



Annual environmental indicators and action plan

Third year:

July 2019 – February 2020

Second five-year period

Index of topics



SUSTAINABILITY and ENVIRONMENT

CRITERIA FOR SELECTING INDICATORS

RESULTS OF THIRD YEAR OF THE ERA

ADR's commitment: sustainability and environment

SUSTAINABILITY PLAN

ADR's commitment to sustainability is embodied in its annual Sustainability Plan, which is formally approved by top management



On a local scale, ADR aims to contribute to achieving the 17 SDGs defined by the United Nations by implementing a comprehensive program of actions, the punctual implementation of which is constantly monitored by the various departments involved and the CEO.

ADR's commitment: sustainability and environment



THE SECRETARY-GENERAL OF THE WORLD TOURISM ORGANIZATION
HAS THE HONOUR TO DESIGNATE

**FIUMICINO “LEONARDO DA VINCI”
INTERNATIONAL AIRPORT**

FOR ITS COMMITMENT TO SUSTAINABILITY AND ITS OUTSTANDING PASSENGER SERVICE

ZURAB POLOLIKASHVILI
ROME, ITALY, 1 JULY 2020

SUSTAINABILITY PLAN

The company's commitment to promoting sustainability practices has led the Leonardo da Vinci Airport to achieve, in July 2020, an authoritative recognition for the results it has achieved.

ADR's commitment: sustainability and environment

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 behaviour by all parties operating within the airport grounds.

STRUCTURE OF THE ENVIRONMENTAL CONTROL SYSTEM:

- ✓ Inclusion of environmental clauses in contracts
- ✓ Introduction 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
- ✓ Area allocation and redelivery reports

ADR's commitment: sustainability and environment

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 projects designed (and built) according to the high environmentally sustainable standards required by this protocol.

LEED: the phases of certification



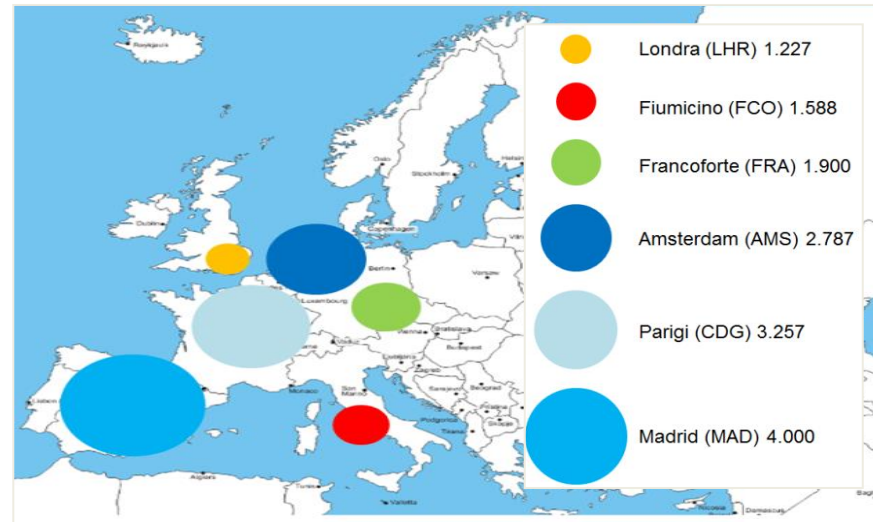
CIA GENERAL AVIATION

ADR's commitment: sustainability and environment

REDUCTION OF LAND USE

In development of the airport, particular attention is paid to land use

For Fiumicino the land use per passenger indicator is particularly good; it is one of the lowest among the main European hubs: 0.4 m²/pax



ADR's commitment: sustainability and environment

OUR RESULTS IN THE MAIN ENVIRONMENTAL SECTORS

ADR's progress from 2012 to present

2012

TODAY



-40%
Energy
consumption
(vs. 2012)



-29%
Consumption
of drinking water
(vs. 2012)



98%
Waste sent for
recovery
(vs. 27% in 2012)

