Trend of environment indicators

Economic Regulation Agreement

Second year:
July 2018 - June 2019

Second five-year period

Index of topics

ADR'S COMMITMENT: ENVIRONMENT AND SUSTAINABILITY

CRITERIA FOR SELECTING INDICATORS

RESULTS OF 2ND YEAR OF THE ERA

(July 2018 – June 2019)

ADR's commitment: environment and sustainability

ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) UNI EN ISO 14001:2015

A comprehensive process management tool designed to ensure the ***best possible environmental performance*** of the airport system and consistent behavior by all parties operating within the site.

STRUCTURE OF THE ENVIRONMENTAL CONTROL SYSTEM:

- ✓Inclusion of environmental clauses in contracts
- ✓Implementation of the Environmental Document
- ✓Implementation of first-level checks on third parties
- ✓Carrying out of second level checks (through inspections and document analysis) on the activities carried out by third parties within the FCO and CIA airports

ADR's commitment: environment and sustainability

ESP: 2019 ENVIRONMENTAL SUSTAINABILITY PLAN

For 2019 ADR has adopted an Environmental Sustainability Plan divided into ***4 macro thematic areas:***

- **LIMITATION OF ENVIRONMENTAL IMPACTS OF PROCESSES**
- **ENVIRONMENTAL SYSTEM 2.0**
- **FOSTERING COMMUNICATION AND CULTURAL CHANGE**
- **ENVIRONMENTAL MONITORING PLAN 2.0**

This Plan includes ***more than 55*** corporate projects for the FCO airport, with different objectives focused on sustainability, environmental protection and the protection of the territory and the landscape.

ADR's commitment: environment and sustainability

DETAIL OF THE MACRO-AREAS OF INTERVENTION OF THE ESP

- **LIMITATION OF ENVIRONMENTAL IMPACTS OF PROCESSES**

  To provide a concrete and measurable contribution to the improvement of ADR's environmental performance and to the reduction of environmental impacts of the airports' processes/activities, ensuring measurable improvements in particular for **environmental materials issues**.

- **ENVIRONMENTAL SYSTEM 2.0**

  To complete and strengthen the system developed in 2018, in particular by updating the procedural and contractual system, strengthening the control system for both the first and second levels, computerizing the management systems and making the organization supporting the environmental system more widespread.

- **FOSTERING COMMUNICATION AND CULTURAL CHANGE**

  To develop and disseminate the respect for the environment and for sustainability by improving **communication** on environmental issues: ADR's site, the publication of environmental data as required by the "VIA" (environmental evaluation impact) of FCO Sud. To activate opportunities for discussion with the airport context and with its main stakeholders. To continue the internal training and communication programs launched in 2018.

- **ENVIRONMENTAL MONITORING PLAN 2.0**

  To consolidate the current environmental monitoring plan, moving on to monitoring, coming from an analysis of the **risk-based** context, the definition of the resulting Priority Environmental Indicators and the identification of tolerance thresholds, alerts and intervention.

ADR's commitment: environment and sustainability

ENVIRONMENTALLY SUSTAINABLE DESIGN AND CONSTRUCTION

LEED, **(Leadership in Energy and Environmental Design)**, is a green certification protocol for the design, construction, operation and maintenance of buildings.

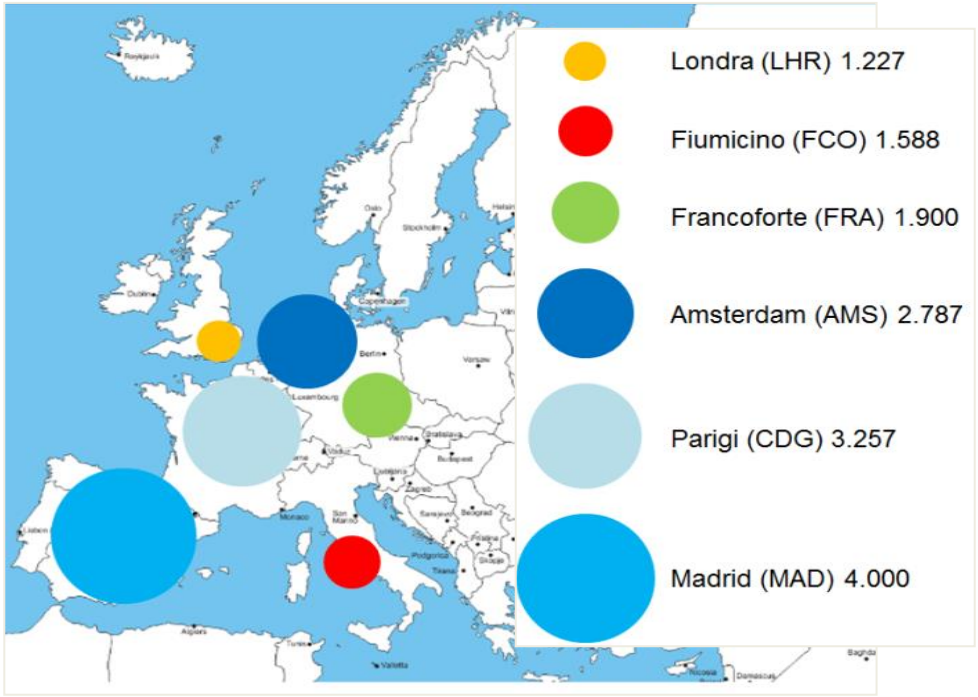
The general aviation area at Ciampino, Boarding Area A at Fiumicino and the new Hubtown are all projects designed and built according to the high environmentally sustainable standards required by this protocol.

