

ENAIRe 



2017

OUR COMMITMENT WITH THE ENVIRONMENT

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01 Introduction



A. Presentation

ENAIRE in Spain is one of the main air navigation service and aeronautical information suppliers, appointed by Law 9/2010 for the exclusive provision of air traffic services for air control and approach control, as well as flights, alerts and advisory information for Spanish airspace.

The Spanish Airports and Air Navigation Public Company (Aena) became ENAIRE on 4 July 2014 (article 18 of Royal Decree - Law 18/2014). Since the publication of this Royal Decree, the Aena Foundation was absorbed by ENAIRE. ENAIRE is the main shareholder of Aena, S.A. (51%) and hold shares in INECO (45.85%), CRIDA (66.66%), EMGRISA (0.08%), GNSS, S.L (19.3%) and GROUP EAD (36%).

It is also the owner of the ENAIRE Foundation. It is the fourth largest air navigation services provider in Europe by number of movements, and it actively participates in all of the European Union's projects related to the implementation of the Single European Sky project.

01 Introduction | A. About ENAIRE

Due to our geographical location we manage traffic that originates and has its destination in four different continents (Europe, America, Asia and Africa), as well as being the main gateway for South American flights.

ENAIRE is certified as an organisation that provides air navigation services, as well as a supplier of air traffic controller training.

ENAIRE's mission is to "provide safe, quality, efficient and environment-friendly air navigation services that meet the needs of our customers and society in general, all while paying special attention to the training of our staff and contributing to the development of air transport."

ENAIRE is responsible for air navigation services that include the management of Spanish airspace, which covers 2,190,000 km². Compliant with the International Civil Aviation Organisation (ICAO), it is split into three Flight Information Regions (FIR): Madrid, Barcelona and the Canary Islands.

- **As the main supplier of aerodrome air traffic services in Spain it manages 22 towers, which include**

the five towers with the highest level of traffic in Spain.

- **It is also the supplier of communications, navigation and surveillance services for all airspace and airports within the Aena S.A. network, as well as for Lleida-Alguair.**

01 Introduction | A. About ENAIRE

On an international level, ENAIRE is also an active member of various work groups and associations, with its main focus being the achievement of a standardised and efficient international framework for all air navigation matters.

In relation to this we are also members of the A6 Alliance (alliance of six main European air navigation service suppliers), actively participating in the consolidation of initiatives related to the implementation of the Single European Sky.

We are part of the SESAR Joint Undertaking, in whose work programme we participate in more than 60 projects that design the technology required to achieve the Single European Sky. Along with DFS (German supplier), LVNL (Dutch supplier) and NATS (British supplier), we are also members of the iTEC consortium, which is developing the new generation of the controller work position and the future Common Flight Treatment Plan.

01 Introduction | B. Air Transport and the Environment

Another point that bears mentioning is ENAIRE's participation in the South West Functional Airspace Block (SW FAB), sharing operational requirements irrespective of national frontiers, which improve the efficiency of the European network between Spain and Portugal.

Proyectos SESAR-ENVIRONMENT en los que participa ENAIRE

Desarrollo del marco de validación ambiental de SESAR

Proyecto de Apoyo y Coordinación Medio Ambiental

Programa AIRE

01 Introduction | B. Air Transport and the Environment

Sustainable development at a global level requires a balance between the stakeholders involved.

Sustainability materialises the minimisation of adverse effects that can affect the environment as a result of social and economic development.

Aviation is a very representative example, as it significantly contributes to the global social and economic development, representing 3.4% of the global GDP.

It is also a powerful generator of employment and an important lever for economic development and a facilitator of tourism: 8 out of 10 tourists visiting Spain arrived via airports (12% of our GDP). It is also a generator of economic profit, facilitating international trade.