Criteria for selection of indicators

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

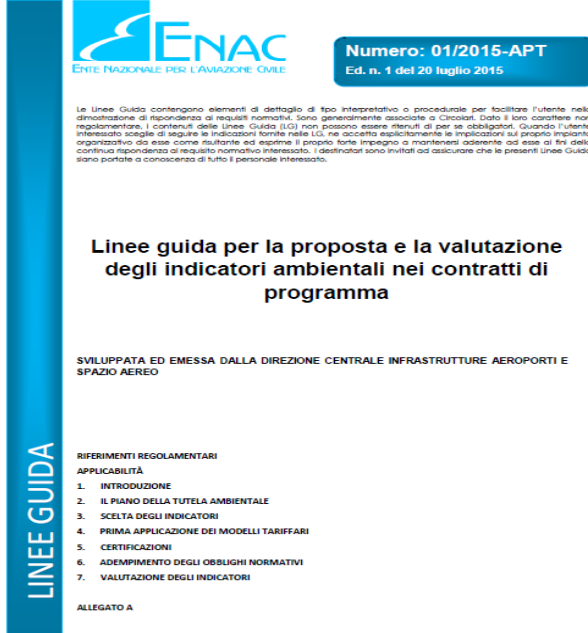
To define the environmental indicators, ADR has taken into account the following factors:

- **2015 ENAC GUIDELINES**
- **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 use 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. Data 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 risultato ed esprime il proprio forte impegno a mantenerli aderente ad esse al fine 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

GROUP I - PRIORITY TARGETS

- Energy saving
- Generation of electricity using renewable sources
- Reduction of emissions
- Noise abatement
- Treatment of waste water

GROUP II - NON-PRIORITY TARGETS

- Energy saving
- Renewable sources
- Management and treatment of waste
- Treatment of waste water
- Soil

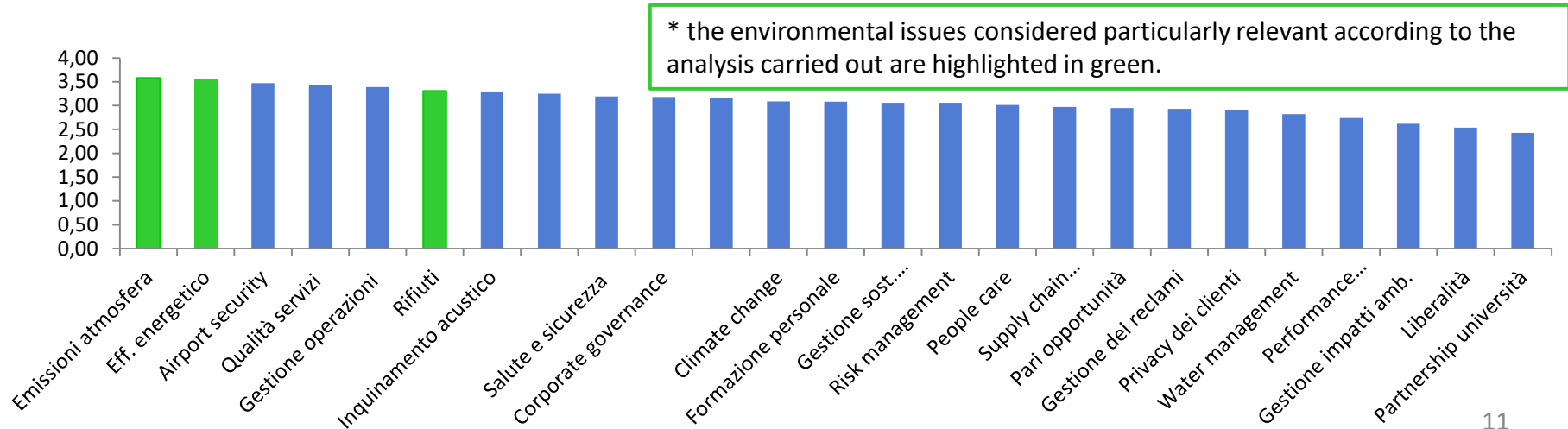
GROUP III – SECONDARY TARGETS

- Personnel training
- Indirect measures that impact the environment
- Efficiency of materials

Criteria for selection of indicators

STAKEHOLDER PRIORITY ANALYSIS






An analysis of the priorities identified by our stakeholders has made it clear that environmental issues are considered particularly relevant: in particular, issues relating to atmospheric emissions and energy efficiency are a priority for our stakeholders, and proper waste management is also a particularly relevant issue.



