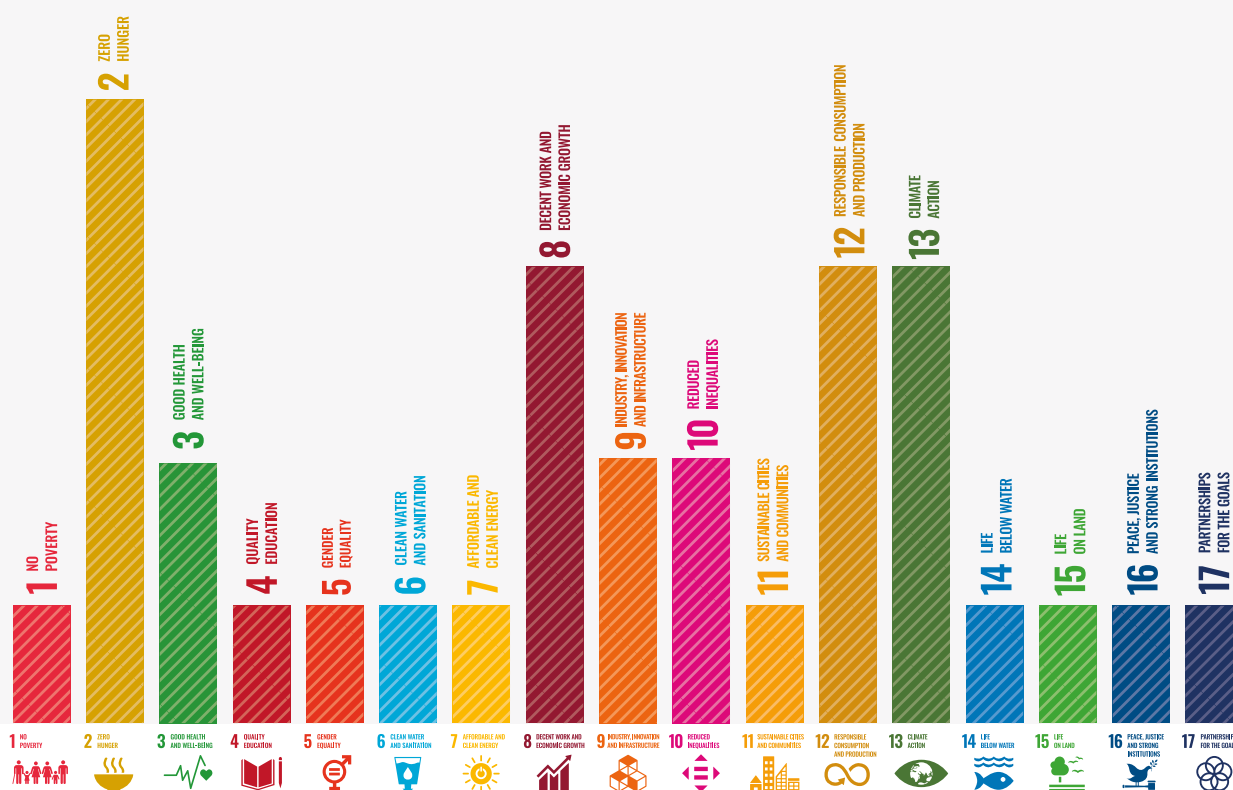


# SDG INDEX

The Sustainable Development Goals where Adisseo is contributing significantly In september 2015, the 193 United Nations Member States adopted **17 Sustainable Development Goals (SDG)**, defining the global priorities and aspirations about the social, environmental and economic development by 2030.

Adisseo is contributing through its products and services, through its investments and also through the best practices implemented.

## SUSTAINABLE DEVELOPMENT GOALS



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