With regard to its global evolution, over the past 30 years, its passenger share has increased

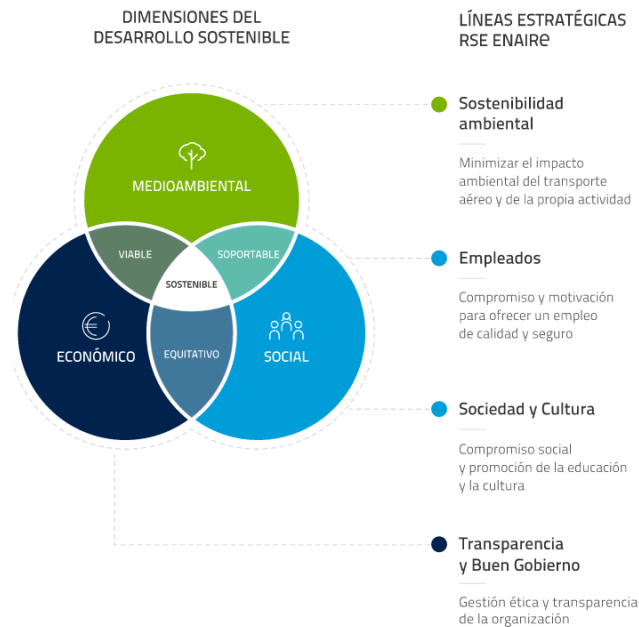
from 1 billion in the 1980s to three times this figure in 2014.

Growth expectations are highly optimistic, given that the number of aircraft in the air is expected to reach around 35,000 in 2034, compared to the current figure of approximately 19,000.

However, this exponential growth is not always accepted socially due to the possible adverse effect that can affect the environment: emissions, global warming, noise in the airport's surroundings, etc.

01 Introduction | B. Air Transport and the Environment

The aeronautical sector's major challenge is to be able to reconcile economic development and the growing demand and protection of the environment.



In an international context, air traffic management in Europe is subject to a stringent regulatory framework associated with the Single European Sky (SES) initiative, which establishes the requirements for air navigation management and services provided. In this regard, an ambitious roadmap that defines 3 stringent international objectives has been established:

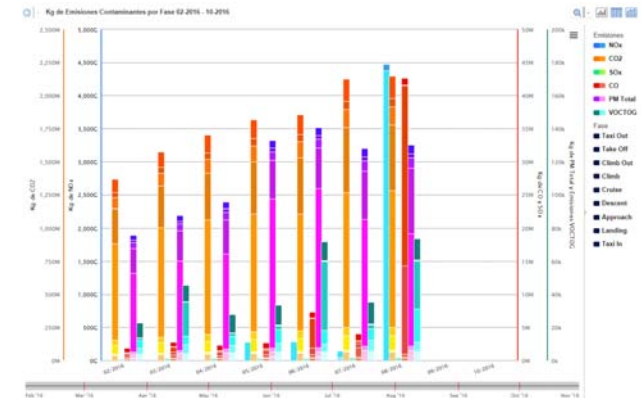
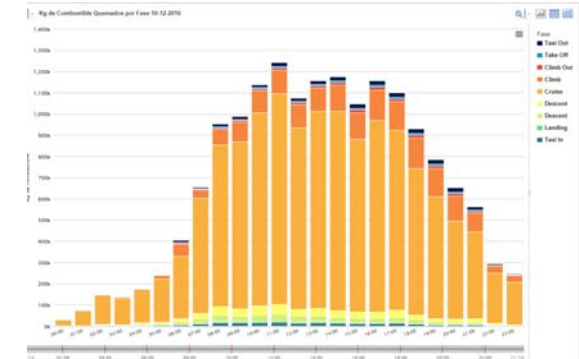
- **Changes in aeronautical technology: new fuels, more efficient aircraft**
- **Limitation of CO2 emissions through an agreement signed between the member countries of the ICAO**
- **A 50% reduction in emissions by 2050 compared to 2005**

As an aviation services provider, ENAIRE plays an important role in meeting these targets, due to establishing environmental sustainability as the strategic axis developing several lines of action in this regard, among of which particularly stands out the "Contribution to the environmental sustainability of air transport by minimising flight impacts on the environment"

