enav SpA

CLIMATE REPORT 2024

IN LINE WITH THE RECOMMENDATIONS OF THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

INNOVATING THE SKY

Every day, we ensure
our passengers fly reliably
and safely.

We design the sky of the
future, investing in people and
innovation for sustainable air
transport and the economic
growth of our Country.

ENAV. Innovating the sky

CLIMATE REPORT 2024

enav SpA


ITA
AIRWAYS

Contents

Introduction

This Climate Report has been prepared with the aim of providing a transparent and detailed overview of the actions undertaken by ENAV to address climate challenges, reduce its greenhouse gas emissions, and contribute to the European goals for the decarbonisation of air traffic.

The report is structured around four areas of focus that reflect the disclosure categories established by the Task Force on Climate-related Financial Disclosures (TCFD). Specifically, these areas concern the approach to climate change in terms of governance, strategy, risk and opportunity analysis, and the metrics and targets adopted.

The ENAV Group

The ENAV Group is composed of **various companies organised into four distinct operational areas**:

Air navigation services sector, which exclusively includes ENAV S.p.A. whose core business is providing air traffic control and management services and other essential air navigation services in Italian airspace and at the national civil airports for which it is responsible, ensuring the highest technical and system standards in flight safety and upgrading the technology infrastructure of air navigation systems. ENAV is the fifth-ranked player[1] in Europe and a major actor at the global level in the Air Traffic Control (ATC) industry.

Maintenance services sector, covered by Techno Sky S.r.l. wholly owned by ENAV, whose core business is the management and maintenance of the equipment and systems used for national air traffic control, ensuring its full operational efficiency and uninterrupted availability around the clock.

AIM (Aeronautical Information Management) software solutions service segment, occupied by IDS AirNav S.r.l., wholly-owned by ENAV, which is involved in the development and sale of software solutions for the management of aeronautical information and air traffic, as well as delivering a range of commercial services.

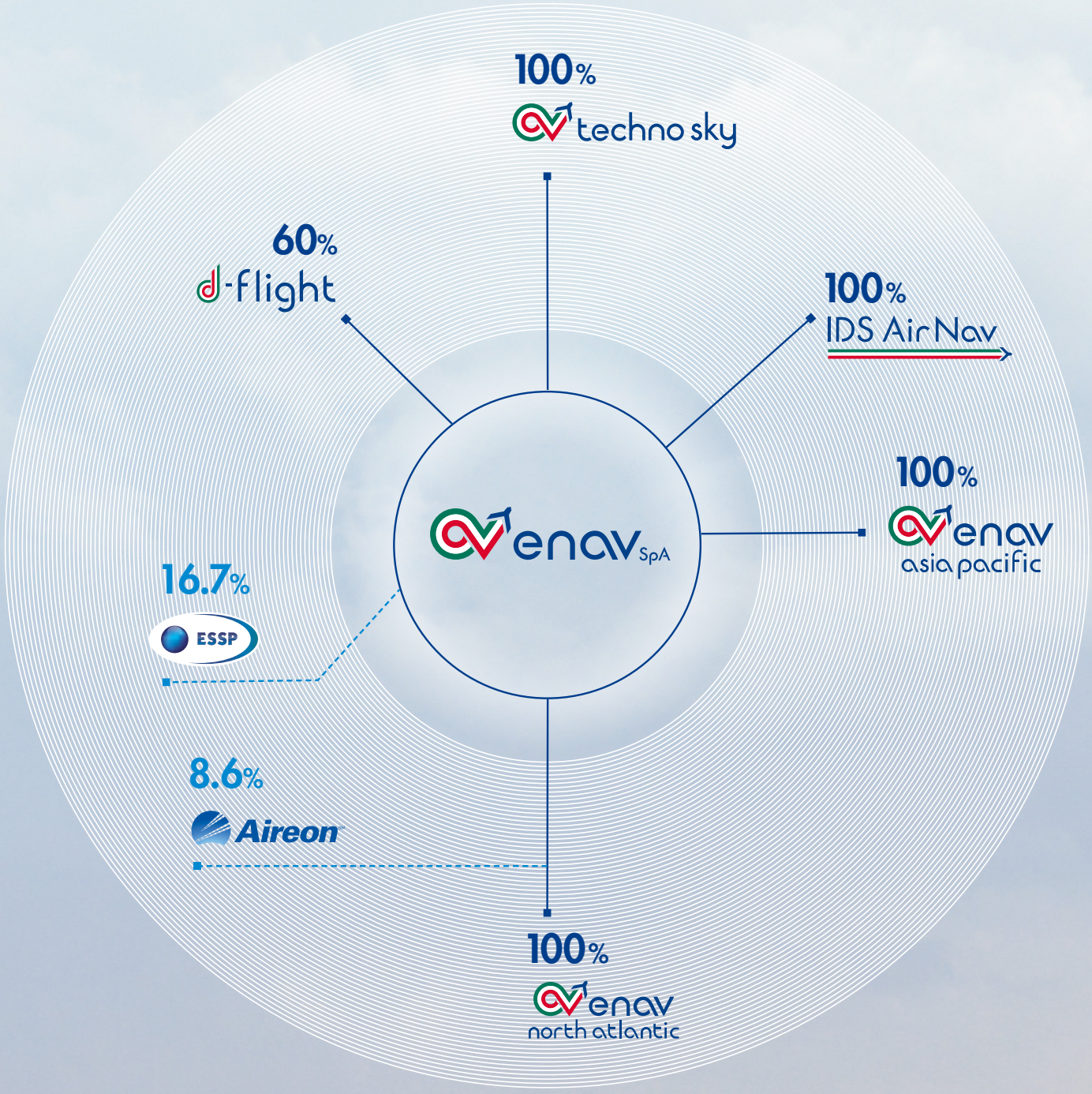
Other services, which include:

ENAV Asia Pacific Sdn Bhd, a Malaysian company wholly owned by ENAV, which is involved in business development and the delivery of services on the non-regulated market, with particular regard to the areas of strategic interest in Southeast Asia. In December 2024, ENAV's Board of Directors resolved to put the company into voluntary liquidation, as it no longer considered a presence in Malaysia for the development of the Group's business as strategic.

ENAV North Atlantic LLC, which currently holds, through Aireon Holdings LLC, an 8.60% interest (pre-redemption) in Aireon LLC, which will stand at 10.35% post execution of the redemption clause. Aireon realised and manages the first global satellite monitoring system for air traffic control, with the aim of enabling the comprehensive surveillance of all routes worldwide, with a focus on the polar, oceanic and other remote areas currently not covered by the radar-based air traffic control services, and enabling the optimisation of routes and achieving ever higher standards of flight safety and efficiency.

D-Flight S.p.A., a company 60% owned by ENAV, has as its corporate purpose the development and provision of low-altitude air traffic management services for remotely piloted aircraft and all other types of aircraft falling under the category of *Unmanned Aerial Vehicles Traffic Management (UTM)*.

1 ENAV manages one of the highest volumes of flights compared to other air navigation service providers in Europe, ranking fifth.


100%
techno sky
60%
d-flight
100%
IDS AirNav
100%
enav
asia pacific
enav SpA
16.7%
ESSP
8.6%
Aireon
100%
enav
north atlantic

4,376
Employees

45
Control towers

4
Area Control Centres (ACC)
Rome, Milan, Brindisi, Padua

Flights handled annually
Route traffic
2,258,556
Terminal traffic
860,608

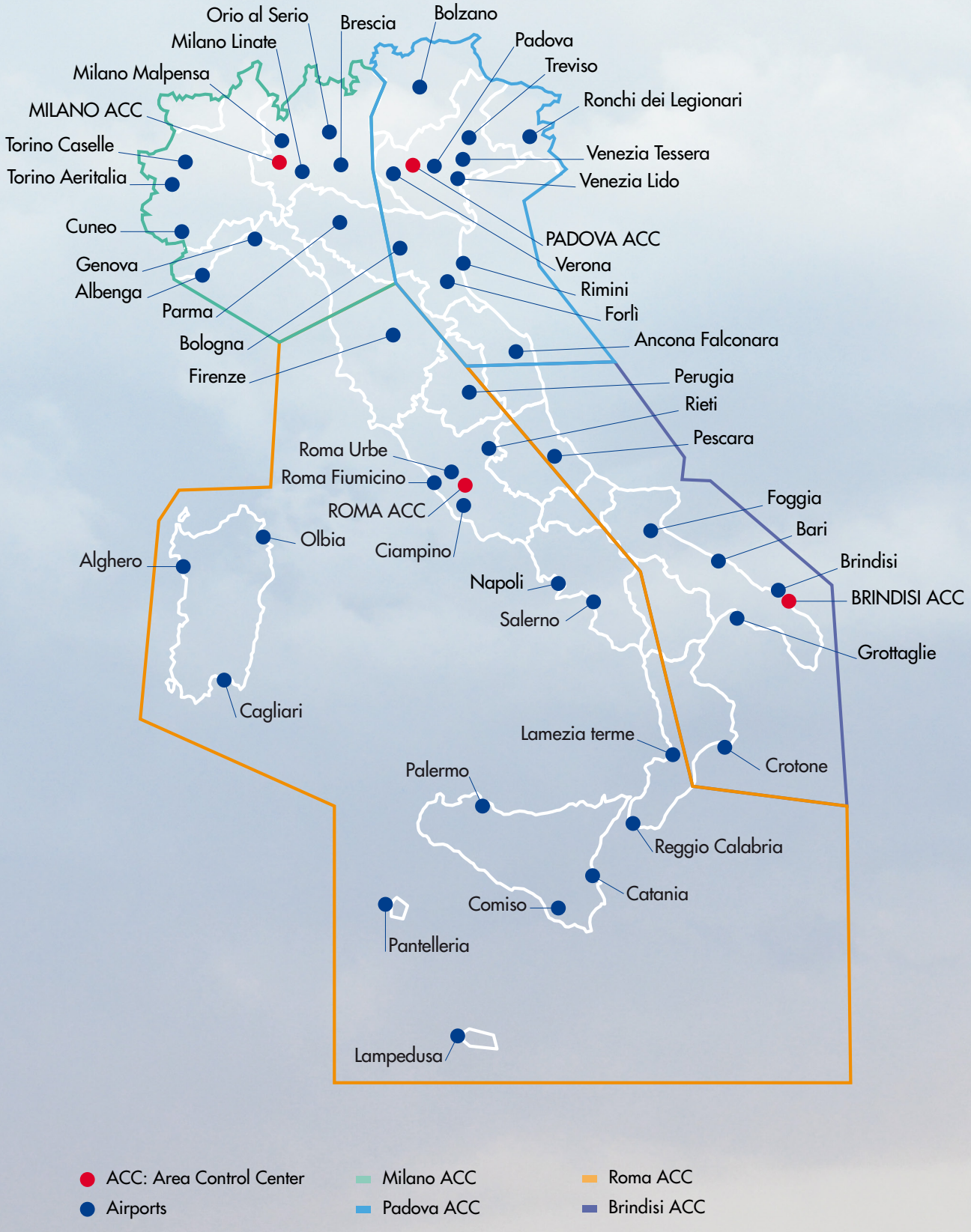
4,890
Emissions of tCO_2e (Scope 1 and 2)

-87.4%
Reduction of Scope 1 and Scope 2 CO_2 emissions vs 2019

96%
Electricity consumed from certified renewable sources (GO)

297,000
Emissions of tCO_2 avoided thanks to the "Free Route"

A LIST
CDP Climate Rating 2024

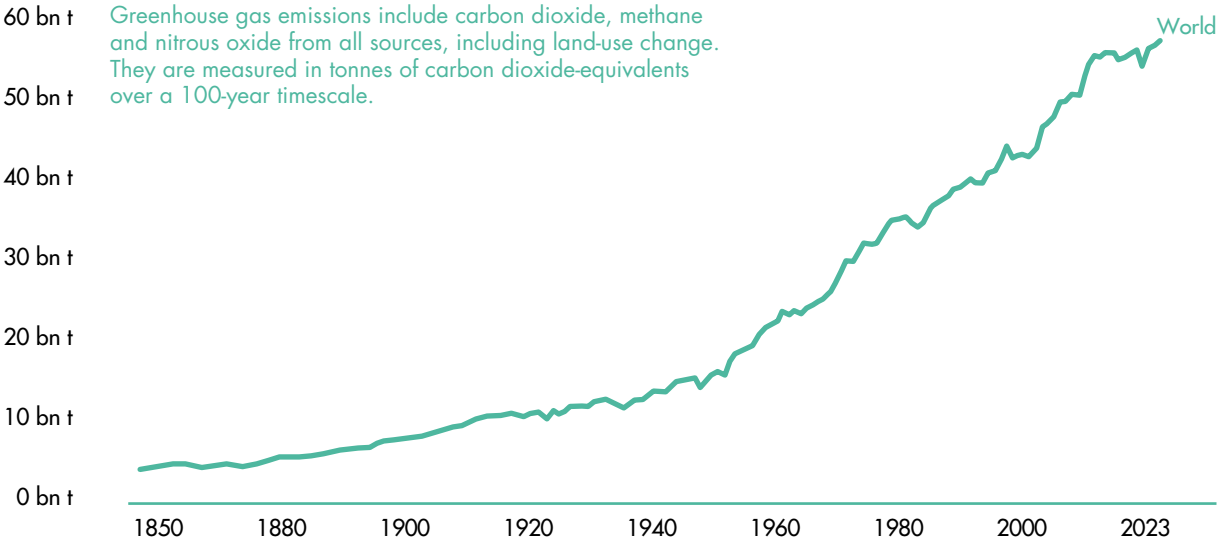

Orio al Serio
Brescia
Bolzano
Milano Linate
Padova
Treviso
Milano Malpensa
Ronchi dei Legionari
MILANO ACC
Torino Caselle
Venezia Tessera
Torino Aeritalia
Venezia Lido
Cuneo
PADOVA ACC
Genova
Verona
Albenga
Rimini
Parma
Forlì
Bologna
Ancona Falconara
Firenze
Perugia
Rieti
Pescara
Roma Urbe
Roma Fiumicino
Foggia
ROMA ACC
Bari
Olbia
Ciampino
Brindisi
Alghero
Napoli
BRINDISI ACC
Salerno
Grottaglie
Cagliari
Lamezia terme
Crotone
Palermo
Reggio Calabria
Catania
Comiso
Pantelleria
Lampedusa
ACC: Area Control Center
Airports
Milano ACC
Padova ACC
Roma ACC
Brindisi ACC

Emissions: global context and air transport

Greenhouse gas (GHG) emissions represent one of the greatest environmental challenges on a global scale. The increasing concentration of these gases in the atmosphere is the primary driver of global warming and climate change, which are having significant impacts on ecosystems, economies, and communities around the world.

Globally, GHG emissions have risen rapidly over the past 50 years, increasing from approximately 5 billion tonnes of CO_2e in 1850 to more than 53 billion tonnes in 2023. This trend continues to jeopardise the goals of the Paris Agreement, which aims to limit the rise in global temperature to 1.5°C above pre-industrial levels.

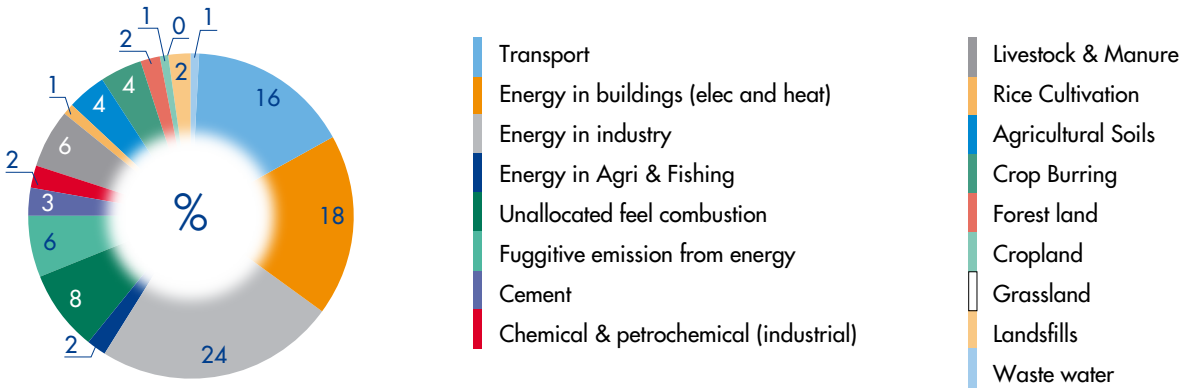
Greenhouse gas emissions (GHG)



Source: Jones et al. (2024) – with major processing by Our World in Data. "Annual greenhouse gas emissions including land use" [dataset]. Jones et al., "National contributions to climate change 2024.2" [original data].