LEED: the phases of certification

ADR's commitment: environment and sustainability

REDUCTION OF LAND USE

In airport development particular attention is paid to land use:
In fact, our indicator of land use per passenger is one of the lowest among the main European hubs.



0.4
m^2/pax

ADR's commitment: environment and sustainability

OUR RESULTS IN THE MAIN ENVIRONMENTAL SECTORS

ADR's progress from 2010 to present

2010 → TODAY

-45%
Energy consumption
(vs. 2010)

-60%
Consumption of drinking water
(vs. 2010)

+200%
Separate waste collection
(vs. 2010)
Reduction of 1,500 t of waste

EUROPEAN AIRPORTS COMMITTING TO NET ZERO CARBON EMISSIONS BY 2050

2050 NET ZERO

ADR PRIMO AEROPORTO AD ADERIRE COME PILOTA

ADR also proposed itself as the first airport pilot project within the Sustainability Strategy defined by ACI Europe

Criteria for selection of indicators

The Economic Regulation Agreement with ENAC is an opportunity to confirm and strengthen ***ADR's commitment*** to **the environment** and **business sustainability**.

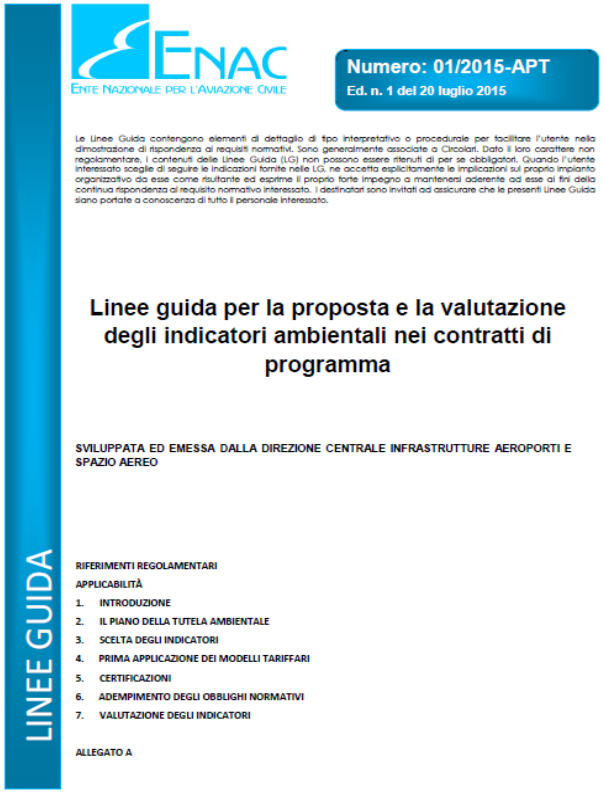
To define the environmental indicators ADR has taken into account the following:

- **ENAC GUIDELINES 2015**
- **REDUCTION OF THE ENVIRONMENTAL IMPACTS OF THE AIRPORT SYSTEM**
- **ANALYSIS OF STAKEHOLDER PRIORITIES**

Criteria for selection of indicators

MORE EFFECTIVE AND MEANINGFUL INDICATORS

In July 2015 ENAC issued GUIDELINES to define the methods to be used to prepare/assess environmental protection plans


ENAC
ENTE NAZIONALE PER L'AVIAZIONE CIVILE

Numero: 01/2015-APT
Ed. n. 1 del 20 luglio 2015

Le Linee Guida contengono elementi di dettaglio di tipo interpretativo o procedurale per facilitare l'utente nella dimostrazione di rispondenza ai requisiti normativi. Sono generalmente associate a Circolari. Dato il loro carattere non regolamentare, i contenuti delle Linee Guida (LG) non possono essere ritenuti di per se obbligatori. Quando l'utente interessato sceglie di seguire le indicazioni fornite nelle LG, ne accetta esplicitamente le implicazioni sul proprio impianto organizzativo da esse come risultante ed esprime il proprio forte impegno a mantenersi aderente ad esse ai fini della continua rispondenza al requisito normativo interessato. I destinatari sono invitati ad assicurare che le presenti Linee Guida siano portate a conoscenza di tutto il personale interessato.