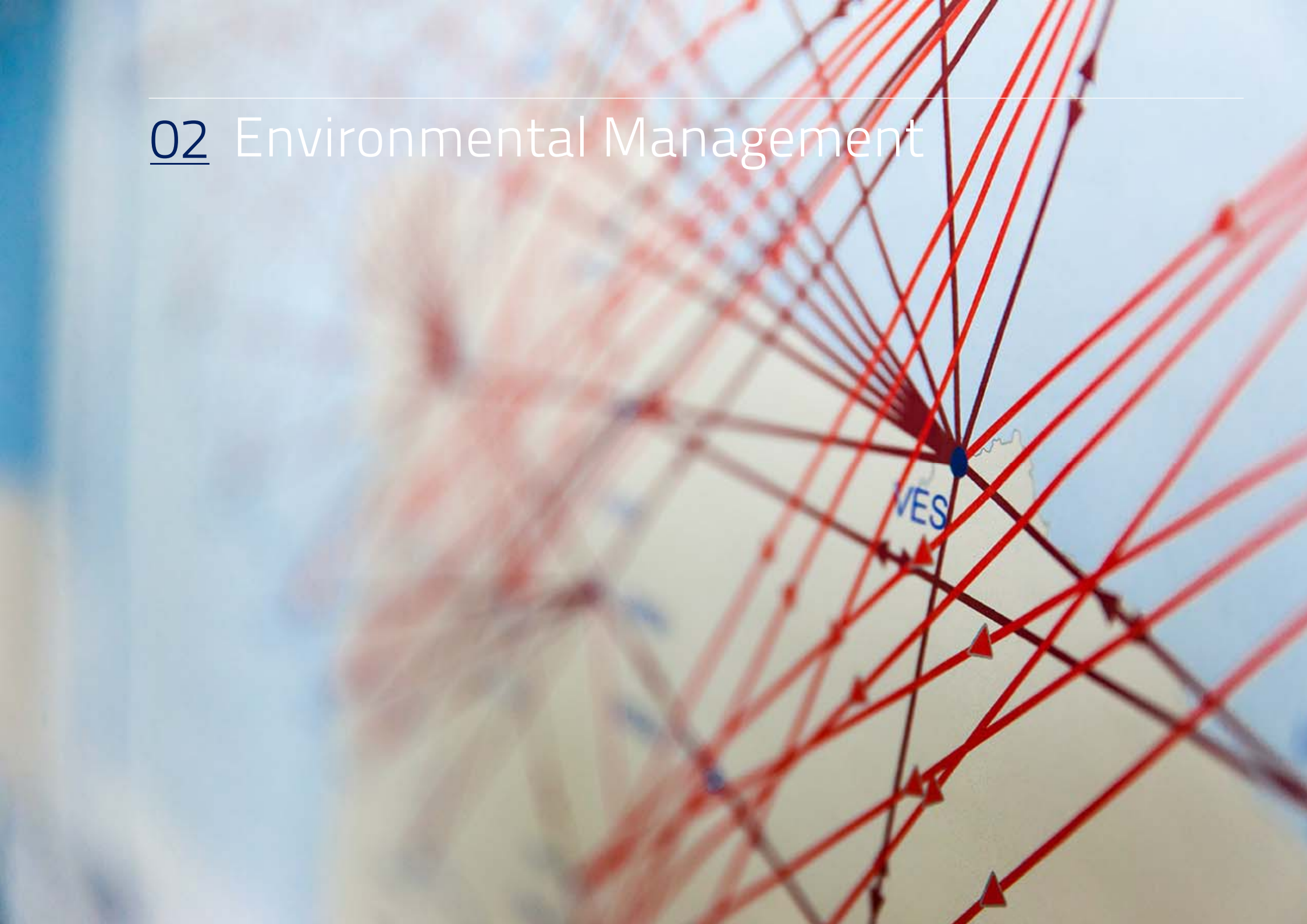
01 Introduction | B. Air Transport and the Environment



Our main target is based upon creating a more efficient Spanish airspace network of routes, cutting distances flown for air carriers and powering fuel savings and fewer greenhouse gas emissions. Our commitment with the environment also involves the scope of R&D&i. Over recent years, ENAIRE has invested a significant effort in innovation aimed at monitoring fuel consumption and emissions of flights that fly over Spanish territory.