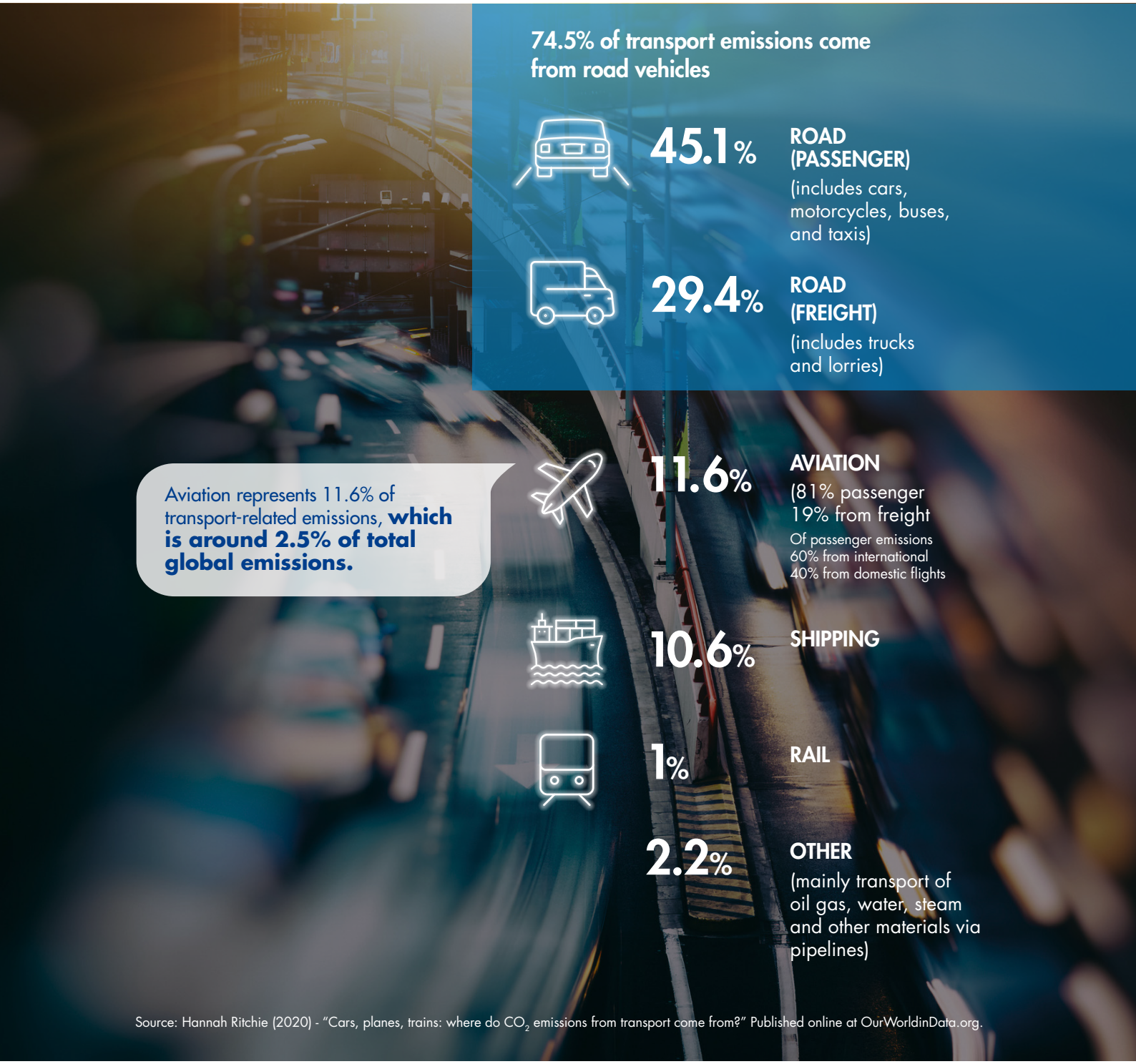
As illustrated in the chart below, the total energy used in industry and buildings is the main source of emissions, accounting for approximately 42% of global CO_2e emissions. Transport, on the other hand, is the third most impactful sector, contributing around 16%. Although the objectives of the Paris Agreement apply uniformly across all economic sectors and serve as an important benchmark for policymakers, industry data highlight the need to adopt specific sectoral strategies for reducing climate-altering emissions.

Share of global greenhouse gas emissions (%)



Source: Hannah Ritchie (2020) - "Sector by sector: where do global greenhouse gas emissions come from?" Published online at OurWorldinData.org.

In the coming decades, a significant increase in global demand for mobility is expected, driven by various structural and socio-economic factors. The global population is projected to grow from 8.2 billion in 2024 to around 10.3 billion by the mid-2080s, with particularly marked growth in developing countries. Such population growth will lead to an increase in the urban population and, consequently, a greater need for daily and interregional travel. At the same time, rising average incomes and improving economic conditions in many parts of the world are making individual and collective means of transport – such as cars, trains, and airplanes – more accessible[2].

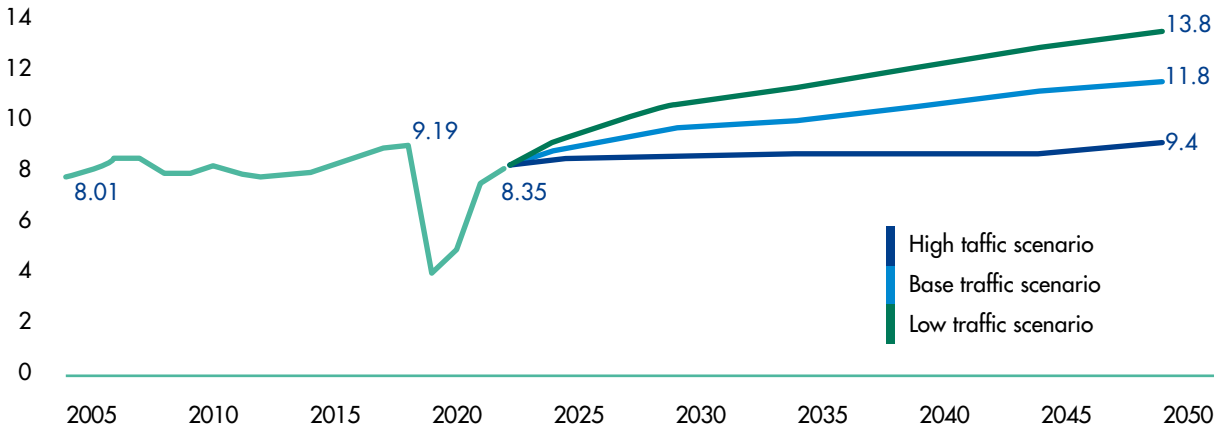


Source: Hannah Ritchie (2020) - "Cars, planes, trains: where do CO_2 emissions from transport come from?" Published online at OurWorldinData.org.

2 United Nations, Department of Economic and Social Affairs, Population Division (2024). World Population Prospects 2024: Summary of Results.

According to the EASA 2025 European Aviation Environmental Report, the number of flights at EU27+EFTA[3] airports in Europe grew by approximately 5% between 2005 and 2023, reaching 8.35 million, while passenger-kilometres[4] almost doubled (+80%).

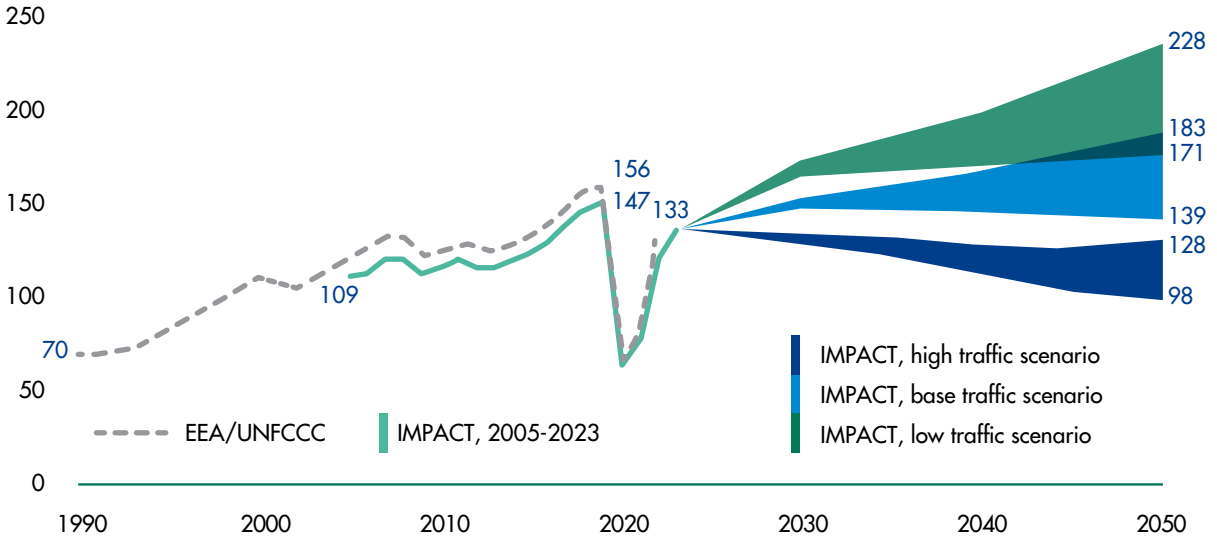
Arrivals and departures at EU27+EFTA airports (millions)



Source: European Aviation Environmental Report 2025, EASA.

In line with the increase in flights, CO_2 emissions from all departing flights[5] reached 133 million tonnes in 2023, representing a 22% increase compared to 2005.

Total CO_2 emissions from all departures from EU27+EFTA (million tonnes)



Source: European Aviation Environmental Report 2025, EASA.

3 Includes the 27 EU Member States and Iceland, Norway, Switzerland, and Liechtenstein.
4 All departures from EU27+EFTA airports.
5 Flights departing from EU27+EFTA airports.

Average CO_2 emissions per passenger-kilometre have gradually decreased, reaching 83 grams in 2023, equivalent to a fuel consumption of 3.3 litres per 100 passenger-kilometres.

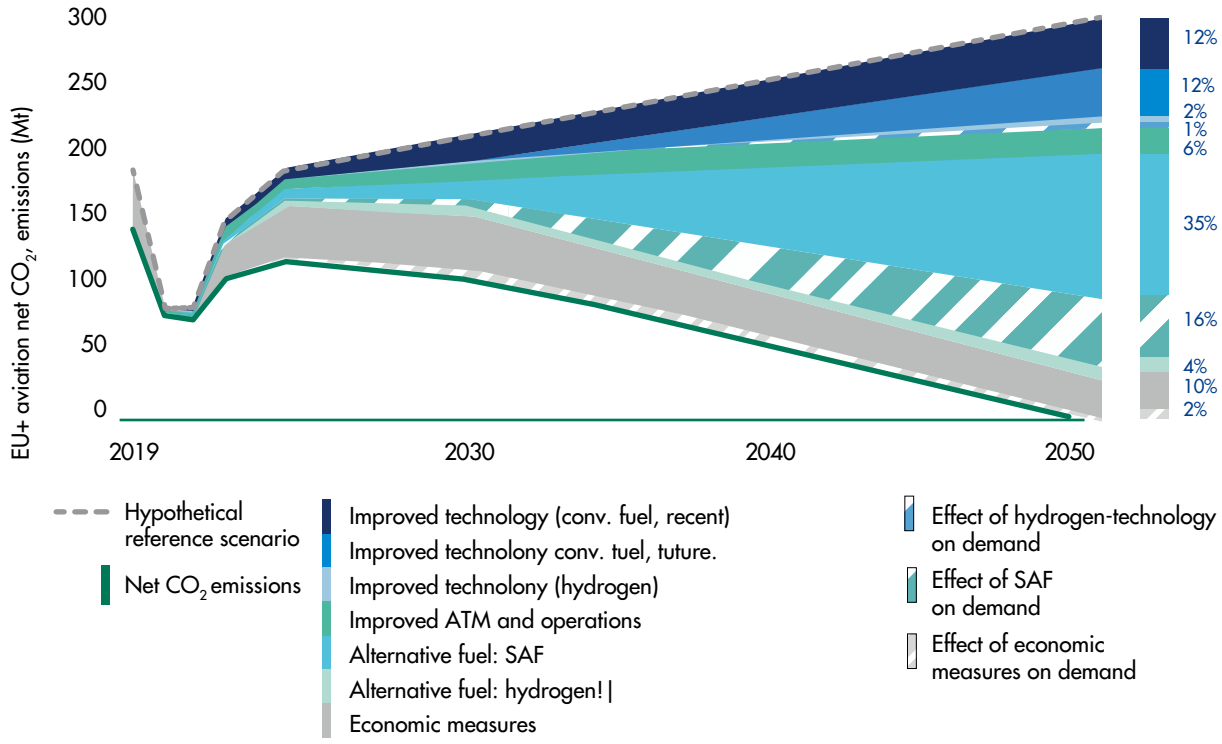
Among the main initiatives at European level in the field of Air Traffic Management (ATM) is the Single European Sky (SES) project[6] . As described in the "Strategy" chapter, ENAV plays a key role in the national and European air traffic management system, contributing significantly to the initiatives promoted by the European Commission for the implementation of this project.

According to forecasts, the full implementation of the SES ATM Master Plan vision by 2050 could lead to an overall reduction of 400 million tonnes of CO_2, with a decrease in emissions per individual flight of 9.3%.

Recently, five European associations representing airlines, manufacturers, airports, and air navigation service providers published the Destination 2050 report[7]. This report outlines a roadmap to significantly decarbonise the aviation sector by 2030 and to achieve net-zero CO_2 emissions by 2050. The first edition of the "Destination 2050" report, published in spring 2021, was updated in 2025.

As illustrated in the chart below, it is estimated that around 6% of the measures contributing to the achievement of Net Zero 2050 will come from improvements in ATM services (as envisaged under the Single European Sky initiative) and airport operations.

Net-zero pathway for flights within and departing from the EU+ region



Source: A4E, ACI-EUROPE, ASD, CANSO, ERA, Netherlands Aerospace Centre (NLR) and SEO Amsterdam Economics, «Destination 2050 – A route to net zero european aviation», February 2025.

6 An initiative launched in 2004 by the European Commission, aiming to optimise the management of European air traffic (ATM), making it safer, more cost-efficient, and more environmentally friendly.

7 A4E, ACI-EUROPE, ASD, CANSO, ERA, Netherlands Aerospace Centre (NLR) and SEO Amsterdam Economics, «Destination 2050 – A route to net zero european aviation», February 2021. The latest updated report was published in February 2025.

Change in CO_2 emissions in 2050 compared to reference scenario	CO_2 reduction (Mt)	CO_2 reduction (%)
CO_2 emissions in the reference scenario	295	-
Impact on demand - Hydrogen technology and costs	3	1%
Impact on demand - SAF	47	16%
Impact on demand - Economic measures	5	2%
Total CO_2 reduction due to demand impacts	**55**	**19%**
Technological improvements - Recent conventional aircraft	36	12%
Technological improvements - Future conventional aircraft	34	12%
Technological improvements - Hydrogen-powered aircraft	5	2%
Improvements in ATM services and airport operations	19	6%
Alternative fuels and sustainable energy - SAF	105	35%
Alternative fuels and sustainable energy - Hydrogen	11	4%
Economic measures	29	10%
Total CO_2 reduction for sustainability measures	**239**	**81%**
Total net reduction of CO_2 emissions	**295**	**100%**

As highlighted in the table, the use of *Sustainable Aviation Fuel* (SAF[8]) is expected to enable a CO_2 emissions reduction of approximately 35% compared to the baseline scenario. Moreover, in line with the European *ReFuelEU Aviation* regulation, it is anticipated that by 2050 at least 70% of the fuel used for flights departing from the EU will consist of SAF, supported by increased production capacity and the consolidation of supply chains.

Among the most significant technological measures for reducing CO_2 emissions in the aviation sector, advances in aircraft aerodynamics and propulsion systems play a central role. In particular, ongoing[9] and anticipated improvements in aircraft and engine technology – including electric and hybrid propulsion systems – will enable an estimated 24% reduction in emissions. This is further complemented by the development of hydrogen-powered aircraft, which, although still in the experimental phase and with a longer time horizon, represent an additional 2% potential emissions reduction. Altogether, these technological innovations in aircraft propulsion will represent a 26% contribution to the decarbonisation pathway of the aviation sector.

8 For further details, please refer to the Glossary of Terms.
9 The proportion of aircraft aged under five years has seen a slight increase, while a decline has been observed in the percentage of aircraft aged between 15 and 19 years. This trend is likely attributable to the acceleration of phase-out processes for older aircraft, which intensified during the COVID-19 pandemic crisis.

A combination of four key measures could lead to substantial reductions in CO_2 emissions. By 2050, these reductions are expected to be as follows:

PILLAR	TOTAL REDUCTION (%)	TOTAL REDUCTION (MT CO_2)	COMPONENTS
Aircraft and engine technology	**-27%**	-79 Mt CO_2	• Recent technologies: 12% • Future technologies: 12% • Hydrogen technology: 2% • Demand reduction: 1%
Air traffic management and operations	**-6%**	-19 Mt CO_2	• Airline operations, air traffic management improvements, airport ground operations: 6%
Alternative fuels and sustainable energy	**-56%**	-163 Mt CO_2	• SAF alternative fuel: 35% • Hydrogen alternative fuel: 4% • Demand reduction: 16%
Economic measures (EU ETS & CORSIA)	**-12%**	-35 Mt CO_2	• Economic measures: 10% • Demand reduction: 2%

Therefore, projections indicate that the air transport sector is engaged in a decarbonisation pathway by 2050, in line with global climate goals. This transition requires the coordinated contribution of all stakeholders in the value chain – from airlines to aircraft manufacturers, from airport operators to fuel suppliers – through the adoption of low-emission technologies, sustainable aviation fuels, and more efficient operational practices.