Linee guida per la proposta e la valutazione degli indicatori ambientali nei contratti di programma

SVILUPPATA ED EMESSA DALLA DIREZIONE CENTRALE INFRASTRUTTURE AEROPORTI E SPAZIO AEREO

LINEE GUIDA

RIFERIMENTI REGOLAMENTARI
APPLICABILITÀ
1. INTRODUZIONE
2. IL PIANO DELLA TUTELA AMBIENTALE
3. SCELTA DEGLI INDICATORI
4. PRIMA APPLICAZIONE DEI MODELLI TARIFFARI
5. CERTIFICAZIONI
6. ADEMPIMENTO DEGLI OBBLIGHI NORMATIVI
7. VALUTAZIONE DEGLI INDICATORI

ALLEGATO A

<u>GROUP I</u> – PRIORITY TARGETS
- Energy saving
- Generation of electricity using renewable sources
- Reduction of emissions
- Noise abatement
- Treatment of waste water

<u>GROUP II</u> – NON-PRIORITY TARGETS
- Energy saving
- Renewable sources
- Management and treatment of waste
- Treatment of waste water
- Soil

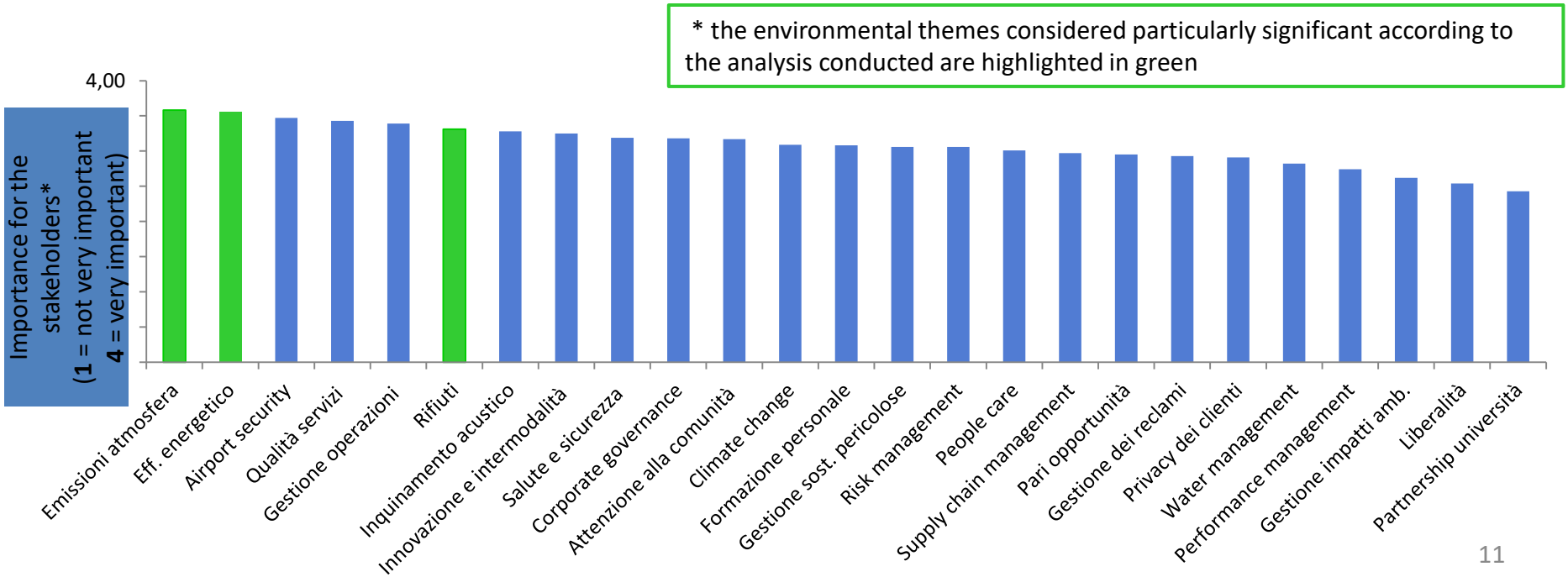
<u>GROUP III</u> – SECONDARY TARGETS
- Personnel training
- Indirect measures that impact the environment
- Efficiency of materials

Criteria for selection of indicators

ANALYSIS OF STAKEHOLDERS' PRIORITIES

We analyzed the priorities of ADR's stakeholders and the areas found to be of greater importance are firstly atmospheric emissions and energy efficiency, closely followed by waste management.

* the environmental themes considered particularly significant according to the analysis conducted are highlighted in green



Criteria for selection of indicators

DEFINITIONS OF INDICATORS

Taking into account the Environmental Analysis, the guidelines defined by ENAC and the priorities highlighted, ADR has identified 5 indicators on which to focus its efforts:

- **Saving energy and reducing emissions into the atmosphere**
- **Maximization of the percentage of separate waste collection in the terminals**
- **Replacing the company's fleet with low-emission vehicles**
- **Reduction of consumption of drinking water**
- **Verification of environmental clauses included in contracts**

Results 2nd year
Economic Regulation Agreement

July 2018 - June 2019

Second five-year period

Atmospheric releases-ACA

3+

The calculation shall be made each year on the basis of the total emissions of the previous year.