02 Environmental Management



02 Environmental Management

ENAIRE has implemented an Integrated Management System that has been certified regarding environmental matters according to standard ISO 14001:2015, whose guidelines lead us towards a continuous improvement.



02 Environmental Management | A. Emmissions

A. Emissions

Since 2012, in which the KEA¹ indicator for Spain was 5.16%, the inefficiency of routes has been gradually reduced to 3.72% at 2017 year-end.

These values represent an aggregate reduction of 17.5 million nautical miles, 192,000 tons of fuel and 605,000 tons of CO₂ emitted into the atmosphere².

	2013	2014	2015	2016	2017	Total Acumulado
Millas adicionales ahorradas	2.056.001	4.909.367	4.690.702	4.519.923	1.287.858	17.463.851
Combustible ahorrado(Tm)	22.616	54.003	51.598	49.719	14.166	192.102
Emisiones de CO2 ahorradas (Tm)	71.240	170.110	162.533	156.615	44.624	605.122

Some of the actions aimed at improving the airspace routes are based on:

- **Negotiating with the Air Staff (EMA) to reconcile the use of military areas and civil aviation**
- **Reviewing traffic routing with airlines**
- **Negotiating with other collateral airspaces**
- **Designing routes in collaboration with the airlines**

¹ Indicator that measures the excess distance an aircraft would cover in the shortest distance

² KEA. 2013-2017 period. The reference year for the 2013-2016 period is 2012, and for 2017 and successive years it will be 2016

B. Consumption

Power

The power consumed during 2017 amounted to 39 Gwh, which compared to the figures of 2010 involves a saving of almost 15 Gwh.

During the 2010-2017 period, an equivalent amount of 36,000 tons of CO₂ has been avoided.

The entire power consumed since 2016 comes from renewable energies.

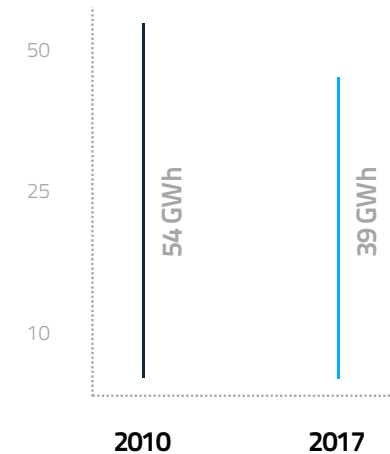
Water

During 2017, 99,447 m³ of water have been consumed³. Compared to 2010 (135.852 m³), water consumption was reduced by 27%.

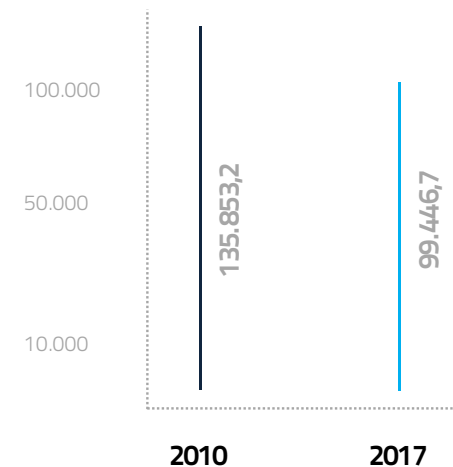
This saving is equivalent to the water required to fill 14.5 Olympic pools.

³ Water consumption reflects the accumulated data for human consumption and irrigation

CONSUMO ELÉCTRICO



CONSUMO DE AGUA



02 Environmental Management | C. Waste

C. Waste

Non-hazardous waste

ENAIRE's guidelines on waste management are helping reduce their generation. We have been able to reduce non-hazardous waste by 7.6% since 2010. With regard to their management, they are all managed through authorised waste managers.