STRATEGY

The Group's strategy

On 31 March 2025, ENAV's Board of Directors approved the new 2025–29 Industrial Plan, based on the following main guidelines:

The **full continuity of strategic initiatives in the regulated market**, which will continue to represent the Group's core business, with the aim of maintaining the high standards of excellence and efficiency already recognised internationally.

A **strong push into the non-regulated market**, with the aim of entering new businesses and new geographies to ensure fully taking advantage of the Group's distinctive assets and skills.

Evolution of the Group's operating model in all its components (from human capital to organisation, from digitalisation to communication), in line with the peculiarities and needs of both the regulated and unregulated market.

The **definition of new governance logic in the Business Plan** to ensure proper and concrete execution, also in light of the experience gained on some initiatives already launched in recent years.

These guidelines are translated into a structure built around four pillars: the regulated market and the non-regulated market, both of which are supported by two cross-cutting elements – the operating model and the execution plan.

Fully aligned with this strategic vision, the new 2025–2029 Sustainability Plan is an integral part of the Industrial Plan. It is deeply rooted in the Parent Company's historic social role in supporting air transport, ensuring safe and efficient travel for millions of people, and contributing to the connection between places, cultures, and economies.

Specifically, the new Sustainability Plan will be structured around five strategic areas of action:

Becoming a leader in climate engagement
ENAV remains committed to supporting customers and stakeholders by optimising air traffic management and developing innovative procedures capable of reducing fuel consumption across all flight phases. At the same time, it continues efforts to reduce energy consumption at company sites and to lower Group emissions, keeping the fight against climate change at the core of its strategy.

Driving transformation across the value chain
The Group supports its suppliers through the development of a dedicated programme aimed at improving their ESG performance, identifying and mitigating risks arising from the supply chain, and creating significant synergies with the Group's climate objectives.

Generating a positive social impact
ENAV seeks to further consolidate and strengthen its relationship with stakeholders, enhance the well-being and skills of its people, and promote an ESG culture by raising awareness and engaging both internal and external stakeholders.

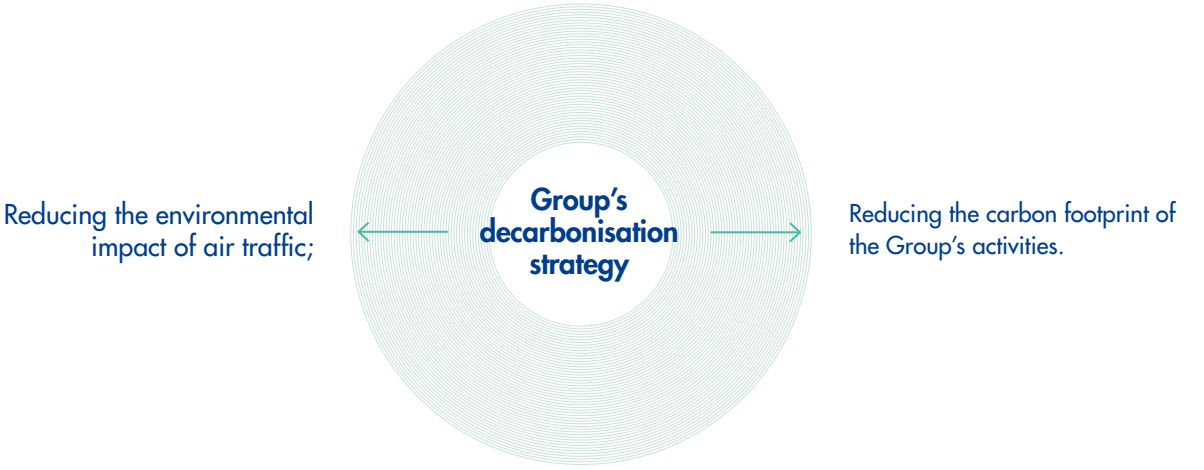
Accelerating the spread of DEI culture
ENAV aims to develop inclusive, equitable and respectful working environments through initiatives designed to strengthen internal awareness on diversity, equity and inclusion (DEI) issues, promote an open and participatory organisational culture, and ensure gender equality, with particular attention to pay equity and equal access to career development opportunities.

Technological Innovation
Innovation represents a distinctive and strategic element for the ENAV Group, which intends to consolidate its international positioning as a technological leader in the sector. The evolution of the ATM operational model, combined with the development of advanced technological solutions, will act as an enabler for achieving industrial and strategic objectives, while also generating tangible sustainability benefits, in line with the directions of the new Sustainability Plan.

Climate strategy

ENAV's commitment to the environment and the fight against climate change is based on a strategy aimed at reducing its own carbon footprint and supporting the decarbonisation of the air transport sector. This is achieved by enabling lower energy consumption required for flight through operational optimisations during cruising, landing, take-off, and taxiing phases — with the aim of minimising delays and related fuel consumption — thereby contributing to the path toward Net Zero Aviation EU.

The Group's decarbonisation strategy is structured around two main pillars:



Reducing the environmental impact of air traffic

ENAV contributes, both through its own initiatives and in coordination with other European ANSPs, to the optimisation of the airspace under its responsibility by means of targeted actions to improve its availability, operational organisation and, consequently, the management of air traffic flows.
These activities contribute to a significant reduction in aircraft fuel consumption and emissions, while ensuring the maintenance of high standards of performance and operational safety.

Among the key priorities identified is the reduction of CO_2 emissions from managed traffic, with a target reduction of

approximately **5.7%** by 2029

ENAV is in fact a key player in the international air traffic management system and plays a central role in the initiatives promoted by the European Commission to implement the *Single European Sky*, through the European Union Aviation Safety Agency (EASA) and EUROCONTROL, the intergovernmental organisation supporting, facilitating and coordinating the development of an efficient European air traffic control system.

Focus

Key ENAV Projects in SESAR 3

The transition toward a more modern and sustainable air traffic management system in Europe is being driven by the SESAR (Single European Sky ATM Research) programme, promoted by the European Commission. The initiative, launched in 2009 and divided into three phases (SESAR 1, SESAR 2020, and the current SESAR 3 – Digital European Sky), develops innovative concepts and technologies to make air traffic more efficient, safer, and environmentally sustainable. SESAR 3, with a timeframe of 2022–2031, represents the new phase of research and innovation, with the ENAV Group currently involved in 19 strategic projects selected according to company priorities. Further projects will be added in the coming years under new calls for proposals planned during the initiative.
Environmental impact reduction is a key theme of the SESAR programme (Aviation Green Deal). Below are the ENAV Group's projects most directly addressing this area of performance.

TADA - *Terminal Airspace Digital Assistant*
The TADA project aims to develop an intelligent digital assistant to support air traffic controllers in terminal areas. Using artificial intelligence and machine learning technologies, TADA analyses historical and operational data to provide predictive suggestions and enhance the quality of real-time decision-making. The objective is to increase airspace efficiency and capacity while maintaining high safety standards and optimising flight paths and fuel consumption.

CONCERTO - *Dynamic Collaboration to Generalise Eco-friendly Trajectories*
This project focuses on integrating environmentally friendly flight trajectories into daily operations. It develops tools to optimise air traffic management by considering environmental impact, not only in terms of CO_2 emissions but also other climate effects. Key solutions include a digital orchestrator for tactical planning and a system to identify climate-sensitive areas.

GALAAD - *Green Aviation: Lean Arrivals And Dynamicity*
GALAAD, coordinated by ENAV, proposes an innovative approach to terminal area management by introducing greater dynamism and flexibility in the allocation of arrival routes. As an alternative to standard arrival routes, the operational concept developed foresees RNP (Required Navigation Performance) routes that are dynamically adapted in real time to operational conditions such as traffic, weather, or airspace availability. The expected result is improved operational efficiency, reduced fuel consumption, and a lower environmental impact.

HERON - *Highly Efficient Green Operations*
The main goal of the HERON project is to reduce aviation's environmental impact by optimising both airborne and ground operations. This includes the use of advanced technologies to improve air traffic management, reduce taxiing emissions, and adopt more efficient flight procedures such as performance-based trajectories and continuous descent approaches.

ENAV is constantly engaged in a wide range of activities aimed at modernising and optimising ATS (Air Traffic Services) infrastructures and networks, pursuing the primary objective of maintaining unchanged safety levels in air navigation operations, while contributing to the European Commission's target of progressively decarbonising the air transport sector by 2050.

All actions planned and implemented in this area are catalogued and monitored, periodically, in the Flight Efficiency Plan (FEP).

The Flight Efficiency Plan (FEP)

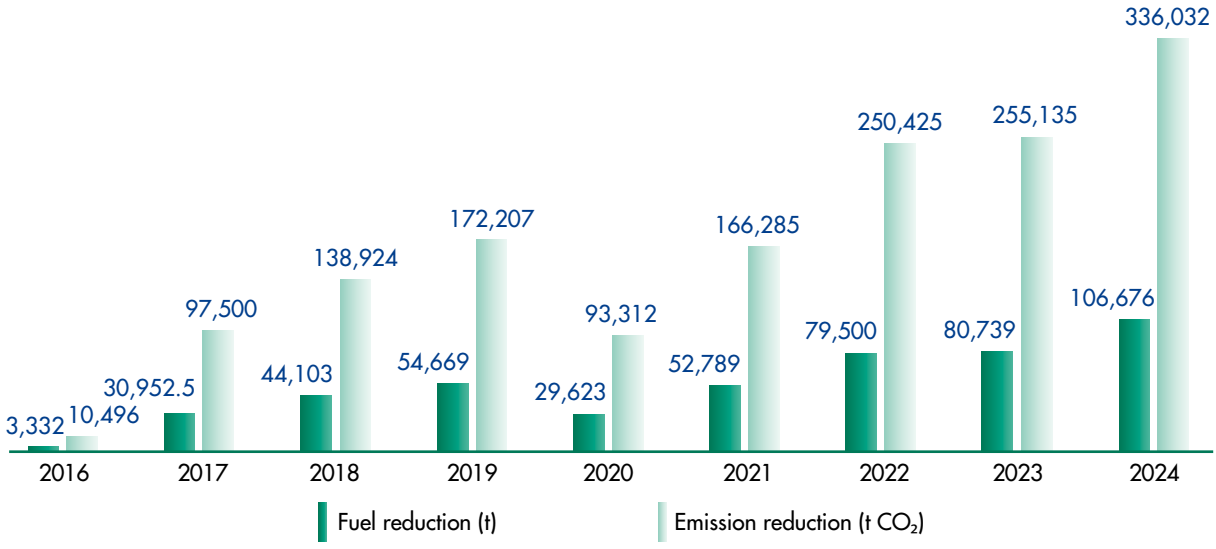
The Flight Efficiency Plan (FEP) is a multi-year intervention plan, part of the European *Single European Sky* programme, whose main objective is to support and guide strategies and planned resources towards the development of a cutting-edge air navigation system within both Italian and European airspace, to the benefit of the environment, passengers and airspace stakeholders.

In order to achieve this goal and its related objectives, FEP programmes are aimed at implementing and fostering the optimisation of airspace structure and ATS geography, ATS networks and overall airspace availability.

The main expected benefits will be:

- increasingly efficient and optimised flight profiles for Airspace Users (AUs), based on aircraft type and city-pair route;
- direct trajectories with positive effects, including shorter distances and flight times, lower fuel consumption, reduced CO_2 and other pollutant emissions, as well as decreased flight management costs;
- increased airspace availability and ATC capacity within the relevant airspace, to ensure smoother and more orderly traffic flows;
- improving, or at least maintaining, existing levels of operational safety.

FEP - Fuel and emissions reduction



Free Route Airspace Italy

The concept of "free route" airspace refers to a portion of airspace where the ATS network has been removed and where flights crossing or entering this volume may plan direct trajectories between defined entry and exit points.

As part of initiatives to meet airspace stakeholders' demand for greater airspace availability and ATC capacity[10] in European airspace, by December 2025 all States will be required to comply with the new minimum transition level for "free route" airspace set at 6,500 metres, in line with European Regulation on the harmonisation of airspace rules in the European sky (EU Reg 116/2021).[11]

Continuing in its pursuit of improving traffic flow management and contributing to increased environmental and operational efficiency of the Italian aviation system, on 21 March 2024 ENAV brought forward the transition by completing the final phase of the roadmap for the implementation of Free Route Airspace in Italy (FRAIT).
The intervention lowered the vertical lower limit from FL 305 (around 9,000 metres) to FL 195 (around 6,500 metres), thereby allowing Airspace Users (AUs) greater flexibility in planning direct trajectories, reducing fuel consumption and consequently cutting CO_2 emissions into the atmosphere.

At the same time, on the date of the FRAIT lower limit implementation, the concept of Free Route Cross-Border Operations was also introduced. This consists of the functional integration of the FRAIT airspace with the *SECSI* FRA *(South-East Common Sky Initiative Free Route Airspace)*, the latter jointly managed by the main ANSP (*Air National Service Providers*) of the Balkan area (Slovenia, Austria, Bosnia and Herzegovina, Croatia, Serbia and Montenegro).
This operational project represents a milestone in cross-border air navigation interoperability and a significant step towards the realisation of the *Single European Sky (SES)*. At the same time, it enhances flight efficiency by removing various constraints (Cross over Points – CoPs) placed at the borders of different ANSPs, thereby facilitating both AU flight planning and the handover of flight control between different ATCOs (Air Traffic Controller Operators). This further reduces flight times and distances, and thus contributes to an increasingly lower environmental impact.

The lowering of the vertical limit of "free route" airspace to 6,500 metres across the entire Italian airspace has above all generated a positive impact on domestic and medium-haul flights in terms of city-pair distances.
Indeed, with the previous FRAIT vertical limit set at 9,000 metres, many of these flights were unable to fully benefit from the planning advantages of the "free route" concept, since on shorter distances the vertical flight profile did not allow them to reach and maintain an optimal altitude within FRAIT airspace.

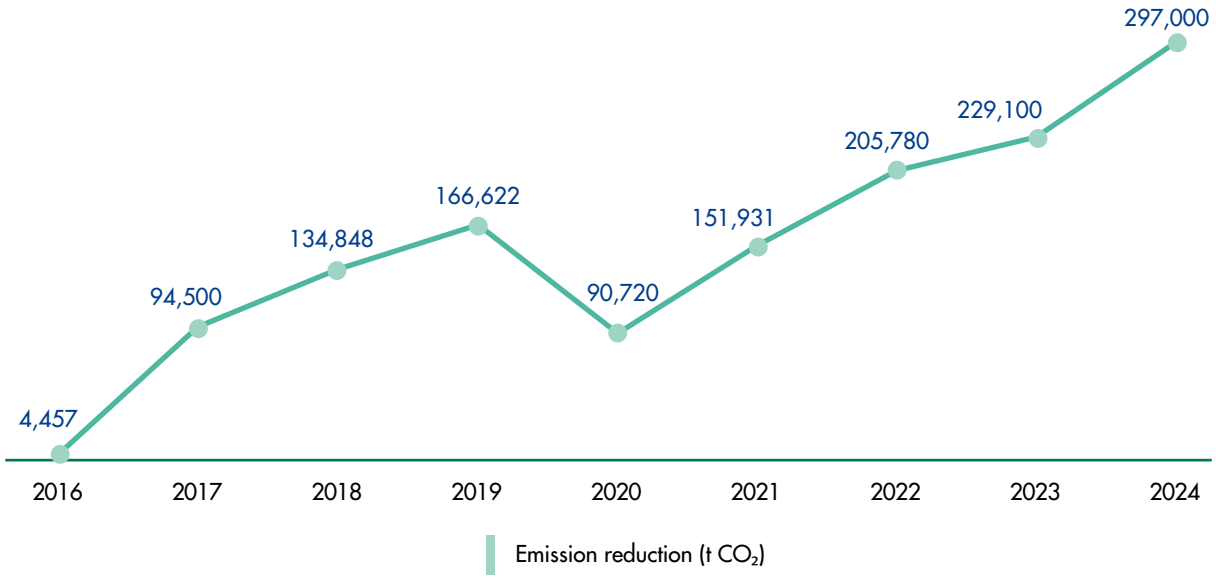
Between 2016 and 2024, the benefits quantified in terms of operational efficiency, achieved through the implementation of the FEP, amounted to approximately 110 million kilometres of reduced flight trajectories, corresponding to fuel savings of around 435,000 tonnes and more than 1.3 million tonnes of avoided CO_2 emissions.