Criteria for selection of indicators

DEFINITIONS OF INDICATORS

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

-  1. **Energy saving and reduction of emissions into the atmosphere**
-  2. **Maximization of the percentage of separate waste collection in the terminals**
-  3. **Replacing the company's fleet with low-emission vehicles**
-  4. **Reduction of consumption of drinking water**
-  5. **Verification of compliance with environmental clauses included in contracts**



Results 3rd year Economic Regulation Agreement

July 2019 – February 2020

Second five-year period



Atmospheric releases-ACA

3+

In 2020, the Fiumicino and Ciampino airports both maintained level 3+ of the ACA "Neutrality" accreditation for their 2019 emissions.

This result was achieved both for the emissions avoided together with the measures put in place, and for the regulatory extension issued as a result of the Covid-19 emergency.

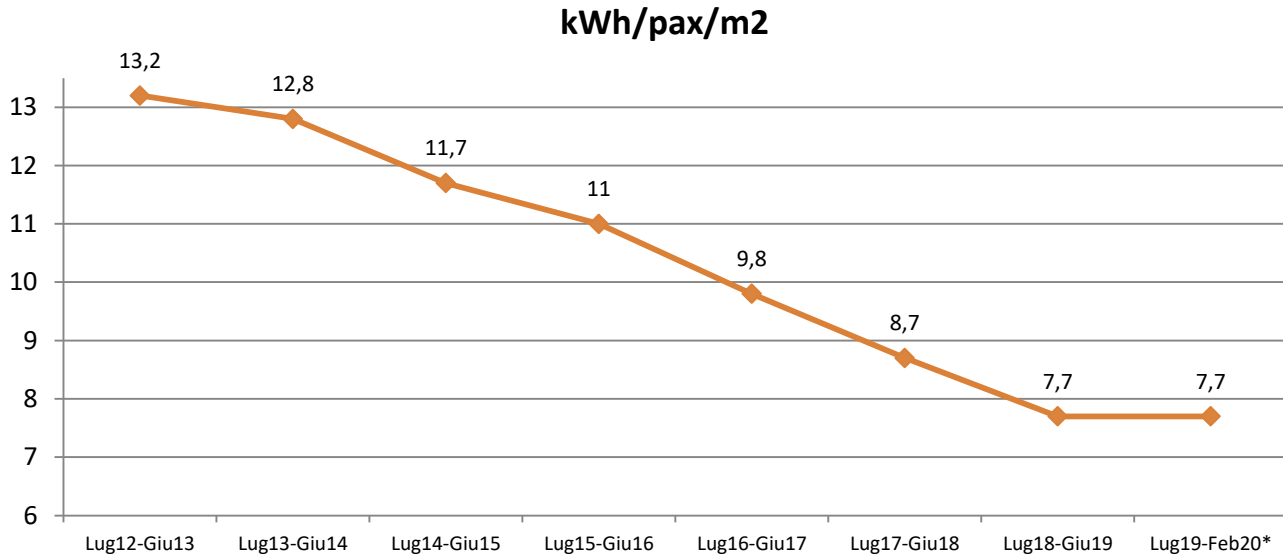


NEUTRAL FIUMICINO AND CIAMPINO





FCO Energy Saving



Estimated value for the July 2019 – February 2020 period



FCO Energy Saving

MEASURES

Investment activities have continued as well as the use of cutting-edge software based on machine learning to optimize energy consumption.

A total of more than 100,000 LED lights have been installed in buildings, car parks, runways and aprons.

We have successfully completed the feasibility study for installing a large 30 MW photovoltaic panel system in the airside area of the Fiumicino airport.

Some projects, also financed by the European Community, have reduced aircraft taxiing times and as a result climate-changing emissions.