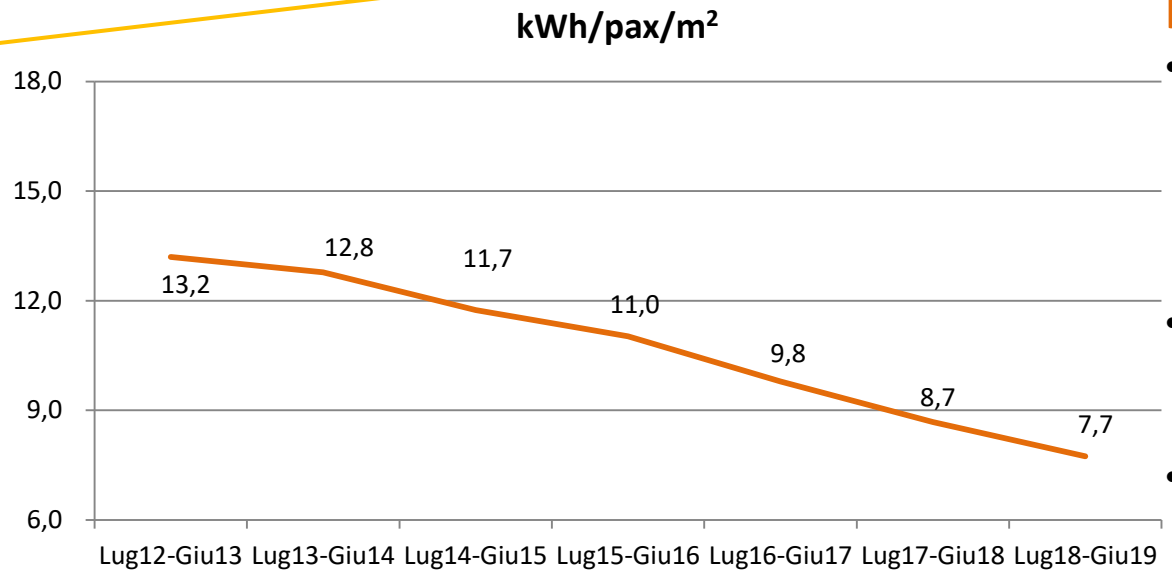
The activities taken into account in the calculation are both the direct activities of the airport operator (thermal power plants for heating and air conditioning, energy consumption of the airport, operational vehicles needed for airport activities) and those of third parties that can be guided or influenced by airport activities.

airport carbon accreditation

MAPPING | REDUCTION | OPTIMISATION | NEUTRALITY

NEUTRAL FiUMICINO AND CIAMPINO

Energy saving FCO



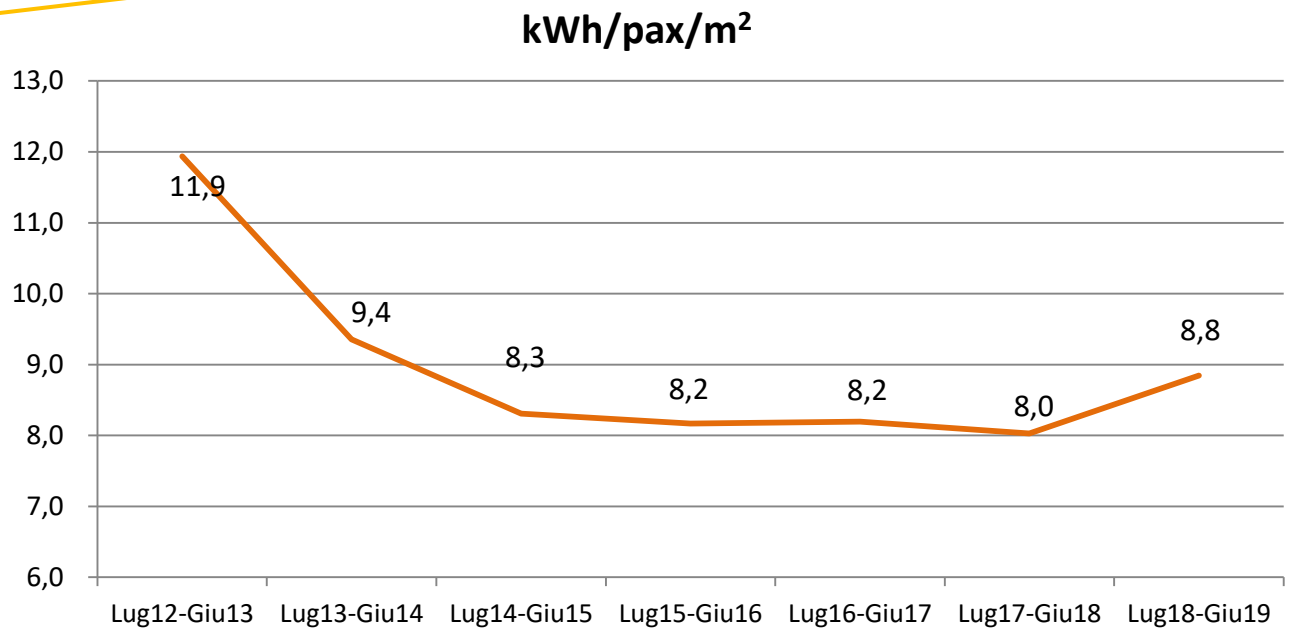
MEASURES

- Replacement of the lighting fixtures with LED technology in the terminals and in the external access road network and of the airside side light towers
- Replacement of refrigeration units and absorbers with high performance units
- The FDD software that uses AI logic to predict the malfunctions and suggest optimizations of air conditioning systems

WHITE CERTIFICATES

- Submitted a draft for the March 2018-August 2018 semester for a total of 298 certificates for a semester. The total amount of certificates that can be obtained from this project is estimated at 550 TEE for a probable cost of € 130,000€.
- Presented and approved a project for the replacement of refrigeration units in the PG344 thermal power plant in Terminal 1, for which about 60 TEE will be recognized.