Year	Route reduction (Km)	Fuel reduction (t)	Emission reduction (t CO_2)
2016	320,824	1,415	4,457
2017	8,435,380	30,000	94,500
2018	11,340,150	42,809	134,848
2019	14,171,600	52,896	166,622
2020	6,800,000	28,800	90,720
2021	10,829,000	48,232	151,931
2022	16,375,500	65,327	205,780
2023	18,132,500	72,500	229,100
2024	**23,600,000**	**94,000**	**297,000**
Trend 2016-2024	**110,004,954**	**435,979**	**1,374,959**

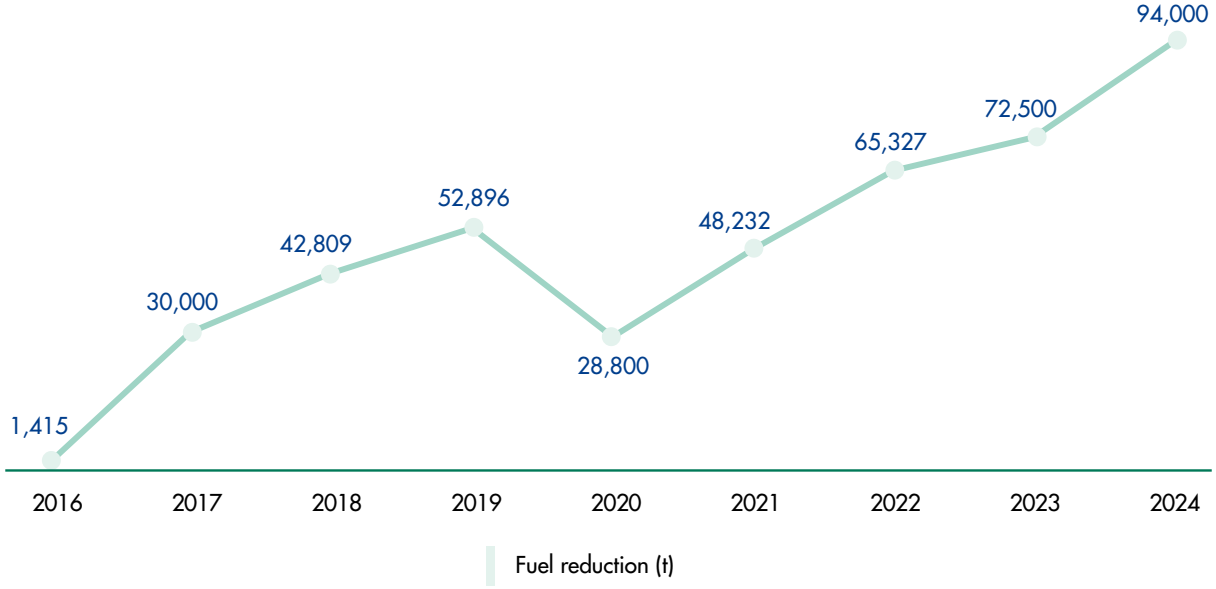
10 In the context of air traffic, the term capacity refers to the maximum volume of traffic that can be managed safely and efficiently by an air traffic control system, taking into account factors such as airspace configuration, availability of human and technological resources, and operational conditions. The expansion of Free Route airspace contributes to increasing the system's overall capacity by reducing the complexity of predefined routes and more evenly distributing traffic flows, resulting in direct benefits in terms of punctuality, fuel consumption, and environmental impact.

11 The European regulation governing the implementation of Free Route Airspace (FRA) is Implementing Regulation (EU) 2021/116 of the Commission, which complements Regulation (EU) 716/2014. The Regulation sets out procedures and requirements for the establishment and use of FRA, including cross-border boundaries and connectivity with terminal manoeuvring areas (TMAs). The main objective is to increase the efficiency and sustainability of air transport by allowing flights to plan direct routes through designated airspace without the need to follow predefined paths.

Free route – Emission reduction



Free route – Fuel reduction



Arrival Manager (AMAN)

The Arrival Manager (AMAN) tool was designed to support the Air Traffic Controller Operator (ATCO) in managing the sequencing of aircraft on approach for landing under heavy traffic conditions.

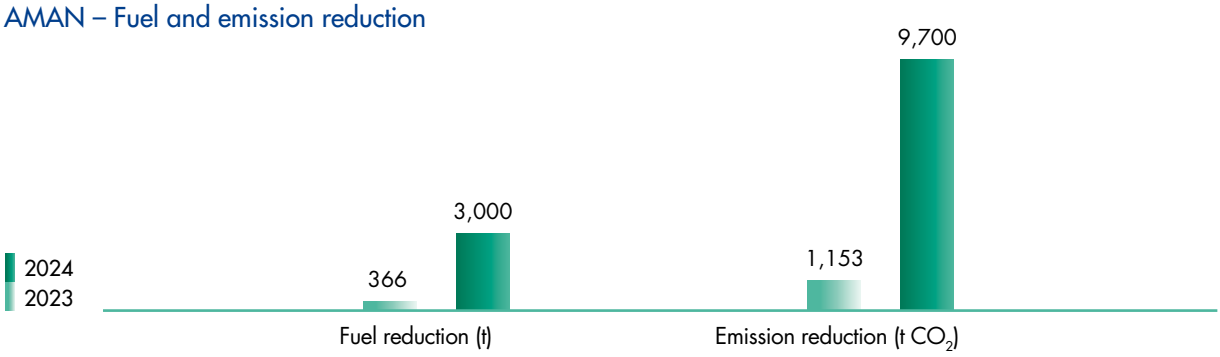
The system provides ATCOs with an optimal arrival sequence for aircraft approaching from different directions, organised to reduce the space-time interval between successive aircraft. This increases ATC capacity and enables the handling of a greater number of flights within the same timeframe.

At the same time, AMAN optimises the distance to be flown by each aircraft from entry into the Terminal Area, thereby enhancing flight efficiency, reducing fuel consumption and consequently lowering CO_2 emissions, as well as cutting flight times to the benefit of passengers.

In Italy, the AMAN tool has been installed at the Milan and Rome ACCs (Area Control Centres), respectively serving Milan Malpensa, Milan Linate, Bergamo Orio al Serio and Rome Fiumicino airports.
This has made it possible to optimise arrival sequencing at these airports, generating — as consolidated data for 2024 confirm — an operational efficiency benefit of approximately 520,000 kilometres of reduced distance flown in Terminal Areas, fuel savings of around 3,000 tonnes, and a reduction of CO_2 emissions by about 9,700 tonnes.

Fuel savings (t)		Enabled emission savings (t CO_2)	
2023	**2024**	**2023**	**2024**
366	3,000	1,153.4	9,700

AMAN – Fuel and emission reduction



The Airport Collaborative Decision Making (A-CDM)

The Airport Collaborative Decision Making (A-CDM) tool has been designed with the aim of improving the management of aircraft movements through enhanced information sharing among the various stakeholders operating on the airport platform, including ENAV ATCOs, airlines, airport managers, airport operators and Eurocontrol's Network Manager (NMOC).

In line with its objectives, the tool has been conceived to foster and enhance:

- the efficiency and resilience of airport operations;
- punctuality, by reducing delays through synchronised aircraft movements on the airport platform (both before start-up until take-off, and from landing until engine shutdown in the arrival phase);
- the use of resources, by increasing the predictability of events (hotspots) and reducing congestion (bottlenecks).

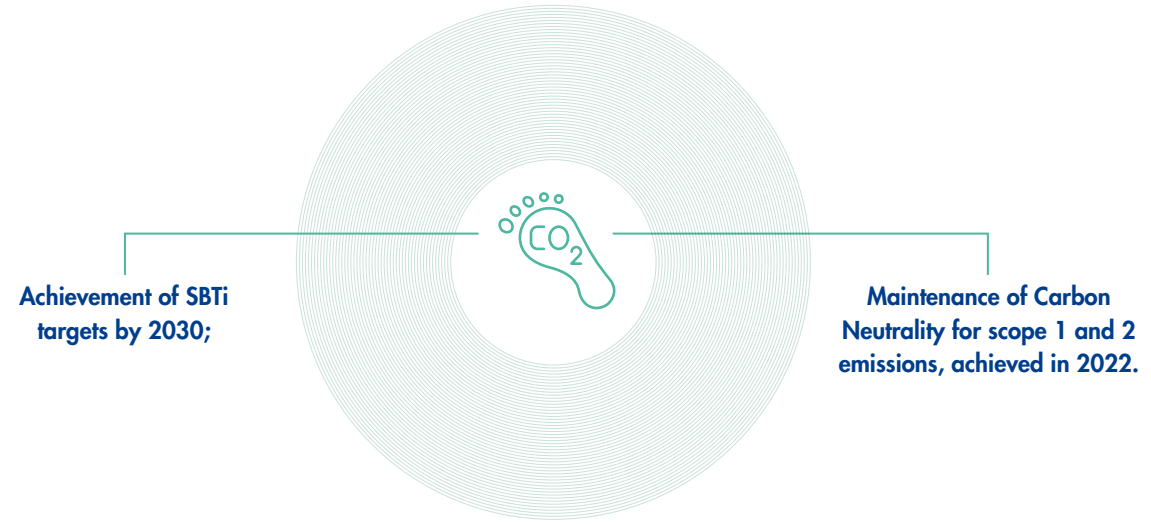
Based on the information received, the tool calculates the optimal start-up time for departing aircraft, in order to ensure the fastest and most efficient taxiing process. At the same time, it provides increasingly accurate and updated arrival times to airport operators, allowing them to better manage arrival sequences at parking stands.

As a result:

- airlines will benefit from improved slot adherence and reduced waiting times;
- airport managers and operators will be able to better plan their resources and improve operational punctuality;
- the ATC authority (ENAV ATCOs) will be able to leverage the available information to optimise pre-departure sequencing and accelerate ground operations thanks to greater traffic predictability.

Reducing the carbon footprint of the ENAV Group's activities

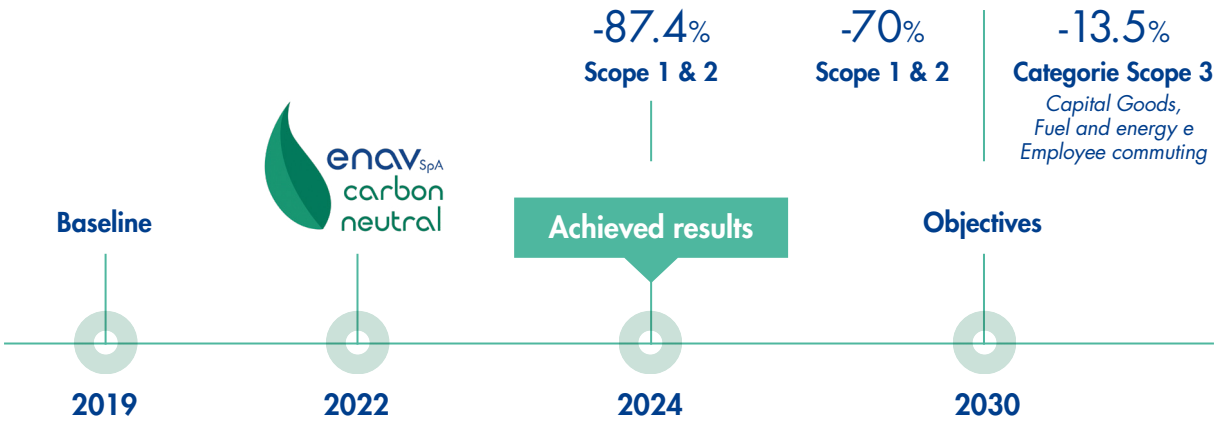
Alongside the broader objective of contributing to the progressive decarbonisation of air transport, the ENAV Group is committed to reducing the carbon footprint of its activities and has defined two main objectives in this area:



SBTi target:

"ENAV Group commits to reduce absolute scope 1 and 2 GHG emissions 70% by 2030 from a 2019 base year. ENAV Group commits to reduce absolute scope 3 GHG emissions from capital goods, fuel-and-energy-related activities, and employee commuting 13.5% by 2030 from a 2019 base year."

Climate goals

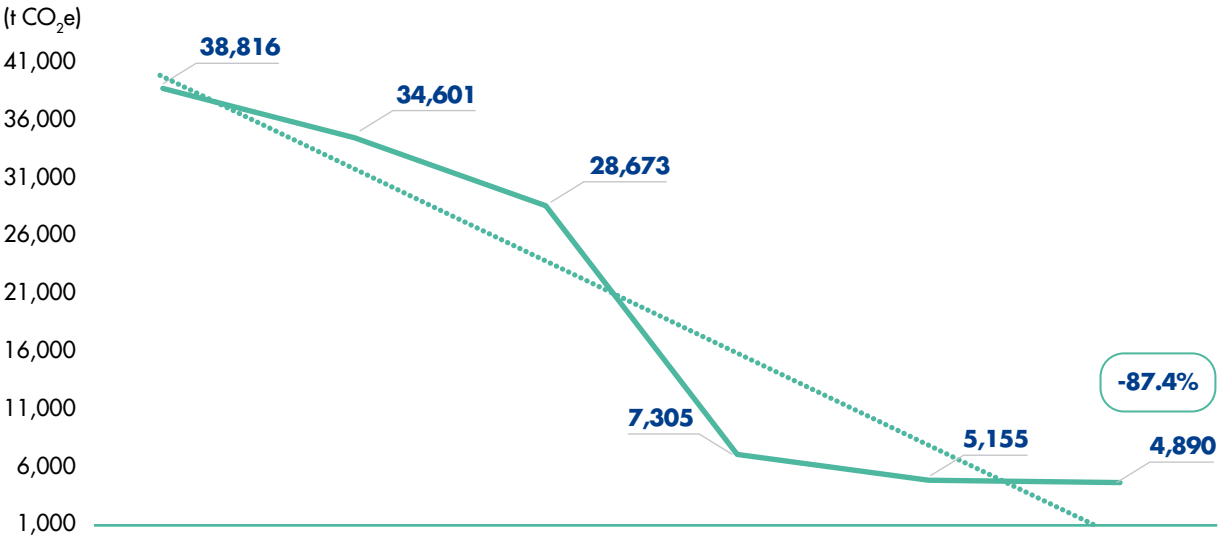


The ENAV Group has set climate targets for 2030, which include not only a reduction of at least 70% in Scope 1 and Scope 2 emissions compared to 2019 levels (already achieved by the end of 2022), but also a reduction of at least 13.5% in Scope 3 emissions across the categories of "*Capital Goods*", "*Fuel- and Energy-related Activities*", and "*Employee Commuting*"[12].

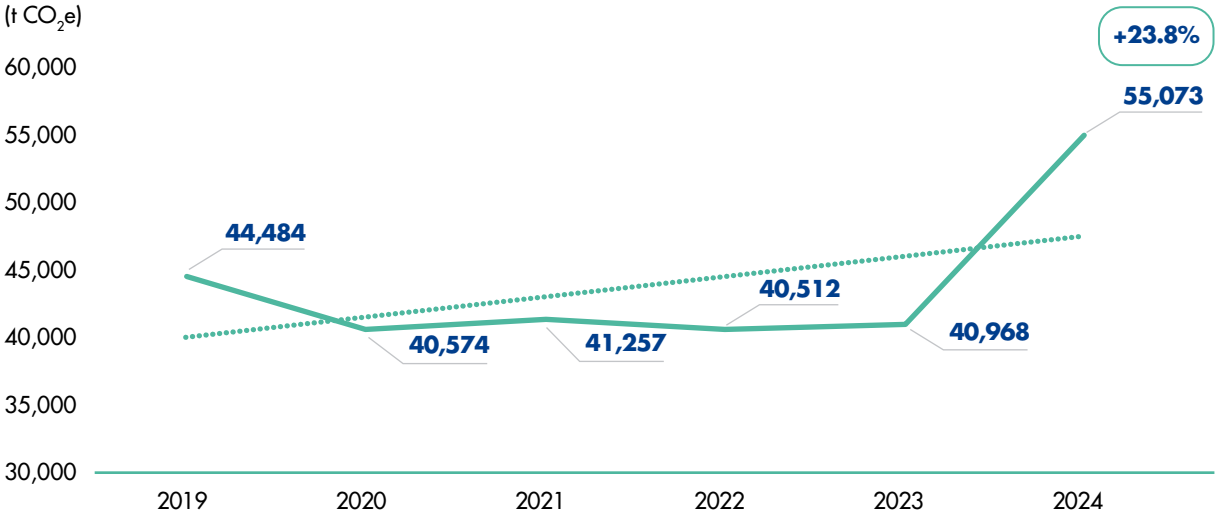
12 The category "*Capital Goods*" includes all upstream emissions arising from the production of capital goods purchased or acquired by the Company (e.g., ATM systems, communication networks); the category "*Fuel and Energy-related activities*" includes emissions related to the production of purchased fuel and energy; the category "*Employee Commuting*" includes emissions arising from the transport of employees between their homes and the workplace.

These emission reduction targets have been validated by the *Science Based Target initiative (SBTi)*, the initiative arisen from a partnership between CDP (formerly the Carbon Disclosure Project), the UN Global Compact, WRI (World Resources Institute) and WWF in order to guide the private sector to climate action through science-based emission reduction targets.
The objectives validated by SBTi define the commitments of those companies that are in line with the level of decarbonisation necessary to contain the increase in global temperature below 1.5°C compared to pre-industrial temperatures.

SBT target progress – Scope 1 and 2



SBT target progress Scope 3



Compared to the 2019 baseline, the Group achieved an 87.4% reduction in Scope 1 and 2 emissions, surpassing the 70% reduction target set for 2030 well ahead of schedule. This result was mainly driven by: the procurement of certified renewable electricity via Guarantees of Origin (GO), which covered 96% of total energy needs in 2024; and structural energy efficiency upgrades to company assets.

In contrast, Scope 3 emissions within the SBTi perimeter increased by 23.8% compared to 2019. This rise is primarily due to the use of the "spend-based" calculation methodology for the Capital Goods category, which estimates indirect emissions based on financial expenditure for capital items. In particular, increased investments in infrastructure and technology during 2024 led to a 42% rise in emissions for this category compared to the previous year.