EUROPEAN AIRPORTS COMMITTING TO
NET ZERO CARBON EMISSIONS BY 2050



NET ZERO

ADR PRIMO AEROPORTO AD ADERIRE
COME PILOTA

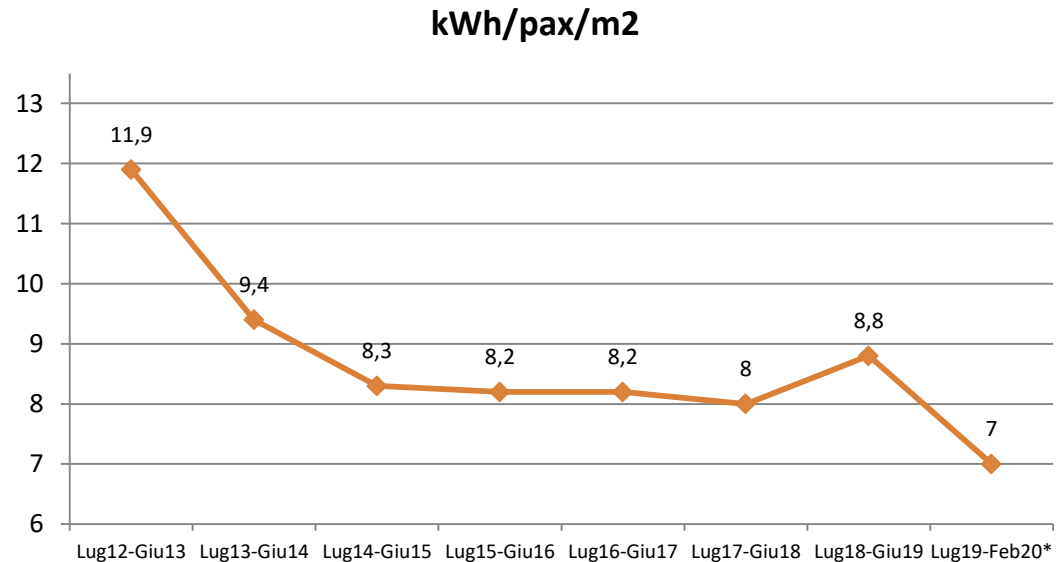
ADR also proposed itself as the first airport pilot project within the Sustainability Strategy defined by ACI Europe



CIA Energy Saving

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 reduces the energy consumption of the air conditioning system using external air
- We also installed a system to monitor air conditioning and heating at the airport, to manage it automatically.

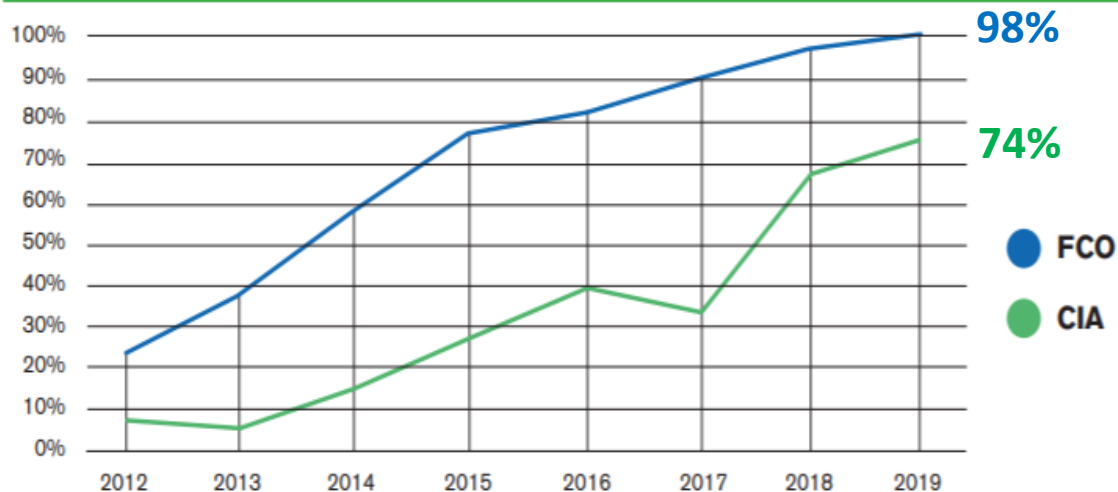


Estimated value for the July 2019 – February 2020 period



Waste sent for recovery

RIFIUTI AVVIATI A RECUPERO



The "door to door" waste collection system model, in place at both airports, involves applying a charging system that rewards virtuous behaviour and discourages non-compliant disposal methods. In 2019 this method led us to achieve 98% of waste sent for recovery at Fiumicino airport and 74% at Ciampino airport

¹⁴ Percentuale di rifiuti avviati a recupero ricalcolata senza considerare i rifiuti costituiti da fanghi, fosse settiche e miscele acque grasse.