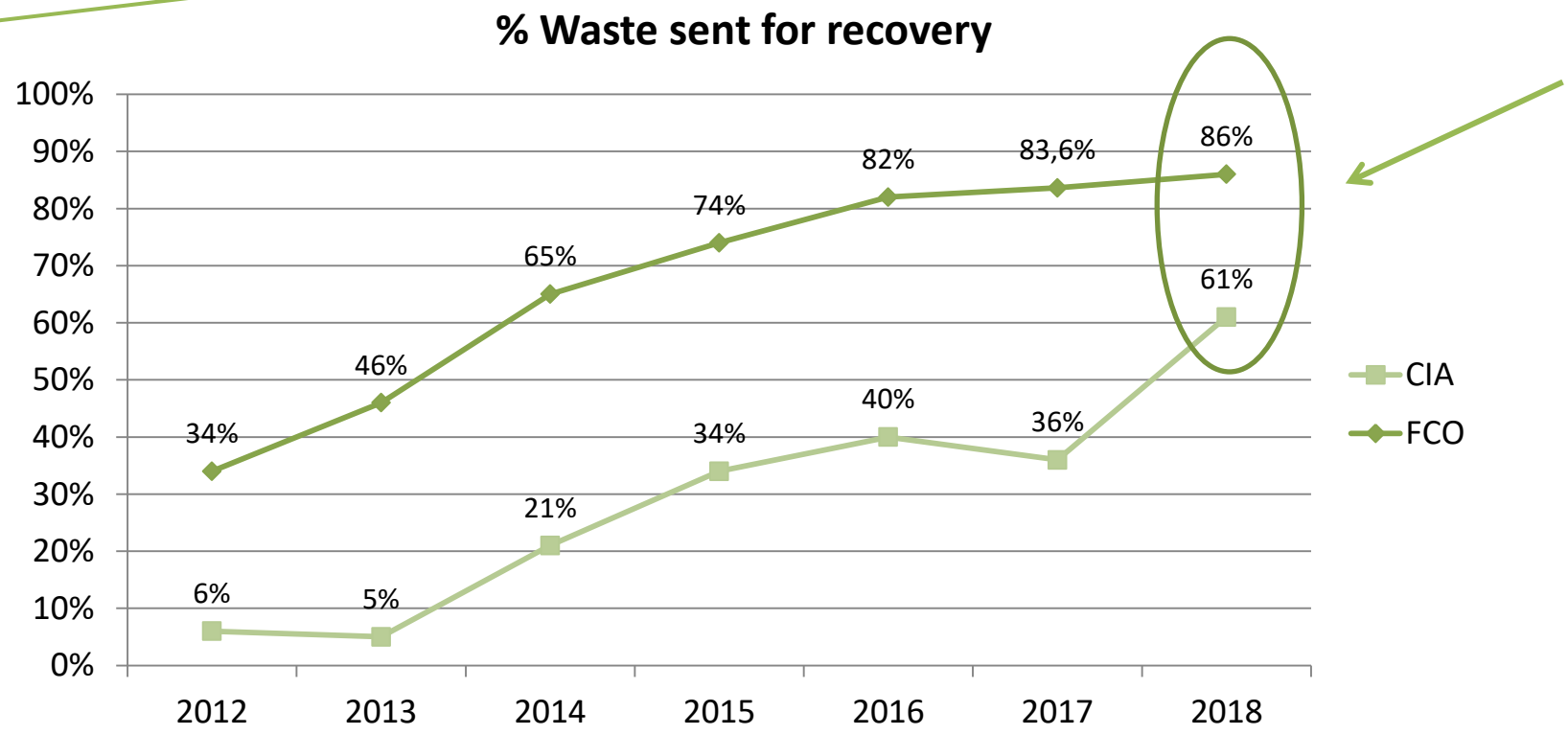
Energy saving CIA



MEASURES

- Replacement of conventional lamps with LED technology
- Installation of inverters on air handling units in the air conditioning system
- Implementation of the so-called free-cooling that, by using external air, reduces the energy consumption of the air conditioning system
- We also installed a system to monitor air-conditioning and heating at the airport to manage it automatically

Waste: separate collection



At both airports, the door-to-door waste collection model, which applies a pricing system that rewards virtuous behavior and discourages non-compliant disposal, made it possible in 2018 to send 86% of our waste for recovery at Fiumicino and 61% at Ciampino.