Reducing Scope 3 emissions remains one of the most challenging aspects of decarbonisation strategies, as these emissions are generated along the entire value chain and stem from activities not under the direct control of the organisation. The main challenges lie in the variety of calculation methods that can be applied (spend-based, supplier-specific, hybrid)[13]; the complexity of estimating the carbon footprint of capital goods, which are often heterogeneous in nature and lifecycle; and the need for active engagement of the supply chain to promote sustainable practices and data transparency.
To address these issues, the Group is progressively implementing more granular methodologies[14] (e.g. supplier-specific and hybrid), integrating ESG criteria into procurement processes, and strengthening dialogue with strategic suppliers.

Focus

Updating climate targets in line with SBTi criteria

In accordance with the criteria established by the Science Based Targets initiative (SBTi), the ENAV Group is required to redefine its emissions reduction targets every five years, aligning them with the most up-to-date guidance and progressively increasing their level of ambition (*).

An analysis of the latest version of the *SBTi Corporate Near-Term Criteria* (v.5.2) confirms that the current reduction requirements for Scope 1 and Scope 2 emissions remain consistent with those established at the time of the initial target submission in 2021, requiring a minimum annual linear reduction of 4.2%. In this context, maintenance target will be set allowing to continue on the decarbonisation path by sustaining the current average annual reduction rate of 4.2%.

With regard to Scope 3 emissions, targets must be aligned with a decarbonisation pathway compatible with limiting global temperature rise to well below 2°C above pre-industrial levels (the "*well below 2°C" scenario*). To this end, the base year must be updated to reflect the most recent representative year for which data is available.

(*) Progress in climate science over recent years has led to an increase in the ambition required of climate targets, highlighting the urgent need to remain within the stricter 1.5°C limit of the Paris Agreement in order to avoid the most severe consequences of the climate crisis.

13 The GHG Protocol provides various methodologies for estimating these emissions, the most relevant being the spend-based approach and the supplier-specific approach. The spend-based methodology relies on an economic-environmental principle: emissions are estimated by multiplying the amount spent on the purchase of a capital good by an average emission factor, expressed in terms of CO_2 equivalent per monetary unit (e.g. kg CO_2e per euro spent). The emission factors used are derived from environmental databases (e.g. DEFRA, Eco Invent, etc.) or LCA (Life Cycle Assessment) inventories, and generally refer to sectoral averages. The supplier-specific methodology is based on the use of primary data provided directly by the manufacturer or supplier of the capital good. In this case, emissions are calculated based on specific information relating to the product's life cycle, such as LCA studies or certified carbon footprint data.
14 For more details, please refer to the focus section in the chapter dedicated to performance.

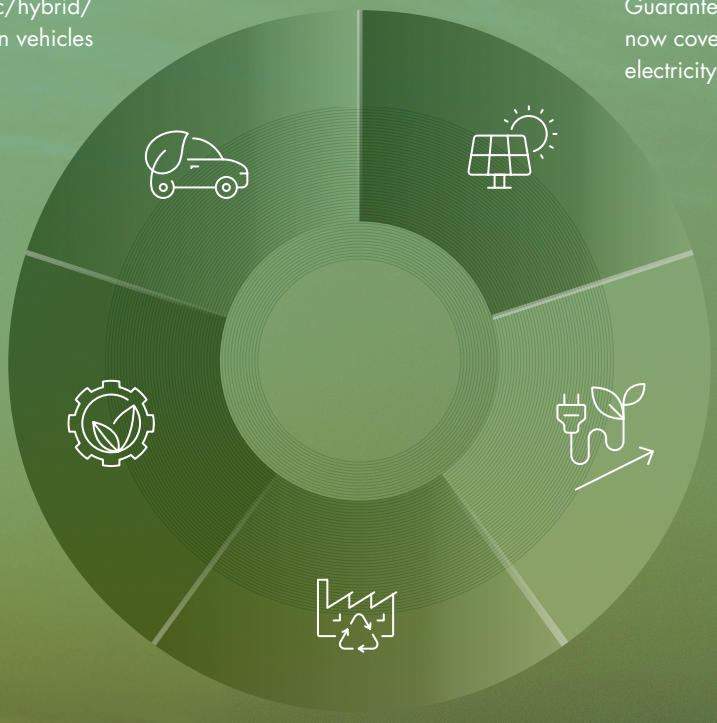
CARBON NEUTRALITY

At the end of 2024, the ENAV Group achieved an overall reduction of more than 87.4% in its direct and indirect greenhouse gas emissions compared to 2019. The retirement of carbon credits[15] (VERRA-certified) for the remaining unavoidable emissions (4,889.86 tCO_2) enabled ENAV to consolidate its carbon neutral status, which was first achieved at the end of 2022.

Carbon Credits

The carbon credits used are linked to the "**Renewable Energy Hydro India**" project, which involves the construction of a run-of-river hydroelectric power plant with an installed capacity of 300 MW. The main goal of the project is to generate electricity using renewable hydropower for local communities in Kuppa, Kinnaur District, Himachal Pradesh, India.

Emission reductions have been achieved through various initiatives:



15 Carbon credits represent the reduction of one tonne of CO_2e and are used to offset emissions through projects that reduce or absorb carbon emissions. This mechanism, known as offsetting, helps balance unavoidable emissions by supporting sustainable projects that contribute to the fight against climate change.

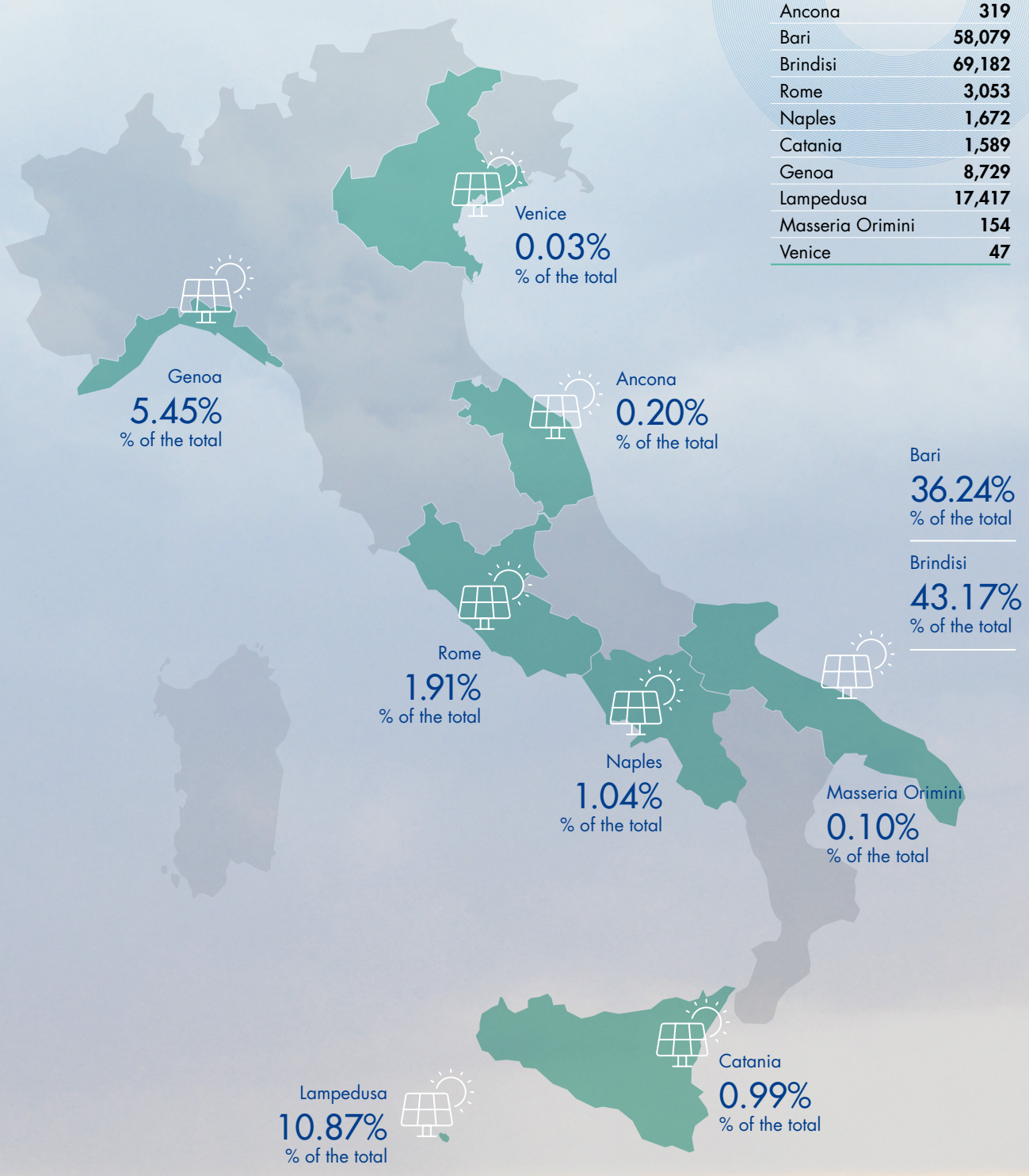
Progressive increase in the share of self-produced energy from renewable sources

The ENAV Group has already launched the installation of photovoltaic systems with the aim of increasing its renewable energy capacity, reducing dependence on fossil fuels, and contributing to the mitigation of its operational environmental impact.

In 2024, self-generated electricity from photovoltaic systems totalled 160 MWh, corresponding to an avoided emission of approximately 80 tonnes of CO_2e.

Self-generated electricity

Corporate website	kWh
Ancona	**319**
Bari	**58,079**
Brindisi	**69,182**
Rome	**3,053**
Naples	**1,672**
Catania	**1,589**
Genoa	**8,729**
Lampedusa	**17,417**
Masseria Orimini	**154**
Venice	**47**



Despite the investments already initiated by the ENAV Group to increase renewable energy generation, the physical and technological characteristics of its infrastructure represent a structural limitation to the large-scale deployment of such initiatives. In particular, the availability of suitable surfaces for the installation of photovoltaic systems is limited: many of the Group's operational sites are located within airport areas, where usable space is constrained and subject to technical, regulatory, and safety restrictions. Furthermore, the geographic distribution of ENAV's infrastructure across the national territory — often in remote areas or with limited available surface area — makes the implementation of centralised or high-capacity solar solutions even more complex.

Despite this, at one site already equipped with a photovoltaic system, a pilot project is under way for the installation of a mini-wind turbine (approx. 20kW), with the aim of further diversifying the energy mix and testing solutions that can be replicated in other operational contexts.

Energy efficiency of ENAV Group Assets

The modernisation of the indoor and outdoor LED lighting systems was completed in recent years, complete with command and control domotics at Rome ACC and at the Headquarters. In addition, upgrades are currently being implemented at Padua ACC and Brindisi ACC under the RTCC programme[16], while similar upgrades are in the design phase for the sites of Bologna, Malpensa, Maccarese, Milan ACC, Ancona, Bari, Crotone, Catania, Venice Tessera, Venice Lido, Naples, and Palermo. As part of the modernisation of air conditioning systems, the phase-out of gas boilers (originally planned for 2025) at Malpensa and Albenga airport sites has been completed, replacing them with high-efficiency heat pumps. This is in line with the Group's roadmap to eliminate all gas boilers nationwide by 2029.

Other interventions include: installation of new EV charging stations; deployment of a network of electricity meters at the most energy-intensive sites.

Furthermore, all investment projects — including new implementations and upgrades of existing systems and infrastructure — incorporate:

- LED lighting systems;
- specific control units for air-conditioning systems that improve management and maintenance, providing ideal temperature conditions for personnel and equipment, resulting in reduced energy consumption;
- where possible, infrastructures equipped with "Exterior Insulation and Finishing Systems" and appropriate fixtures in order to improve thermal insulation and allow for an increase in energy class.

Development of energy research and innovation projects

In 2024, ENAV completed the installation of a blue hydrogen fuel cell system at the VOR Centre in Campagnano. The system is expected to be commissioned in 2025, with the aim of replacing the current GEIA (Gruppi Elettrogeni a Intervento Automatico, Automatic Standby Generator Units) used for preferential power supply, enabling a significant reduction in CO_2 emissions.

Regarding the so-called GEIA units, which are essential to ensure the supply of electricity in the event of a blackout, ENAV is experimenting with replacing traditional diesel fuel with HVO (Hydrotreated Vegetable Oil) fuel, a premium diesel product containing 100% biogenic component, produced to a large extent from scrap raw materials, residues and waste resulting from the processing of vegetable products or from crops that do not compete with the food chain. This green fuel for diesel engines (currently under development for car engines) can cut 90% of GHG emissions, with 30% less particulate emissions, 9% less nitrogen oxide (NOX) and 90% less CO_2 than conventional diesel. An experiment is currently planned on a dedicated

16 As part of the digital transformation of air navigation services, ENAV has launched the RTCC (Remote Tower Control Centre) programme, aimed at the remote management and digitalisation of airport control towers. The project envisages the development of operational centres capable of remotely managing several airports using advanced technologies such as high-definition cameras, sensors and digital communication systems. The simultaneous management of multiple remote towers from a single operations centre will enable ENAV to handle take-offs, landings and ground movements increasingly efficiently and flexibly, to the benefit of airlines, airport operators and local communities.

generator set for preferential power supply at the Poggio Lecceta site; ENAV intends to target this implementation at all the Group's operational sites in the coming years.

By 2025, a research and development project on hydrogen, entitled GRETHA – *A novel GReen Energy Technology based on fueL cells, Hydrogen And renewables*, will be completed. The project, promoted by a temporary consortium (ATI) comprising Graded, ENAV, Tecnosistem, UNINA and UNIVPM, involves the testing and completion of a system for the production of "green" hydrogen powered by photovoltaic plants, to be installed at ENAV's Brancasi site.

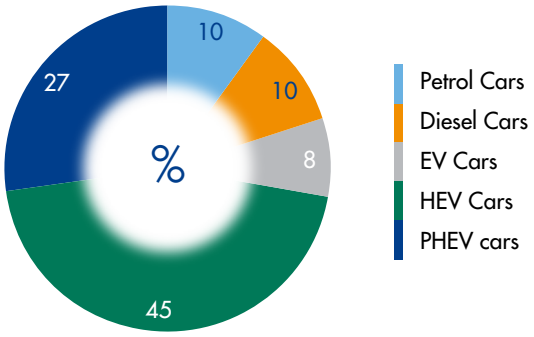
Replacement of the Company car fleet with electric/hybrid/plug-in vehicles

ENAV Group has modernised its corporate vehicle fleet, integrating a number of electric, hybrid, and plug-in vehicles. The ENAV Group's vehicle fleet supports various operational activities, in line with the infrastructure and territorial requirements.

- **vehicles used at airport sites:** ENAV operates vehicles dedicated to operational activities within airport premises. These vehicles are essential to ensure the mobility of technical and operational personnel between air traffic control infrastructures (e.g. control towers, radar stations), and to carry out inspections, checks, and interventions in real time.
- **vehicles for maintenance activities:** a portion of the fleet is allocated to maintenance activities. These vehicles are used to reach remote sites, radar centres, and communication and navigation systems.
- **corporate vehicle pool:** to optimise resource use and reduce the environmental impact of staff mobility, the Group promotes the use of corporate car pooling, enabling employees to share Group vehicles for business travel or work-related trips.
- **multi-purpose vehicles:** a portion of the fleet is allocated for mixed business and personal use by specific professional roles. In this area too, the Group is gradually orienting its choices towards vehicles with a lower environmental impact, favouring hybrid or full electric models, in line with its sustainability objectives.

Company car fleet 2024	
Petrol cars	35
Diesel cars	37
Electric vehicles (EVs)	31
Hybrid Electric Vehicles (HEV)	165
Plug-in Hybrid Electric Vehicles (PHEV)	101
Total cars (EV + HEV + PHEV)	**297**
Total corporate vehicle fleet	**369**
Percentage of cars (EV + HEV + PHEV)	**80%**

Company Car Fleet Distribution



In addition, further electric car charging stations have been installed in 2023, with plans to install them by the end of 2027 at the airport sites of Genoa, Albenga, Reggio Calabria, Crotone, Grottaglie, Ancona, Pescara, Fiumicino and Perugia, as well as the Rome offices of the subsidiary Techno Sky.