Waste: Separate collection

- **64%** of waste was separated at **Fiumicino** terminals



- **56%** of waste was separated at **Ciampino** terminals



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 has made 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.

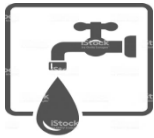
About **150 tons** of wet waste were processed by this treatment and turned into compost





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



Industrial water accounts for more than **50%** of the consumption



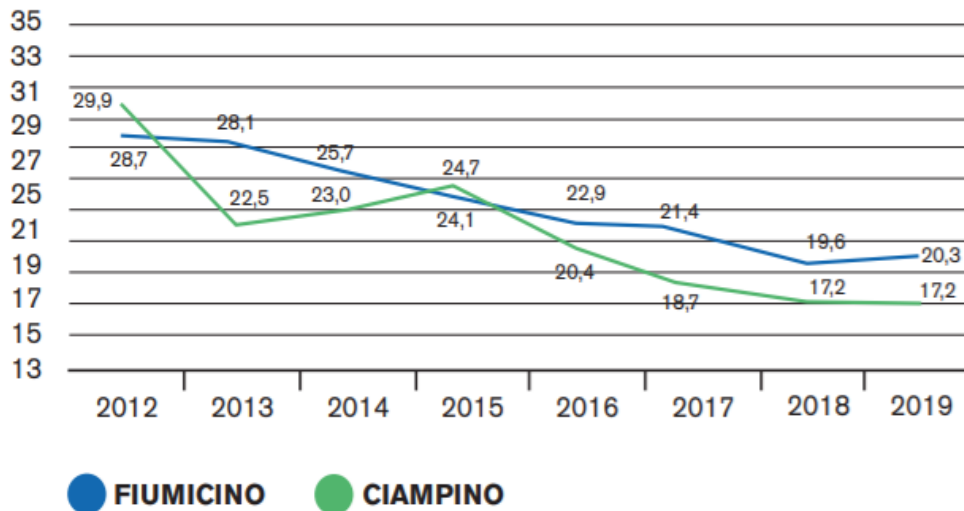
Water: reduction of consumption



At Fiumicino airport a dual network helps to significantly reduce drinking water consumption

Purified water from the airports biological treatment plant is in fact reused for some of the less demanding uses (watering, cooling towers, fire fighting...).

CONSUMI DI ACQUA POTABILE LITRO/PASSEGGERO

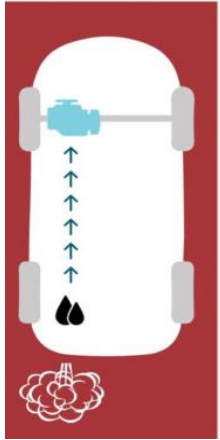




Emissions - vehicle fleet

OBJECTIVE:

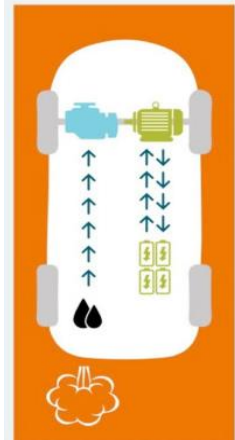
Gradual development of an increasingly environmentally friendly vehicle fleet, the majority of which consists of vehicles with low CO₂ emissions and electric/hybrid vehicles.



Conventional vehicle

DIESEL/PETROL

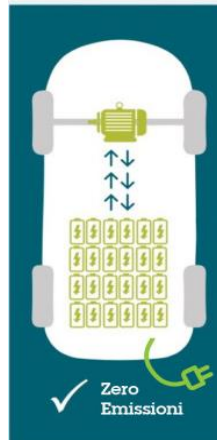
96



Hybrid vehicle

TOYOTA YARIS HYBRID - BMW 530e

53



Plug In Electric vehicle

CITROEN C-ZERO

12

163 vehicles overall (FCO+CIA)





Verification of environmental clauses



- **50%** environmental audits **Ciampino**
- **16%** 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 e tutela dell'ambiente e pertanto si impegna ad assicurare la relativa nota informativa ambientale e che gli stessi dipendenti, subappaltatori, fornitori e, in generale, dal terzo conto della stessa.