Waste: separate collection

- **60%** of separated waste **Ciampino**

- **64%** of separated waste **Fiumicino**

MEASURES

- Checks on disposals of non-separated waste
- Involvement of food sector businesses by reporting performance and accountability policies
- Installation of compacting machines at the gates to optimize plastic waste from plastic bottles

Waste: internal composting

Construction of a composting plant with a capacity of 1000 t/year at Fiumicino airport

The plant will make it possible to recycle the organic fraction of the municipal solid waste (MSW) produced in the airport grounds, to make a soil conditioner for the internal green areas

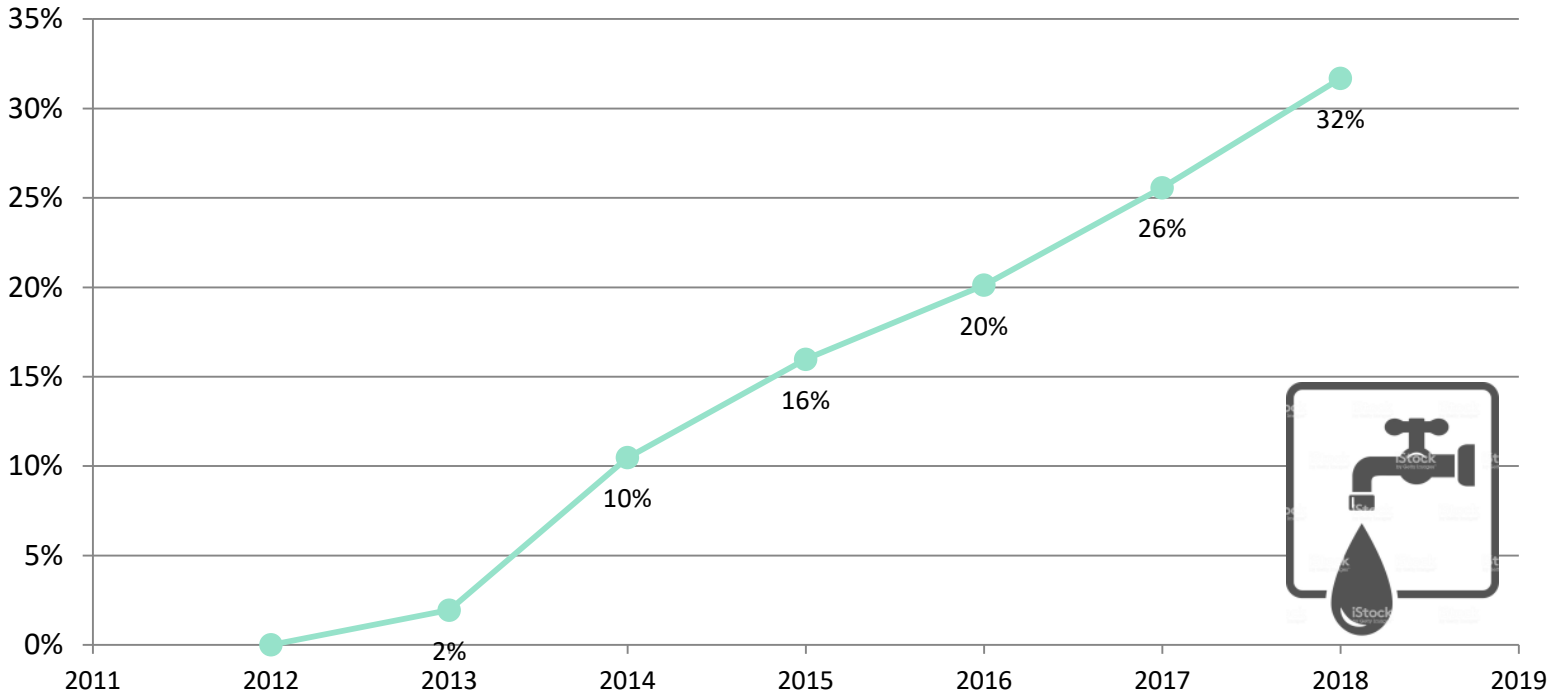
Water: reduction of consumption

- Optimization of usage by identifying users who can be served by non-potable water
- Optimization and upgrade of distribution networks
- Installation of full-time water meters connected to the airport's remote control platform
- Precise monitoring of pressure and flow parameters
- Detection of hidden leaks and malfunctions by studying the measured parameters