Planned actions to mitigate environmental impact

Among the initiatives that the ENAV Group intends to launch in the near future, also within the framework of the new Sustainability Plan, are — in addition to the continued procurement of certified renewable electricity — a number of targeted measures aimed at further improving the operational efficiency of the Group's technological infrastructure and assets. In particular:

1. Replacement of gas boilers with low-GWP heat pumps, which will not only significantly reduce greenhouse gas emissions but also improve the overall energy efficiency of company facilities (the chart below shows a projected reduction of 734 tCO_2e between 2024 and 2029);

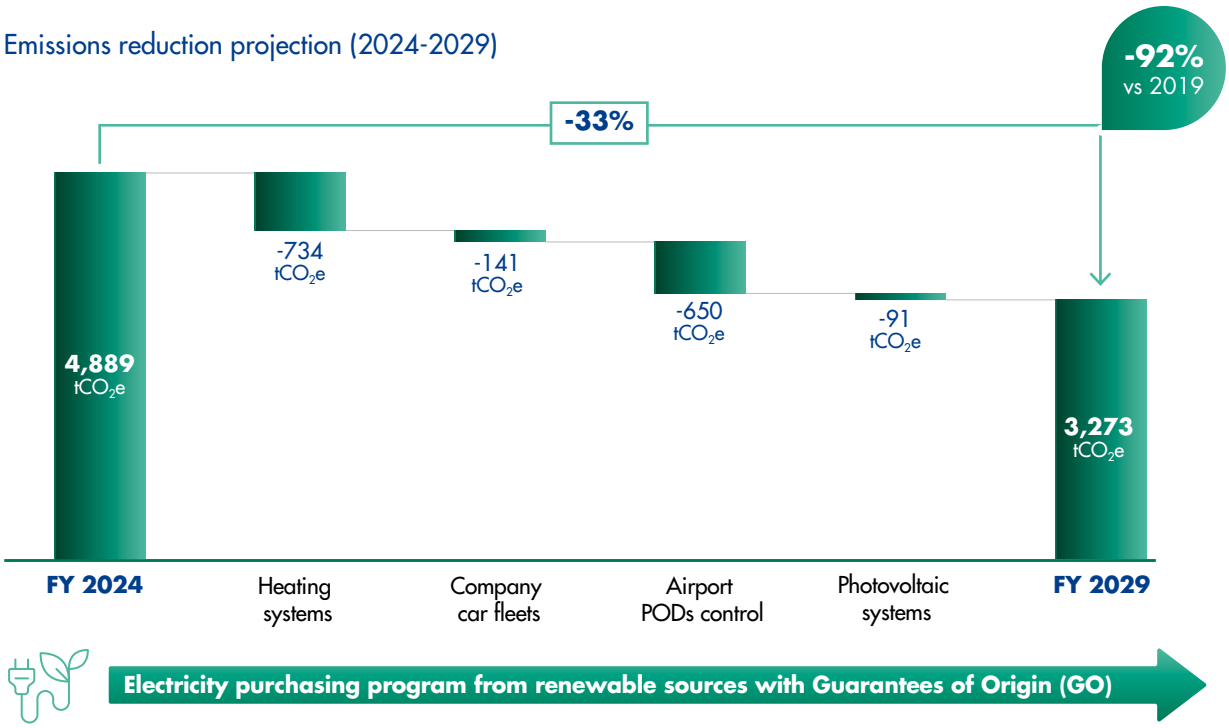
2. Further increase in the share of electric vehicles within the company fleet, aiming to reduce emissions related to fleet operations (the chart below shows a projected reduction of 141 tCO_2e between 2024 and 2029);

3. Acquisition programme of airport Points of Delivery (PODs), aimed at centralising the management of electricity supply points to ensure greater control over consumption and supplier selection, while facilitating the procurement of 100% renewable electricity through Guarantees of Origin contracts (the chart below shows a projected reduction of 650 tCO_2e between 2024 and 2029).

4. Installation and commissioning of new photovoltaic systems, with the objective of increasing self-production of energy from renewable sources, thereby reducing dependence on the national electricity grid and further contributing to the reduction of greenhouse gas emissions (the chart below shows a projected reduction of 91 tCO_2e between 2024 and 2029).

The set of initiatives planned for the period 2025–2029 will enable a potential reduction in residual CO_2 emissions, from 4,889 tonnes in 2024 (baseline) to 3,273 tonnes in 2029[17], representing an overall estimate reduction of 33%. These initiatives will allow a potential reduction of about 92% in scope 1 and 2 emissions compared to 2019.

Emissions reduction projection (2024-2029)



17 The chart below represents a projection of potential emission reductions, developed based on hypotheses and data available at the time of analysis.

GOVERNANCE

ENAV's corporate governance structure, in line with the social relevance of its activities, is geared towards achieving the sustainable success of the company, through the creation of value over the medium to long term and the balancing of the interests of all stakeholders.

Board of Directors

The Board of Directors plays a leading role in guiding the sustainable success of the Company.

It defines strategies and monitors their implementation.

The Board approves the Sustainability Plan and oversees climate change-related risks, ensuring that strategic decisions take into account climate challenges and opportunities.

Sustainability Committee

The Committee supports the Board of Directors on sustainability matters.

In addition to monitoring sustainability strategies, the Committee may issue opinions on specific sustainability issues, suggest corrective and improvement measures to mitigate climate risks, and capitalise on opportunities.

Control, Risks and Related Parties Committee

The integration of relevant ESG issues into the business is constantly monitored also from a risk perspective, thanks to the Internal Control and Risk Management System (ICRMS) and the oversight that the Control, Risks and Related Parties Committee ensures in this area in supporting the activities of the Board of Directors.

Remuneration Committee

It assists the BoD in the development of a Policy for the Remuneration of Directors and Top Management that is conducive to the Company's sustainable success.

Appointments and Governance Committee

It supports the BoD with investigative, propositional and advisory functions in evaluations and decisions on appointments.

ESG Steering Committee

It was established with the objective of ensuring the coordination of processes and initiatives with potential impacts in the field of ESG issues, taking into account the requests of stakeholders and ensuring a constant flow of information on the Policies and activities underway as well as on the guidelines, best practices and regulatory updates in the sector. It is a strategic committee that brings together the heads of the main organisational areas who report directly to the CEO.

Chief Financial Officer

At Group level, the CFO oversees the governance of economic-financial processes, sustainability and financial reporting, as well as the strategic direction of related policies.

Head of Sustainability

Reports directly to the Group *Chief Financial Officer (CFO)*; is responsible for defining the ESG strategy and implementing the related actions.

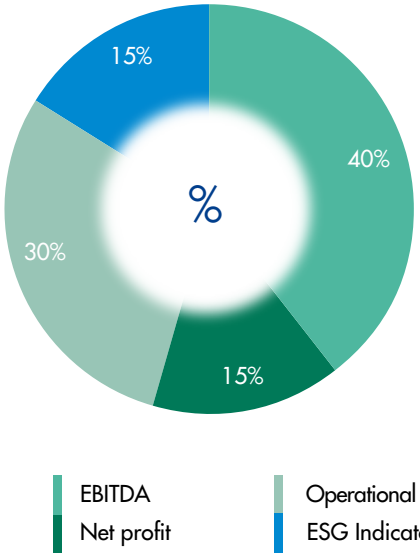
It develops sustainability initiatives and promotes the integration of ESG topics into the corporate strategy, also analysing the impact of business operations on climate change and coordinating the Group's decarbonisation initiatives.

ESG Compensation

The variable remuneration for the Chief Executive Officer and Top Management follows an integrated approach, combining business management with the continuous improvement of sustainability initiatives.

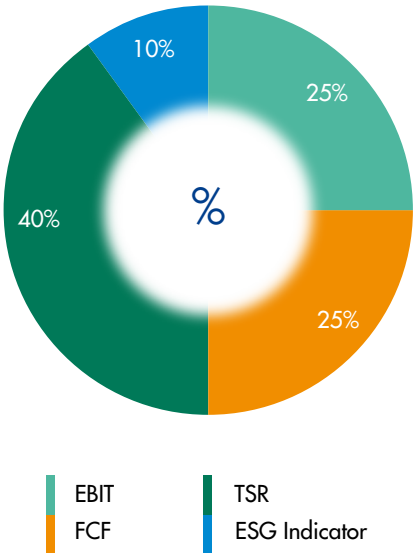
In addition to fixed remuneration, a variable short-term and long-term incentive system is in place.[18] These incentive systems are linked to objectives of an economic-financial and ESG nature[19], with a view to contributing to the achievement of corporate strategy results and the pursuit of long-term interests, in a logic of corporate sustainability.

Weight % Performance indicators for CEO (STI)



EBITDA
Net profit
Operational performance
ESG Indicator

Weight % Performance indicators for CEO (LTI)



EBIT
FCF
TSR
ESG Indicator

18 The short-term variable remuneration (STI) of the Chief Executive Officer during 2024 was linked to the achievement of specific performance targets of the Company, related to: Group EBITDA (weight 40%), Group Net Profit (weight 15%), operational performance on delays (weight 30%) and an ESG indicator (weight 15%). The long-term incentive (LTI) remuneration has been linked to the achievement of specific targets related to: cumulative EBIT (25%), cumulative FCF (25%), relative TSR (40%), and an ESG indicator (10%).

19 For further information, please refer to the Board of Directors' Report on the remuneration policy and fees paid, published on enav.it.

RISKS AND OPPORTUNITIES

Double materiality analysis

Combating climate change could influence the strategies and policies of ENAV and Group companies, as well as how the Group's operations and activities contribute to it. In fact, as part of the double materiality analysis[20] carried out during 2024, impacts and opportunities related to the efficiency and modernisation of air navigation services, the Group's energy consumption and the consequent emissions into the atmosphere were identified.

In particular, the ability to develop innovative flight procedures and technologies for air traffic management represents a strategic opportunity for the Group, as it meets the expectations of customers and the industry in general, also with a view to commercial development. Indeed, the innovative solutions implemented by ENAV, such as the Free Route, Arrival Manager (AMAN) and the Airport Collaborative Decision Making (A-CDM) system, reduce fuel consumption and improve the environmental performance of aircraft.

Energy consumption and the resulting greenhouse gas emissions generated by the Group instead represent a negative impact on the environment related to the provision of air navigation services, as well as the broader direct and indirect management of business activities. In particular, energy requirements are mainly related to the seamless operation of ENAV's technological and physical infrastructure spread throughout the country, and the company fleets. Although the emissions associated with such consumption are relatively low compared to other players in the industry, they negatively contribute to global warming as a whole.

Climate resilience analysis

The ENAV Group adopts an Enterprise Risk Management (ERM) process aimed at identifying, assessing and monitoring risks at Group level and defining and managing actions to contain the level of risks within the propensity thresholds approved by the Board of Directors (Risk Appetite).

The ERM process includes the activities of identifying, analysing, assessing, and monitoring ESG risks, among which climate change is included.

20 The ENAV Group conducts an annual process to identify material ESG issues to be included in sustainability reporting. During 2024, this process was adapted to the changes introduced by the CSRD Directive and the ESRS standard, including the concept of "double materiality", through a cross-functional collaborative process in which the corporate figures competent in the subjects of interest were involved in assessing the materiality of IROs related to the ENAV Group's sustainability issues. This approach makes it possible to analyse how sustainability issues influence – or may influence – the performance, position, and development of the ENAV Group, as well as the current and potential effects its activities have on the environment and society. In this context, climate change represents a cross-cutting issue that entails both risks and opportunities for the Group, in relation to its contribution to the decarbonisation of the aviation sector and the impacts generated along the value chain.

The stages of the value chain covered comprise not only direct operations, but also upstream and downstream activities. Risk assessments are carried out multiple times per year, ensuring continuous and up-to-date monitoring. Furthermore, the time horizon considered is broad and structured, encompassing short-, medium- and long-term periods, in order to ensure a strategic perspective:

Time horizon	From (years)	To (years)	
Short-term	0	1	Refers to risks and opportunities that may arise or have an impact within the current operating year.
Medium-term	1	5	ENAV operates on five-year regulatory cycles. Therefore, medium-term risks and opportunities are those that may emerge during the current regulatory period.
Long-term	5	15	Long-term risks and opportunities are those expected to occur beyond five years, i.e. beyond the next regulatory cycle.

The impacts of the phenomena related to climate change on air traffic stakeholders have been identified and studied at the international level for years. In particular, the Eurocontrol[21] report identifies five key outcomes of weather-related phenomena that could potentially affect aviation:

- short-term weather forecasting;
- impact of storm patterns and intensity on flight operations;
- impact of sea level rise (SLR) on European airport operations;
- impact of climate change on tourism demand;
- impact of changes in wind patterns on flight operations.

With reference to climate change-related risks, the ENAV Group has carried out a study to assess the effects of climate change on the specific sites where ENAV provides its services across the national territory, and in particular at airports.

Physical risks

The study made it possible to evaluate the possible impacts of climate change on ENAV core business activities over two distinct time horizons (2030 and 2050) and two different climate scenarios used by the IPCC (Intergovernmental Panel on Climate Change).

The first scenario (SSP8.5), the most pessimistic, assumes, by 2100, atmospheric CO_2 concentrations will triple or quadruple (840/1120 ppm) compared to pre-industrial levels (280 ppm). This scenario is energy-intensive with total consumption continuing to grow over the century to well over three times current levels.

The second scenario (SSP 4.5) assumes the implementation of certain initiatives such as the use of a range of technologies and strategies to reduce greenhouse gas emissions. It is considered as a stabilisation scenario: CO_2 emissions will peak around mid-century and by 2070 fall below current levels. The atmospheric concentration of carbon dioxide will stabilise by the end of the century at about twice (520 ppm) pre-industrial levels.

21 The document in question is "Climate Change Risks for European Aviation" (2021), prepared for EUROCONTROL by Egis and the UK Met Office. It represents an update of Annex 2 (Adapting aviation to a changing climate) of the 2018 report "Challenges of Growth".

The study revealed the following:

- **with regard to extreme precipitation,** a gradual intensification of the phenomenon is expected in the long term (2050);
- **as far as wind** is concerned, there do not seem to be any critical issues, considering that the forecasts of the above-mentioned scenarios indicate a decrease in the average wind intensity (consequently, the crosswind component – a critical characteristic in providing air navigation services in the context of airports – should decrease proportionally);
- **temperature** is expected to increase by 1-1.5 °C (2030) and 2-2.5 °C (2050) depending on the scenarios;
- **with regard to the rise in sea levels**, the flood risk of infrastructure located in coastal areas remains virtually unchanged.

The Group has defined and regularly tests specific Business Continuity and Disaster Recovery plans on the basis of an in-depth Business Impact Analysis, defining the appropriate procedures to be applied in case of events involving a significant deterioration or interruption of services, in order to preserve continuity in the various possible emergency scenarios. The availability of operational personnel is ensured on a continuous basis, putting this staff through periodic training programmes in order to maintain their required professional qualifications, while also guaranteeing the necessary availability of technology systems with specific functional redundancies and an extensive maintenance plan for all systems and equipment supporting air navigation services. The service level of the technological component is also supported by specific investments plans designed to enhance the reliability, availability, safety and efficiency of systems and equipment.

In this context and with specific reference to climate change, the results of the analysis carried out will become the foundation for monitoring the phenomena studied over time: this can be achieved by regularly updating the climate scenario analysis (e.g., every 2-3 years) in order to process an adequate amount of new data (business and scenario), so as to update the quantification of the operational and financial impacts of climate risks.

Transition risks

As part of its climate change risk management, ENAV adopts a systematic approach that includes the analysis of various types of risks.

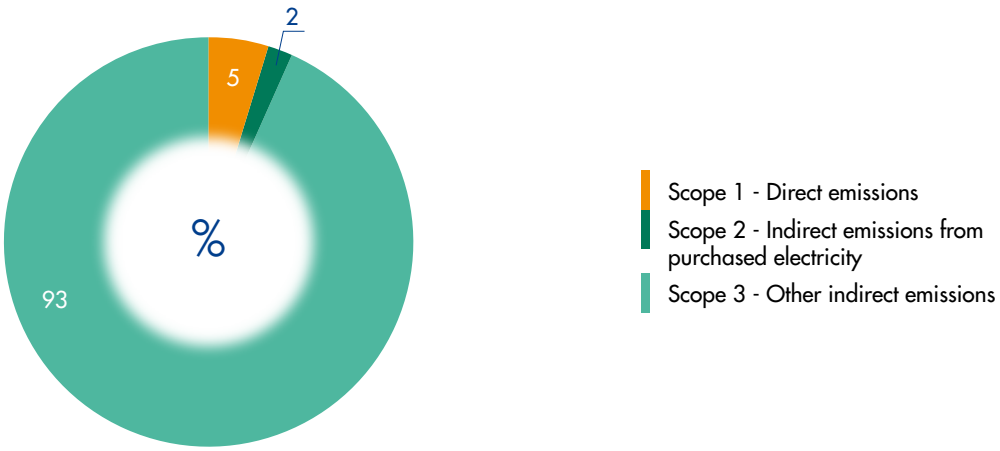
TYPE OF RISK	
Risks related to existing regulations	ENAV continuously monitors the evolving regulatory landscape and maintains a constructive dialogue with institutions in order to assess regulatory changes and mitigate potential climate and environmental impacts. Compliance with current environmental and climate regulations is a priority for the Company, which has implemented an Environmental Management System (EMS) in line with ISO 14001 standards. This system enables the monitoring and assessment of risks arising from non-compliance, thereby reducing the risk of negative environmental impacts. Through internal processes and regular audits, compliance with current regulations is ensured, together with the management of risks related to infrastructure, pollution prevention, and contractual and regulatory obligations.
Risks related to emerging regulations	ENAV also monitors emerging regulations, managing, for example, risks linked to the energy transition, such as delays in authorisation processes or insufficient incentives.
Technological risks	The operational safety of air traffic management (ATM) services is closely linked to technological factors. A disruption to technological infrastructure could jeopardise service continuity, with serious financial and reputational consequences. For this reason, ENAV has developed specific business continuity and disaster recovery plans, which provide for functional redundancy of critical infrastructure.
Legal risks	In order to prevent such risks, ENAV carefully monitors legal compliance and regularly assesses the regulatory implications for its internal processes.
Market risks	The growing consumer focus on sustainability represents a risk factor for ENAV. The Company is engaged in a continuous process of modernising its infrastructure and air navigation services with the aim of reducing fuel consumption and, consequently, greenhouse gas emissions. A concrete example of this is the implementation of the "Free Route" system, which allows airlines to plan more efficient flight paths, thereby reducing travel times and fuel consumption.