Ogni violazione connessa alla tutela ambientale, considerata ai sensi del Regolamento Regionale di Fiumicino e Ciampino, comporterà un inadempimento della Committente mediante l'applicazione della penale prevista all'art. 3.

L'Appaltatore prima dell'inizio delle attività dovrà dimostrare di aver ottenuto le autorizzazioni ambientali rilasciate dalle amministrazioni competenti (Regione Lazio) e di aver eseguito le verifiche necessarie per l'esecuzione dei lavori, di seguito riportate in modo esauritivo:

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

Documento Ambientale

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 uno delle Società dallo stesso 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 ottenute 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 Accred.it.

RIFIUTI

Regione Sociale PRODUTTORE RIFIUTI (***)	CER	DESCRIZIONE CER	IMPIANTI	Destinazione (P.O.D)	Regione Sociale TRASPORTATORI	INTERMEDIARI	Tipologia IMBALLAGGIO (****)

(***): nel caso in cui ci si avvalga di subappaltatori, indicare se questi saranno produttori di rifiuti, avendosi 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, tambo, cisterni, serbatoi, vasche, fusti, sfusi in cassa, ecc.)

Fiumicino: final balance of ERA indicators

Environmental Indicators	Unit of Measurement	2015 Base Year	Objectives			Final balance		
			2017	2018	2019	2017	2018	2019
Reduction of electricity consumption at terminals	Reduction of energy consumption (kWh), vs BY	84,071,268	83,650,912	83,230,555	82,810,199	81,920,630	75,238,341	50,834,096*
Electricity generation by installing photovoltaic systems	MWh generated by traditional sources (not renewable) compared to the MWh consumed	100%	100.0%	99.5%	99.0%	100%	99.28%	99.72%
Replacement of car-pooling vehicles with low emission vehicles	% of non-low emission vehicles compared to ADR's vehicle fleet	94%	94.0%	87.0%	79.0%	85.0%	78.1%	59.72%
Separated waste collection of non-hazardous waste	% of separated waste at the passenger transit areas	50%	51.0%	52.0%	53.0%	56.0%	64.0%	64%
Reduction of consumption of drinking water	% reduction of consumption (in litres) of drinking water per pax compared to the base year	15.57	1%	2%	3%	14%	16%	10%
Verification of compliance with environmental clauses included in contracts	% of contracts NOT audited	100%	90.0%	85.0%	80.0%	81.0%	81.0%	84%

* the final value of **50,834,096 kWh** refers to the 8-month period from July 2019 to February 2020 due to the suspension of measurement following the Covid-19 emergency. In order to obtain an annual consumption (**76,251,144 kWh**) that is comparable and consistent with the final figures for previous years, the monthly consumption for the 4 months of the airport closure period was set equal to the monthly value extrapolated on the basis of the consumption recorded during the 8 months of activity (July 2019–February 2020).



Ciampino: final balance of ERA indicators

Quality Indicators	Unit of Measurement	2015 Base Year	Objectives			Final balance		
			2017	2018	2019	2017	2018	2019
Reduction of electricity consumption at terminals	Reduction of energy consumption (kWh), vs BY	10,680,932	10,627,527	10,574,123	10,520,718	10,750,602	11,611,783	6,146,169*
Electricity generation by installing photovoltaic systems	MWh generated by traditional sources (not renewable) compared to the MWh consumed	100%	100.0%	99.5%	99.0%	100.0%	100.0%	100%
Replacement of car-pooling vehicles with low emission vehicles	% of non-low emission vehicles compared to ADR's vehicle fleet	100%	90.0%	82.0%	70.0%	80.0%	68.8%	52.63%
Separated waste collection of non-hazardous waste	% of separated waste at the passenger transit areas	34%	35.0%	36.0%	37.0%	54.0%	60%	56%
Verification of compliance with environmental clauses included in contracts	% of contracts NOT audited	100%	90.0%	85.0%	80.0%	67%	67%	50%

* the final balance of **6,146,169 kWh** refers to the 8-month period from July 2019 to February 2020 due to the suspension of measurement following the Covid-19 emergency. In order to obtain an annual consumption (**9,219,254 kWh**) that is comparable and consistent with the final figures for previous years, the monthly consumption for the 4 months of the airport closure period was set equal to the monthly value extrapolated on the basis of the consumption recorded during the 8 months of activity (July 2019–February 2020).