INDICADORES	2012	2017
Residuos peligrosos (kg)	46.479	42.942
Residuos no peligrosos (kg)	252.500	193.365

Hazardous waste

In terms of the environment, the generation of hazardous waste is one of our major concerns. Since 2010, ENAIRE has established waste management controls through agreements reached with authorised managers and programmes aimed at stopping the use of certain waste. This has resulted in a 23% drop of waste generation in 2017 when compared to 2010.

03 Environmental Responsibility



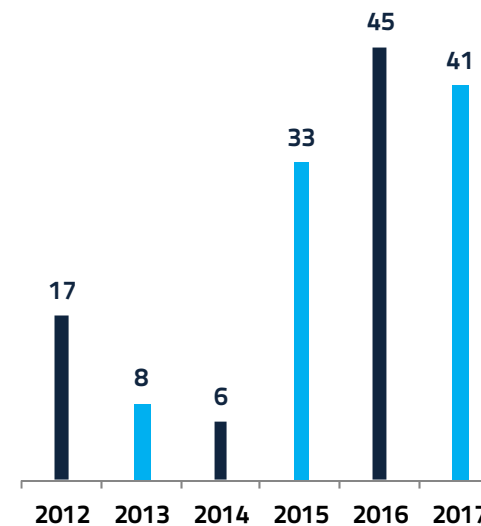
03 Environmental Responsibility

At ENAIRE, we analyse our projects from an environmental standpoint with the purpose of minimising the impact on the territory, while fully considering the location and territorial protection

We carry out studies on the requirement of environmental procedures for all our projects involving the construction of facilities and airspace manoeuvring modifications, specifying whether they have to be considered for environmental procedures within the scope of Law 21/2013, of 9 December, on Environmental Assessment.

Since 2012, 150 projects involving construction and airspace manoeuvring modifications in the Spanish airspace have been analysed.

Projects analysed from an environmental perspective



04 Stakeholders



04 Stakeholders

Within the scope of the strategy followed in the relationships with the Stakeholders, ENAIRE has established several channels of communication and dialogue with groups for which the environment is a relevant and priority matter



Stakeholders for which the Environment is a priority

Clientes
y sus representantes



Sociedad



Organizaciones
profesionales



Proveedores industriales
y Asistencias Técnicas



Aviación General



Autoridades locales



Asociaciones de aerolíneas
y Aviación General


















Gestores
aeroportuarios



04 Stakeholders

ENAIRE has established different channels to communicate objectives, actions and milestones related to the environment

CANAL	INFORMACIÓN AMBIENTAL RELEVANTE	GRUPO DE INTERÉS
FORO DE CLIENTES	EFICIENCIA DE RUTAS AÉREAS MEJORAS DEL SIG	 Gestores aeroportuarios  Compañías aéreas y sus pilotos  Asociaciones de aerolíneas y aviación general  Aviación general
CONAMA	EFICIENCIA DE RUTAS AÉREAS	 Sociedad
WEB DE ENAIRE	MEMORIA RC COMPROMISO AMBIENTAL POLÍTICA DE GESTIÓN INTEGRADA DE ENAIRE CARTA DE SERVICIOS DE ENAIRE	 Sociedad  Proveedores industriales y sistemas técnicos
COMITÉS AEC	MEJORES PRÁCTICAS Y EXPERIENCIAS	 Organizaciones profesionales
ADMINISTRACIONES PÚBLICAS (MINISTERIO DE MEDIO AMBIENTE, FOMENTO)	TRAMITACIONES AMBIENTALES CUESTIONARIOS INFORME DE SEGUIMIENTO CARTA DE SERVICIOS	 Instituciones locales y regionales  Sociedad
SERVICIO DE ATENCIÓN AL CLIENTE (@CLIENTES), INFO@ENAIRE.ES, ADMINISTRACIÓN ELECTRÓNICA)	CONSULTAS, QUEJAS, SUGERENCIAS Y RECLAMACIONES	 Gestores aeroportuarios  Compañías aéreas y sus pilotos  Asociaciones de aerolíneas y aviación general  Aviación general  Sociedad



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