Each risk is monitored with the objective of implementing appropriate mitigation and adaptation strategies. This integrated approach allows the Company to maintain high operational resilience while ensuring the achievement of its long-term sustainability goals.

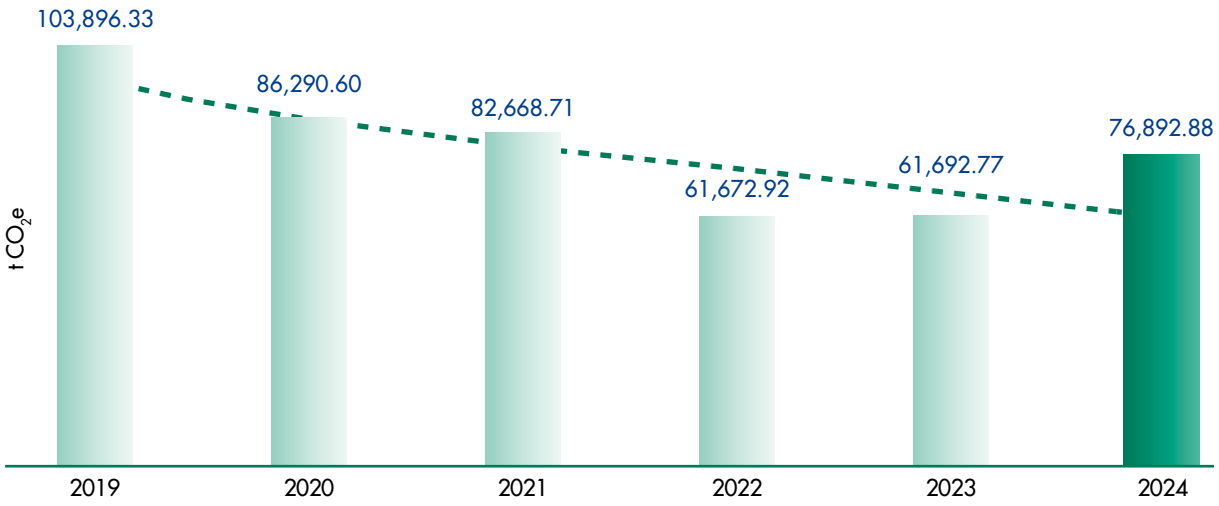
PERFORMANCE

This section presents data relating to the ENAV Group's greenhouse gas (GHG) emissions, broken down into Scope 1, Scope 2, and Scope 3. Charts, trends, and tables provide a comprehensive overview of emissions from 2019 to 2024, in accordance with international *GHG Protocol* guidelines.

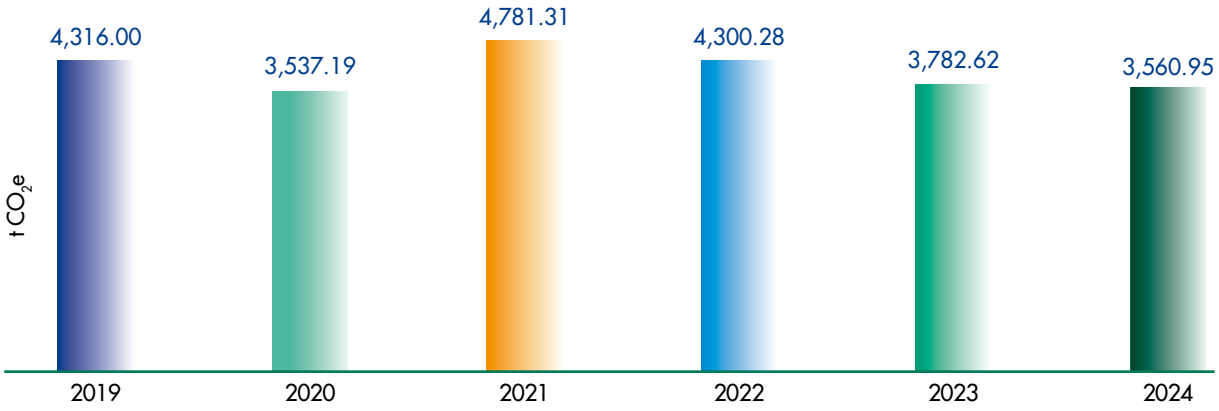
Carbon footprint 2024



Group Carbon Footprint – Trend



Scope 1 emissions

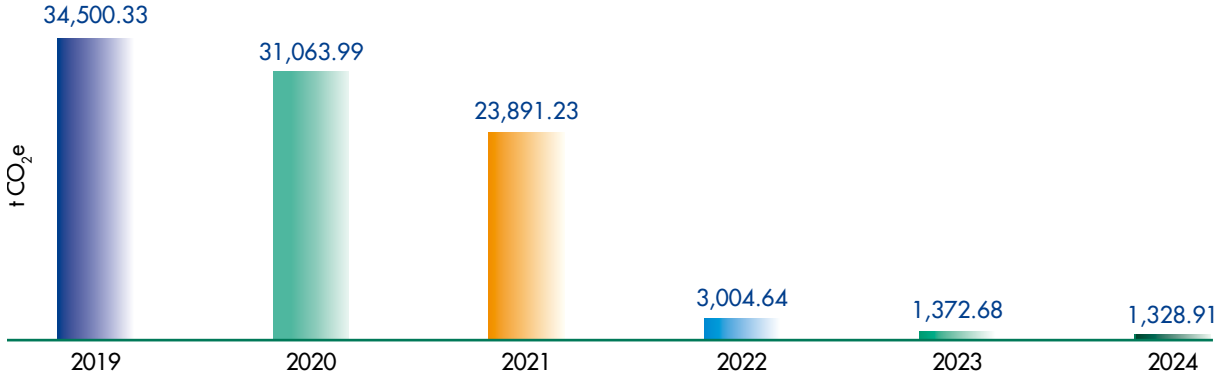


ENAV Group's Scope 1 emissions are generated by:

- fuel consumption for air conditioning of ENAV offices and facilities;
- fuel consumption to power the car and aircraft fleet;
- fuel consumption for emergency power supply of operational facilities;
- leaks associated with the use of refrigerant gases;

By the end of 2024, Scope 1 emissions had decreased by approximately 17% compared to 2019, as a result of energy efficiency measures implemented at the facilities.

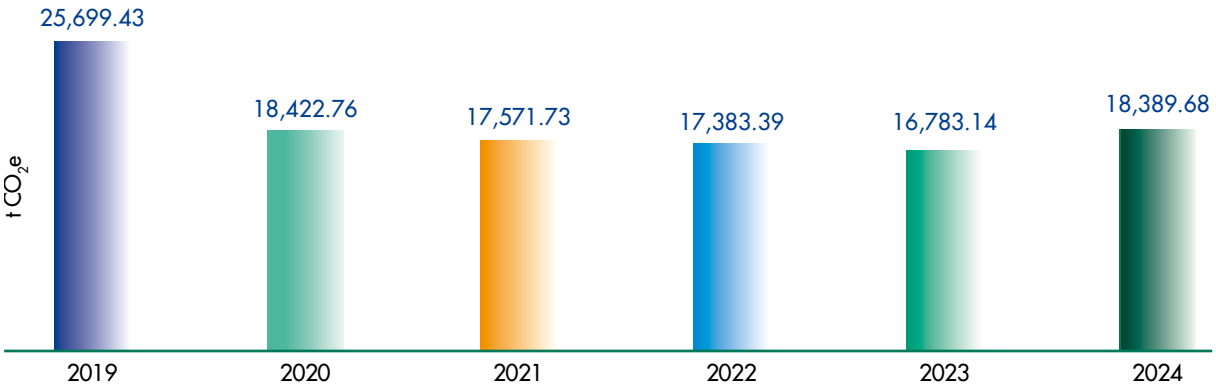
Scope 2 emissions (market-based)



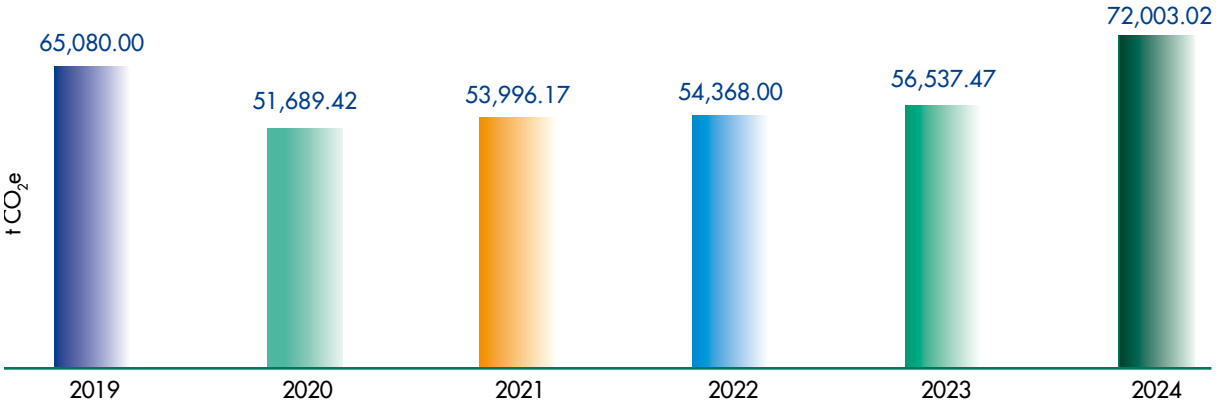
Scope 2 emissions (calculated according to the market-based method[22]) decreased by approximately 96% at the end of 2024 compared to 2019, thanks to the purchase of electricity from renewable sources (GO certified).

22 In accordance with the GRI (Global Reporting Initiative) standards, the ENAV Group has calculated its Scope 2 emissions using the following two methodologies:
- Location-based method, based on average emission factors for power generation on a regional, sub-regional or national basis;
- Market-based method, based on the CO_2 emissions generated by the electricity suppliers from which the organisation procures or on factors relating to the reference market.

Scope 2 emissions (location-based)



Scope 3 emissions



In 2019, the ENAV Group started reporting on Scope 3 emissions, i.e. those generated upstream and downstream in the value chain.

At the end of 2024, Scope 3 emissions had increased by approximately 10% compared to 2019.

This increase is mainly due to the use of a "spend-based" calculation methodology for "Capital goods" and "Purchased goods and services"; in particular, higher Group investments in 2024 led to an increase in emissions for capital goods of 42% compared to the previous year.

Focus

Development of the new Scope 3 emissions calculation methodology

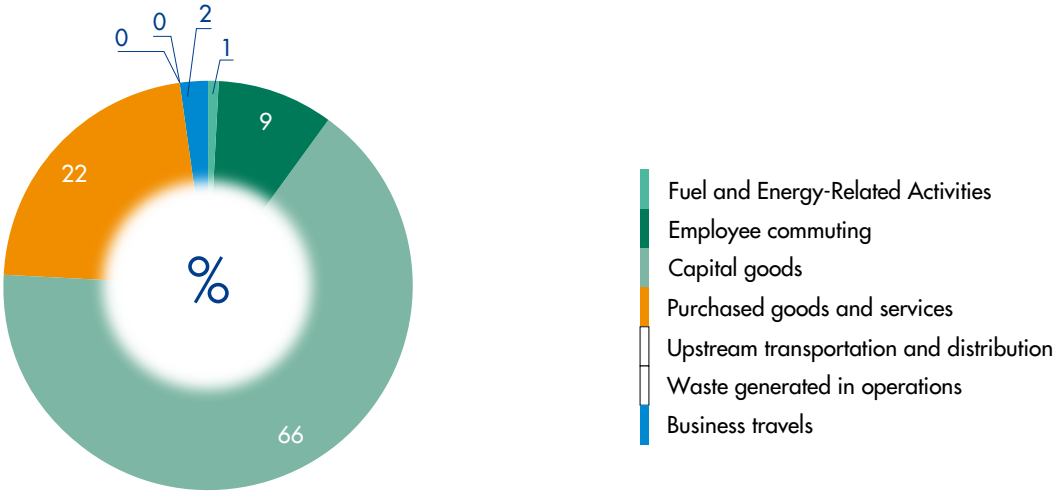
As part of its ongoing commitment to increasingly accurate and transparent climate reporting, ENAV has launched a project to review and update the methodology used for quantifying Scope 3 emissions. This initiative is part of a continuous improvement process aimed at strengthening the quality and robustness of environmental data across the entire value chain.

The adoption of the new methodology is expected to enable a more accurate and meaningful representation of indirect emissions, further enhancing the reliability of the Group's climate reporting.

At present, the reporting of these emissions is in the following categories:

1. Capital goods, included in the reduction targets approved by SBTi.
2. Fuel and energy-related activities, included in the reduction targets approved by SBTi.
3. Employee commuting, included in the reduction targets approved by SBTi.
4. Purchased goods and services.
5. Business travel.
6. Upstream transportation and distribution.
7. Waste Generated in Operations.

Scope 3 emissions



In order to achieve a reduction in emissions generated along the value chain, the ENAV Group has started the implementation of specific corporate projects and initiatives that will mainly be related to the following aspects:

- further boost to energy efficiency measures[23]
- green mobility plans dedicated to ENAV Group people, including innovative work solutions to be progressively extended to an increasing portion of the corporate population;
- greater engagement of suppliers and improvement of suppliers' ESG performance.

Focus

Strengthening supplier engagement

In line with regulatory developments and the 2025–2029 Sustainability Plan, ENAV has launched an ESG assessment and development programme targeting its suppliers, aimed at promoting their growth and sustainable development, and fostering conditions for improved ESG performance throughout the supply chain. This initiative reflects the intention to integrate environmental, social and governance criteria into procurement processes, with the goal of strengthening the resilience and sustainability of the entire procurement ecosystem.

The project is based on a structured analysis of the supply chain, aimed at identifying strategic suppliers and their related ESG impacts. The approach is organised into distinct phases, which will lead to the definition of dedicated internal governance for managing the programme, and an assessment methodology aligned with the Group's internal commitments, relevant regulations, and the material topics identified through the double materiality assessment.

The project will initially involve a pilot phase covering a cluster of suppliers selected based on expenditure, business impact, industry sector, and contract duration. A regulation is currently being developed to establish participation procedures and ESG assessment criteria. The main areas of analysis will include environmental aspects, labour-related issues across the value chain, and business conduct. The implementation of digital tools to support continuous ESG performance assessment and monitoring is also under consideration, with the aim of developing a solid and structured sustainable supply chain management framework.

23 The strengthening of energy efficiency measures reduces Scope 3 emissions – category "Fuel and energy-related activities" – by lowering overall energy demand and, consequently, the indirect emissions associated with the production, transformation and transmission of purchased energy. This effect translates into a lower emission intensity along the upstream value chain, contributing to broader decarbonisation beyond the organisation's operational boundaries.

Group emissions[24]

	u.m	2019	2020	2021	2022	2023	2024	Δ 24-19
Scope 1 emissions	**t CO_2e**	4,316.00	3,537.19	4,781.31	4,300.28	3,782.62	**3,560.95**	**-17.49%**
Scope 2 emissions (market-based)	**t CO_2e**	34,500.33	31,063.99	23,891.23	3,004.64	1,372.68	**1,328.91**	**-96.15%**
Scope 2 emissions (location-based)	**t CO_2e**	25,699.43	18,422.76	17,571.73	17,383.39	16,783.14	18,389.68	**-28.44%**
Scope 3 emissions	**t CO_2e**	65,080.00	51,689.42	53,996.17	54,368.00	56,537.47	**72,003.02**	**10.64%**
Total emissions (market-based)	**t CO_2e**	**103,896.33**	**86,290.60**	**82,668.71**	**61,672.92**	**61,692.77**	**76,892.88**	**-25.99%**
Total emissions (location-based)	**t CO_2e**	95,095.43	73,649.37	76,349.22	76,051.67	77,103.23	93,953.66	**-1.22%**

Note: Scope 1 emissions were calculated according to methodology from the GHG Protocol, using emission factors published by DEFRA (Department for Environment Food & Rural Affairs) 2024. Specifically, scope 1 emissions in 2024 were broken down as follows: emissions from office and facility fuel (994.76 tonnes CO_2e); emissions from car and aircraft fleet (2,068.82 tonnes CO_2e); refrigerant gases (497.37 tonnes CO_2e). In accordance with the provisions of Article 51, paragraph 4, letter a) of the Italian Consolidated Income Tax Law, emissions relating to company cars for mixed business and personal use are measured at 70% of the total.

Scope 2 emissions related to electricity consumption, as per 'The Greenhouse Gas Protocol: Scope 2 Guidance, 2015", are calculated according to the location-based methodology, using the emission factors published by ISPRA in 2024, and according to the market-based methodology using the emission factors published by AIB – European Residual Mixes 2023.

24 The Group's Scope 1, 2 and 3 emissions are measured in accordance with international guidelines provided by the GHG Protocol, an organisation representing a partnership between the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD).