less than **20 l/pax** of drinking water **Fiumicino**

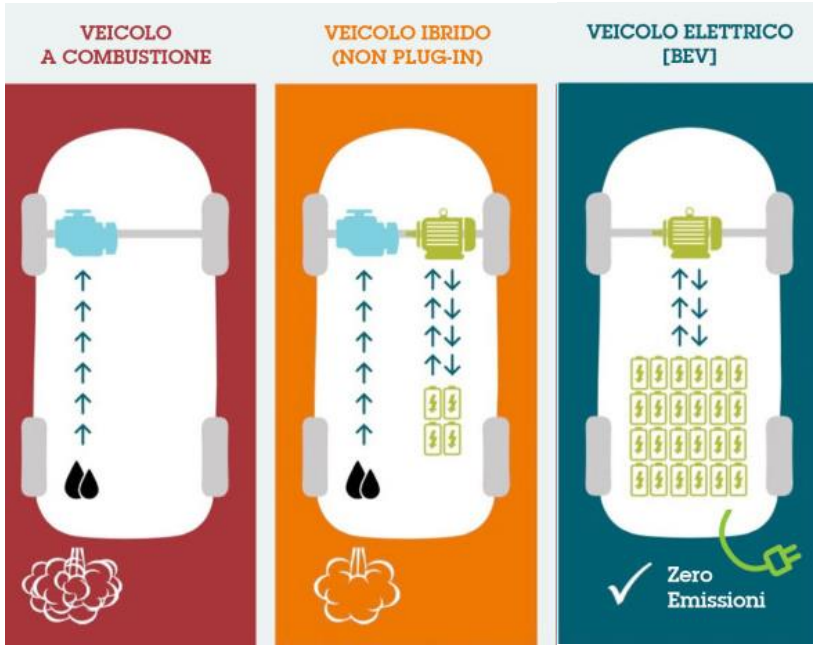
Water: reduction of consumption

FCO-Reduction of consumption of drinking water as percentage per pax



The presence of a dual network at Fiumicino airport makes it possible to significantly reduce the consumption of drinking water. Purified water from the airport's biological treatment plant is in fact reused for some of the less noble uses (watering, cooling towers, fire fighting)

Emissions - vehicle fleet



Conventional vehicle

Hybrid vehicle

TOYOTA YARIS HYBRID

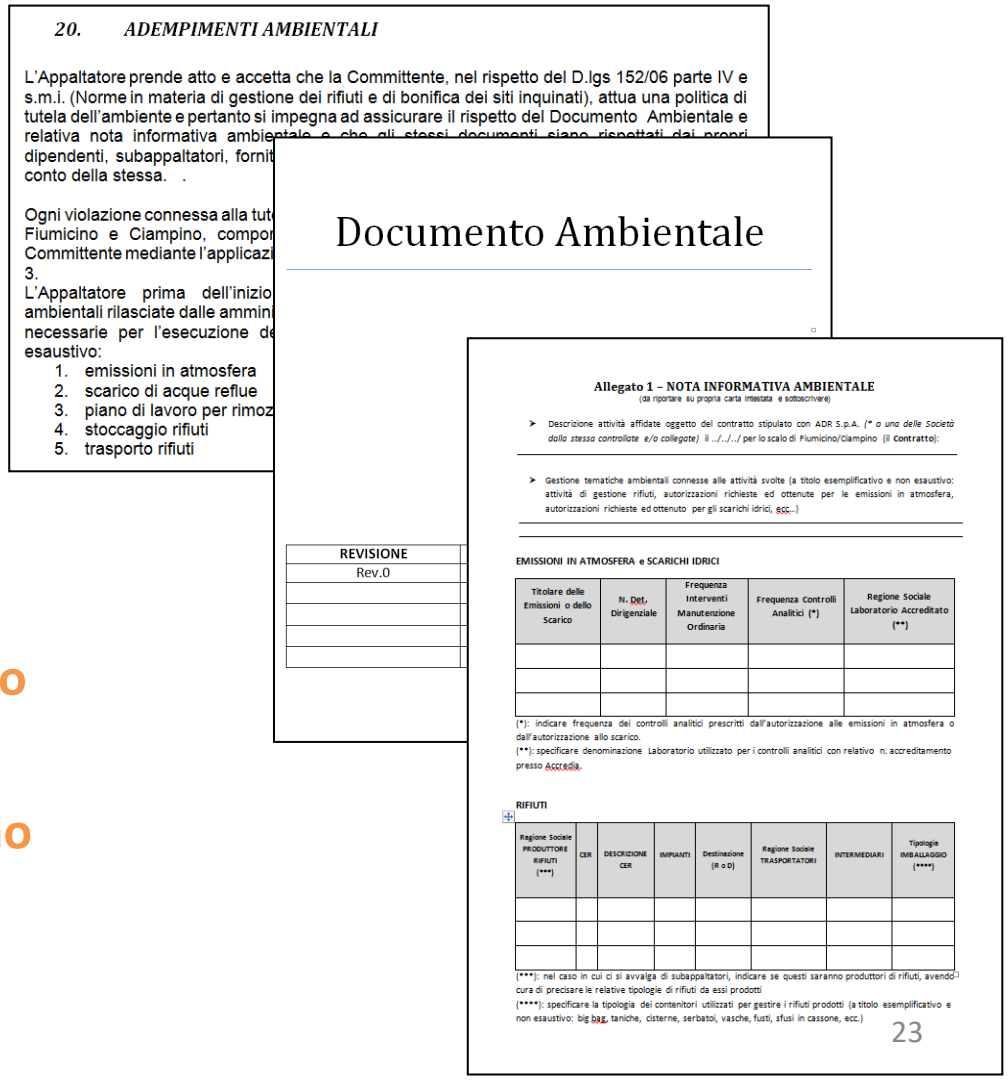
Plug In Electric vehicle

CITROEN C-ZERO

- A tender has been launched to replace old gasoline-powered vehicles with new hybrid vehicles.
- June 2019→+10 Toyota Yaris Hybrids
- September 2019→ 53 total hybrid

erification of environmental clauses

- **23%** environmental audits **Ciampino**
- **19%** environmental audits **Fiumicino**



20. ADEMPIMENTI AMBIENTALI

L'Appaltatore prende atto e accetta che la Committente, nel rispetto del D.lgs 152/06 parte IV e s.m.i. (Norme in materia di gestione dei rifiuti e di bonifica dei siti inquinati), attua una politica di tutela dell'ambiente e pertanto si impegna ad assicurare il rispetto del Documento Ambientale e relativa nota informativa ambientale e che gli stessi documenti siano rispettati dai propri dipendenti, subappaltatori, fornit
conto della stessa. .

Ogni violazione connessa alla tut
Fiumicino e Ciampino, compor
Committente mediante l'applicazi
3.
L'Appaltatore prima dell'inizio
ambientali rilasciate dalle ammini
necessarie per l'esecuzione de
esaustivo:

1. emissioni in atmosfera
2. scarico di acque reflue
3. piano di lavoro per rimoz
4. stoccaggio rifiuti
5. trasporto rifiuti

Documento Ambientale

REVISIONE
Rev.0

Allegato 1 – NOTA INFORMATIVA AMBIENTALE
(da riportare su propria carta intestata e sottoscrivere)

- Descrizione attività affidate oggetto del contratto stipulato con ADR S.p.A. (** o una delle Società dalla stessa controllate e/o collegate*) il ../../../ per lo scalo di Fiumicino/Ciampino (il **Contratto**):

- Gestione tematiche ambientali connesse alle attività svolte (a titolo esemplificativo e non esaustivo: attività di gestione rifiuti, autorizzazioni richieste ed ottenute per le emissioni in atmosfera, autorizzazioni richieste ed ottenuto per gli scarichi idrici, ecc..)

EMISSIONI IN ATMOSFERA e SCARICHI IDRICI

Titolare delle Emissioni o dello Scarico	N. Det. Dirigenziale	Frequenza Interventi Manutenzione Ordinaria	Frequenza Controlli Analitici (*)	Regione Sociale Laboratorio Accreditato (**)

(*): indicare frequenza dei controlli analitici prescritti dall'autorizzazione alle emissioni in atmosfera o dall'autorizzazione allo scarico.
(**): specificare denominazione Laboratorio utilizzato per i controlli analitici con relativo n. accreditamento presso Accredia.

RIFIUTI

Regione Sociale PRODUTTORE RIFIUTI (***)	CER	DESCRIZIONE CER	IMPIANTI	Destinazione (R o D)	Regione Sociale TRASPORTATORI	INTERMEDIARI	Tipologia IMBALLAGGIO (****)

(***): nel caso in cui ci si avvalga di subappaltatori, indicare se questi saranno produttori di rifiuti, avendo cura di precisare le relative tipologie di rifiuti da essi prodotti
(****): specificare la tipologia dei contenitori utilizzati per gestire i rifiuti prodotti (a titolo esemplificativo e non esaustivo: big bag, taniche, cisterne, serbatoi, vasche, fusti, sfusi in cassone, ecc.)

Fiumicino: ERA indicators

Environmental Indicators	Unit of measurement	ERA Objectives	Actual
Reduction of electricity consumption at terminals	Reduction of energy consumption (in kWh) compared to BY	83.230.555	**75.238.341**
Electricity generation by installing photovoltaic systems	MWh generated by traditional sources (not renewable) compared to the MWh consumed	99,5%	**99,28%**
Replacement of car- pooling vehicles with low emission vehicles	% of non-low emission vehicles compared to the ADR vehicle fleet	87,0%	**78,1%**
Separated waste collection of non-hazardous waste	% of separated waste at the passenger transit areas	52,0%	**64,0%**
Reduction of consumption of drinking water	% reduction of consumption (in liters) of drinking water per pax compared to the base year	2%	**16%**
Verification of environmental clauses included in contracts	% of contracts NOT verified	85,0%	**81,0%**

Ciampino: ERA indicators

Quality Indicators	Unit of measurement	ERA Objectives	Actual
Reduction of electricity consumption at terminals	Reduction of energy consumption (in kWh) compared to BY	10.574.123	**11.611.783**
Electricity generation by installing photovoltaic systems	MWh generated by traditional sources (not renewable) compared to the MWh consumed	99,5%	**100,0%**
Replacement of car- pooling vehicles with low emission vehicles	% of non-low emission vehicles compared to the ADR vehicle fleet	82,0%	**68,8%**
Separated waste collection of non-hazardous waste	% of separated waste at the passenger transit areas	36,0%	**60%**
Verification of environmental clauses included in contracts	% of contracts NOT verified	85,0%	**67%**