Scope 3 emissions in detail

	u.m	2019	2020	2021	2022	2023	2024	Δ 24-19
Fuel- and Energy-Related Activities	t CO_2e	6,748.00	4,483.57	5,568.92	1,319.17	930.17	899.77	-86.67%
Employee commuting	t CO_2e	6,290.00	6,489.77	7,086.22	7,289.93	6,507.95	6,553.87	4.20%
Capital goods	t CO_2e	31,446.00	29,601.13	28,601.97	31,902.66	33,529.69	47,619.79	51.43%
Purchased goods and services	t CO_2e	18,928.00	10,665.64	12,134.49	12,513.23	13,843.71	15,475.73	-18.24%
Upstream transportation and distribution	t CO_2e	62.00	60.74	67.71	47.62	47.05	53.32	-14%
Waste generated in operations	t CO_2e	346.00	55.99	93.68	38.28	4.67	5.31	-98.47%
Business travels	t CO_2e	1,260.00	332.57	443.19	1,257.11	1,674.23	1,395.23	10.73%
Scope 3 total	t CO_2e	**65,080.00**	**51,689.42**	**53,996.17**	**54,368.00**	**56,537.47**	**72,003.02**	**-10.64%**

Scope 3 emissions were calculated according to the GHG Protocol methodology, following the guidelines in the document "Technical Guidance for Calculating Scope 3 Emissions, 2013". In particular:

- for category "Purchased goods and services" the "spend-based" approach and the emission factors "Base Coal v. 23.4.0" and "GHG Evaluator of 2016" were adopted;
- for category "Capital goods", the "spend-based" approach and the emission factors "Base Coal v. 23.4.0" were adopted;
- for category "Fuel and energy related activities", the "average data" approach and the "DEFRA 2024" emission factors were adopted;
- for category "Upstream transportation and distribution", the "distance-based" approach and "DEFRA 2024" emission factors were adopted;
- for category "Waste generated in operations", the "waste-type-specific" approach and "Ecoinvent 3.8" emission factors were adopted;
- for category "Business travel", the "distance-based" approach and "DEFRA 2024" emission factors were adopted;
- for category "Employee commuting" the "distance-based" approach was adopted, assuming that each employee drives 30 km per day (round trip) to work using a petrol car (allocation 50% Euro 4 and 50% Euro 5), and the "Ecoinvent 3.8" emission factors.

The residual Scope 3 emission categories indicated by the GHG Protocol, considering the nature of the ENAV Group's business, are not significant in terms of emission impact for the purposes of the Group's GHG inventory.

Focus

Waste management

On the issue of waste management, the ENAV Group assumes and defines as strategic the commitment to govern waste disposal activities through the traceability of the entire process with the aim of giving the maximum possible implementation to the hierarchical criterion of prevention, reuse, recycling, recovery and disposal, in full compliance with current regulations. In addition, the increasing importance assumed by the environmental issue and the relevance of the regulatory complex applicable on the subject have influenced the choice of adopting tools to prevent the risk of non-compliance, in particular computerised tools for compliance management. The active participation of internal staff has also facilitated the full integration of these tools into ENAV Group processes.

Therefore, the management of waste generated in the course of ENAV's activities is carried out by means of:

- the adoption, in line with the commitment expressed in the ENAV Group's Environmental Policy, of an Environmental Management System that meets the requirements of the ISO 14001 standard;
- prevention of the possibility of non-compliance with regulatory requirements, through the use of a computerised system for managing waste registers and transport forms;
- the progressive increase in the percentage of special waste sent for recovery out of the total waste produced, through the adoption of appropriate reward criteria for the awarding of waste transport and disposal/recovery services;
- the adoption of various initiatives regarding the management of waste produced by office activities, such as the elimination of plastic containers from beverage dispensing machines used by ENAV Group companies;
- the provision of environmental training programs for employees, in order to raise awareness and indirectly encourage the reduction of waste.

The effectiveness of the actions undertaken is checked through internal audits and the monitoring of indicators.

Waste created by ENAV Group companies is collected, transported, and subjected to recovery/disposal operations by third-party organisations with the relevant qualifications and authorisations, with which the ENAV Group has special contractual connections. The share of municipal waste is handled through the companies in charge of cleaning services by qualified third-party companies, as mentioned above, or by the public collection service. Verification that the companies in charge of waste management services, as well as the companies in charge of cleaning services, operate in accordance with both contractual and legislative obligations is carried out by the Contract Managers in charge and the Managers of the sites and territorial offices concerned, in application of the ENAV Group's Environmental Management System procedures.

A specific platform is used to collect and monitor data relating to special waste, with which data on all waste loading and unloading operations carried out at all operational sites and offices of ENAV Group companies located throughout the country are managed.

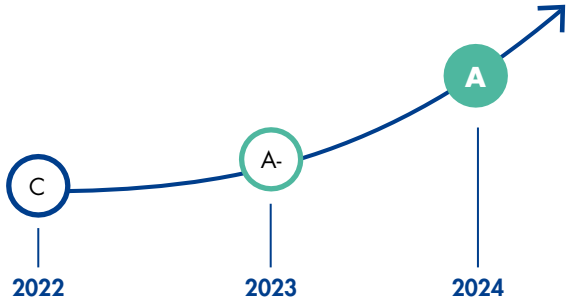
Waste generated

	Unit of measure	2024
Waste for recovery and waste for disposal	t	**166.52**
Waste sent for disposal (waste disposed of in landfill)	t	**2.95**
Total waste generated	**t**	**169.47**

Focus

CDP (former Carbon Disclosure Project)

The ENAV Group has received significant international recognition for its commitment to environmental sustainability. For the first time, it has been included in CDP's prestigious A List (formerly Carbon Disclosure Project) for Climate, the global non-profit organisation that assesses companies based on their management of climate-related risks and opportunities.



GLOSSARY OF TERMS

Climate Change	Climate change refers to long-term alterations in global climatic parameters, including temperature, precipitation, and extreme weather events, primarily driven by human activities. These activities have accelerated the accumulation of greenhouse gases (GHGs) in the atmosphere, with significant impacts on ecosystems, water resources, and economies.
Carbon Neutrality	Carbon neutrality occurs when an entity's (company or nation) net greenhouse gas emissions are reduced and offset, for example, through the purchase of carbon credits.
Carbon Disclosure Project (CDP)	CDP is an international non-profit organisation that operates the global disclosure system for investors, companies, cities, states, and regions to manage their environmental impacts.
Carbon Credits	Carbon credits certify a verified reduction or removal of greenhouse gases, generally measured in tonnes of CO_2 equivalent.
Decarbonisation	Decarbonisation is the process of reducing carbon emissions, primarily by decreasing the use of fossil fuels in favour of renewable energy sources, electrification, and other low-carbon technologies.
Climate-changing Emissions	Greenhouse gas emissions (GHG), also known as climate-altering emissions, include gases such as carbon dioxide (CO_2), methane (CH_2), nitrous oxides (N_2O), and fluorinated gases, which contribute to the greenhouse effect and global warming. These emissions are classified into three scopes: **Scope 1:** direct emissions from sources owned or controlled by the organisation, such as the combustion of fossil fuels. **Scope 2:** indirect emissions resulting from the generation of purchased and consumed energy (e.g. electricity, heating, steam). Scope 2 emissions can be calculated according to two methodologies: **location-based and market-based.** Under the location-based method, emissions are calculated based on the average emissions intensity of the local electricity grid, regardless of the company's specific purchasing choices; this reflects the regional or national energy mix. Under the market-based method, emissions are calculated based on the company's actual energy purchases, taking into account specific contracts or green certificates (such as Guarantees of Origin); this approach reflects the organisation's energy procurement choices. **Scope 3:** other indirect emissions occurring along the organisation's value chain, including activities such as transportation, product use by customers, waste disposal, and the production of purchased goods and services.
EU Emission Trading System (ETS)	Since 1 January 2012, emissions from aviation activities have been included in the EU Emissions Trading System (EU ETS). Airlines operating in Europe are required to purchase emission allowances to cover their CO_2 emissions, thereby encouraging emission reductions through innovation and operational efficiency.

Greenhouse Gas Protocol (GHG Protocol)	The GHG Protocol is an international standard used to measure and manage greenhouse gas (GHG) emissions by organisations and companies. It provides guidance for accounting emissions across the entire value chain, categorising them as follows: Scope 1 (direct emissions), Scope 2 (indirect emissions from energy consumption) and Scope 3 (other indirect emissions across the supply chain).
Guarantees of Origin (GO)	Guarantees of Origin (GO) are certificates that certify the renewable origin of electricity fed into the grid.
Intergovernmental Panel on Climate Change (IPCC)	The IPCC is a United Nations body tasked with providing comprehensive scientific assessments on climate change. It brings together experts from around the world to analyse the causes, impacts, and potential solutions to climate change. Its publications, including periodic assessment reports, are key reference points guiding global policies and actions to mitigate the risks of global warming.
Net Zero	According to Science Based Targets (SBTi), Net Zero refers to achieving a balance between greenhouse gas emissions released into and removed from the atmosphere. For companies, this entails reducing emissions across the entire value chain (Scope 1, 2, and 3) in line with a science-based pathway that limits global warming to 1.5°C, with any remaining emissions offset only after maximum feasible reductions have been achieved. To reach Net Zero, according to SBTi, emissions must be reduced by 90–95% from baseline levels by 2050, with the remaining 5–10% offset through certified carbon removals.
ReFuelEU Aviation Initiative	This initiative aims to promote the use of sustainable aviation fuels (SAF). Its objective is to gradually increase the share of SAF used on flights within the EU, thereby reducing the environmental impact of air transport.
Climate risks	Climate risks primarily include two categories of risk: **Physical risk:** classified as acute when caused by extreme events such as droughts, floods, and storms, and as chronic when resulting from progressive changes such as rising temperatures, sea level rise, water stress, biodiversity loss, and changes in land use. **Transition risk:** refers to the financial loss a company may incur during the transition towards a more environmentally sustainable economy. This may result from the relatively sudden adoption of climate and environmental policies, technological advancements, or shifting market and consumer preferences.
SAF (Sustainable Aviation Fuel)	In accordance with the European classification, SAF (Sustainable Aviation Fuels) are divided into three main categories, each characterised by different sources and production processes, but all sharing the feature of not requiring the extraction of fossil hydrocarbons from underground reserves. The first category includes **synthetic fuels**, also known as e-fuels or RFNBOs (Renewable Fuels of Non-Biological Origin). These fuels are produced by combining hydrogen, obtained from renewable sources, with carbon already present in the atmosphere (e.g. in the form of CO_2), through advanced chemical processes. The second category consists of **biofuels**, derived from biological feedstocks such as biomass, vegetable oils, animal fats, or organic waste. These fuels utilise the carbon absorbed by plants during their growth, thereby contributing to a more sustainable carbon cycle. Finally, there are **recycled carbon fuels**, produced from carbon-rich industrial waste streams, such as exhaust gases from steel plants. These materials, which are not intentionally generated and are difficult to eliminate, are thus repurposed within a circular economy approach.
Science Based Targets (SBTi)	An initiative arisen from a partnership between CDP (formerly the Carbon Disclosure Project), the UN Global Compact, WRI (World Resources Institute) and WWF in order to guide the private sector to climate action through science-based emission reduction targets.
Task Force on Climate-related Financial Disclosures (TCFD)	An initiative established by the Financial Stability Board in 2015, providing recommendations for disclosing financial information related to climate-related risks and opportunities.

TCFD CONTENT INDEX

Thematic area	TCFD recommendation	Disclosure	Page
Governance	• Describe the Board of Directors' oversight of climate-related risks and opportunities	Governance	29
	• Describe the role of management in assessing and managing climate-related risks and opportunities	Governance	29
Strategy	• Describe the climate-related risks and opportunities that the Company has identified in the short, medium and long term	Risks and opportunities; Strategy	31 – 34; 15 - 28
	• Describe the impact of climate-related risks and opportunities on the Company's activities, strategy and financial planning		31 – 34; 15 - 28
	• Describe the resilience of the Company's strategy, taking into consideration different climate-related scenarios, including a temperature increase scenario of 2° C or less		31 – 34; 15 - 28
Risk management	• Describe the processes implemented by the organisation to identify and assess climate change risks	Risks and opportunities	31 - 34
	• Describe the organisation's implemented processes for managing climate change risks		31 - 34
	• Describe how processes to identify, assess and manage climate change risks are integrated into the Company's overall risk management		31 - 34
Metrics and targets	• Disclose the metrics used by the Company to assess climate change risks and opportunities in line with its strategy and risk management process	Strategy; Performance	15 - 28; 35 - 41
	• Disclose Scope 1, Scope 2 and, where applicable, Scope 3 greenhouse gas (GHG) emissions and related risks	Performance	35 - 41
	• Describe the targets used by the Company to manage climate-related risks and opportunities and performance against those targets	Strategy; Performance	15 - 28; 35 - 41

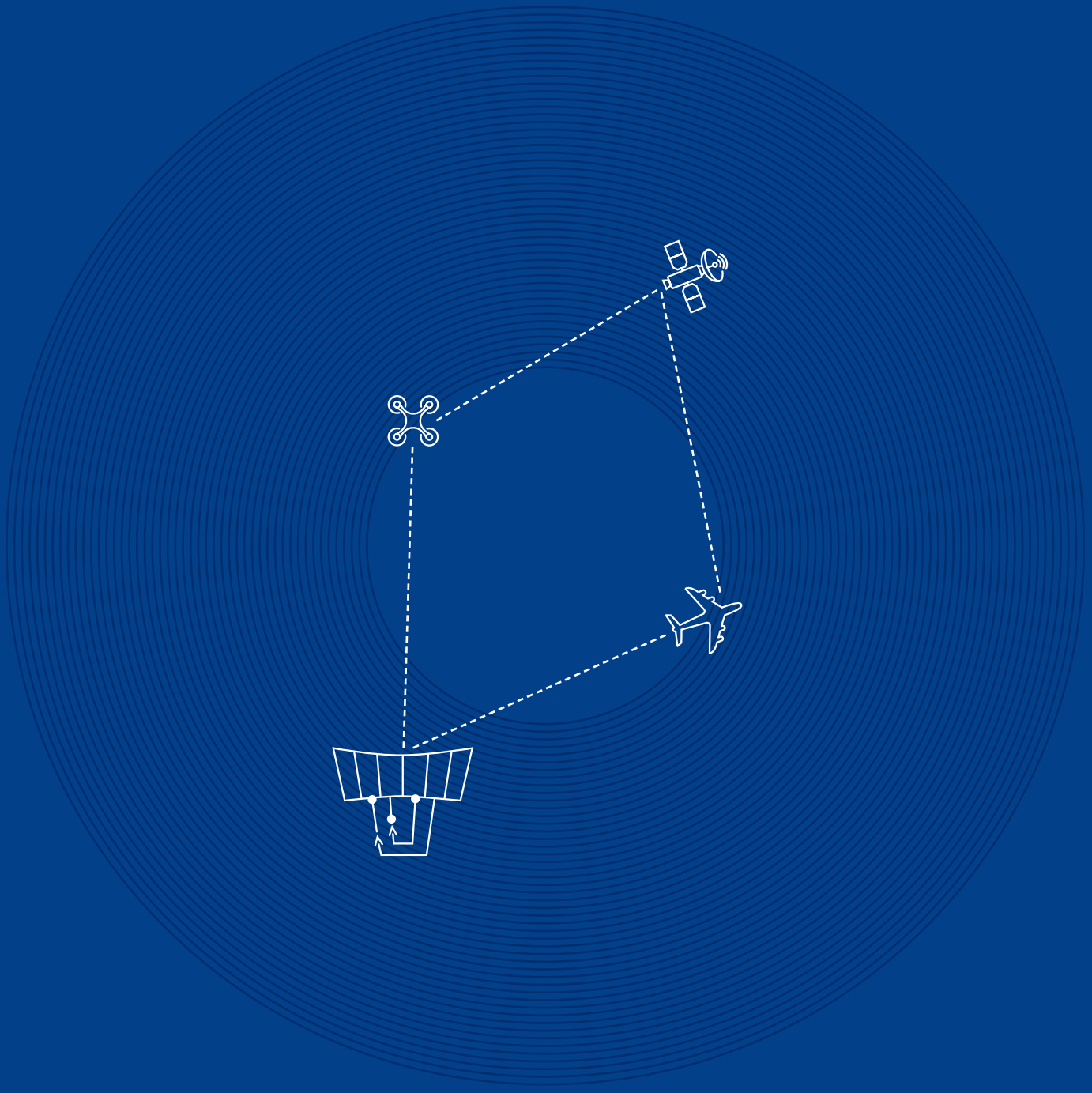
SCOPE OF REPORTING

The qualitative and quantitative information contained in this Climate Report refers to the performance of the ENAV Group for the financial year ended 31 December 2024.

For the purposes of better comparison or contextualisation of the information provided, data relating to the financial years 2019, 2020, 2021, 2022, and 2023 have also been included and duly indicated.

This Statement includes data and information referring to the "ENAV Group", namely the set of companies composed of the Parent Company, ENAV S.p.A. and its subsidiaries, consolidated on a line-by-line basis: Techno Sky S.r.l., ENAV Asia Pacific Sdn Bhd, ENAV North Atlantic LLC, D-Flight and IDS AirNav.

ENAV
Joint-stock company
Registered office in Rome
Via Salaria, no. 716
Share capital €541,744,385.00 entirely paid in
Tax ID and CCIAA No. 97016000586
R.E.A. of Rome No. 965162
V.A.T. No. 02152021008



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