

Environmental Bulletin of Mykonos Airport (JMK)

Reference year 2018

Fraport Greece

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Version Control

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1. INTRODUCTION

Location

The airport of Mykonos, with an IATA code JMK, has been operating since 1971 and is located at 1.2 km to the south-east from the Town of Mykonos and at a very short distance of approximately 1.5km from the coastline of the island.

Administration

The airport administratively belongs to the Municipal Community of Mykonos, of the Municipality of Mykonos of the homonym Regional Unit that belongs to the Region of South Aegean.

Environmental licensing

Approved Environmental Terms	
E.T. Decision Reference number	JMD 32650/04.11.1994
E.T. Amendment Decision Reference number	Ref. No. οικ. 103324/18.04.2016
	Ref. No. οικ. 175511/15.10.2014
	Ref. No οικ. 39773/26.09.2017
	Ref. No οικ. 2976/02.02.2018

1.1. Airport Basic Data

Airport Basic Data					
Airport name IATA / ICAO	JMK / LGMK				
Airport position – Airport Reference Point (ARP)	Latitude: 37° 26' 14" N Longitude: 25° 20' 50" E				
Altitude:	123.45m				
Number of runways	1				
Operation hours (high season)	0:01-24:00				
Runways	Length / Width			Code	
Runway	1,902m x 30m			16/34	
Full length of parallel taxiway	N/A				
Number of taxiways	2				
Apron capacity	A	B	C	D	E
	-	-	5	-	-
Employees	High season		Low season		
Fraport Greece (FG) employees	30		28		
Employees of other companies	46		11		
Terminal					
➤ Total area (m ²)	9,000				
Other buildings and service/storage areas					
➤ RFF (m ²)	Temporarily housed in ISOBOX until completion of new RFF				
Parking Areas					
Car parking spaces	100				

Bus parking spaces	12
Taxi parking spaces	10

1.2. Airport Facilities

1.2.1. Fuel Handlers

Number of fuel handler companies	
Number of fuel handler companies operating at the Airport	2

Installations inside the airport		EKO	GISCO	HAFCO
Environmental Management System (EMS)	(YES/NO)	YES	YES	Not operating at the airport

1.2.2. Ground Handlers

Ground Handlers				
Number of ground handler companies operating at the airport			3	
Installations inside the airport		SKYSERV	SWISSPORT	GOLDAIR
Vehicles (total number)		8	18	74
Environmental Management System (EMS)		(YES/NO)	YES	YES

2. TRAFFIC DATA STATISTICS

2.1. Annual Traffic Data

Annual Traffic Data for the year 2018	
Overall Annual Air Traffic Movements ¹	17,267
Percent of increase or decrease in relation to the previous year	9.1%
Annual passenger traffic	1,395,787
Percent of increase or decrease in relation to the previous year	15.6%
Annual cargo transferred (tn)	93
Percent of increase or decrease in relation to the previous year	72.40%
Aircraft types	
Prevailing aircraft types for domestic flights	
Aircraft type	No. of flights
A320	1544
DH8D	864
B712	709
AT72	492

¹ Military and training flights not included.

AT75	453
A32A	395
B73H	296
EC35	268
AS55	174
A109	171
Other	1926
Prevailing aircraft types for international flights	
Aircraft type	No. of flights
A320	1964
A32A	1343
B73H	824
A319	799
B712	547
C56X	444
B738	290
E190	227
CL60	218
E35L	212
Other	3107

2.2. High season traffic data

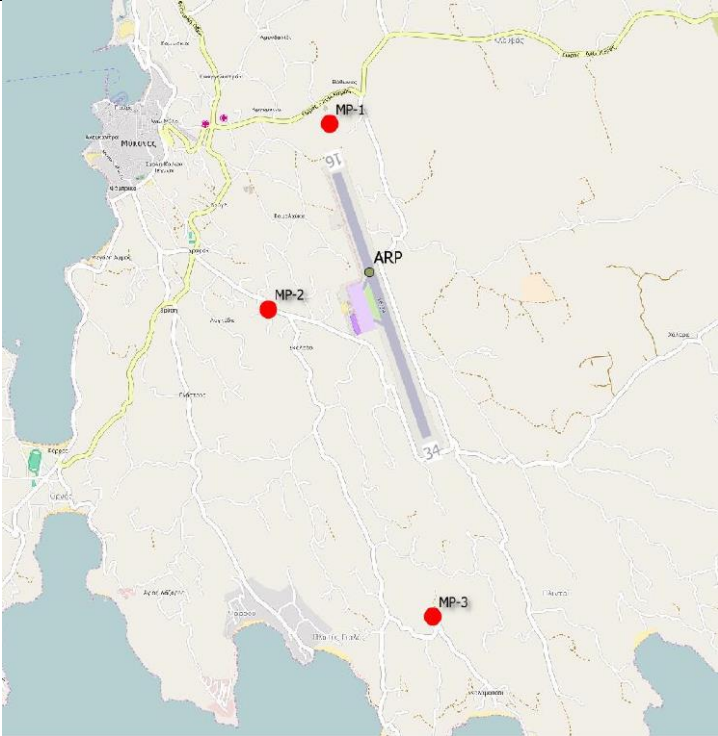
High season traffic data (June-September)	
Highest traffic month	July
Air traffic movements during the month with highest traffic	4,503
Air traffic movements daily average number during the month with highest traffic	145

2.3. Low season traffic data

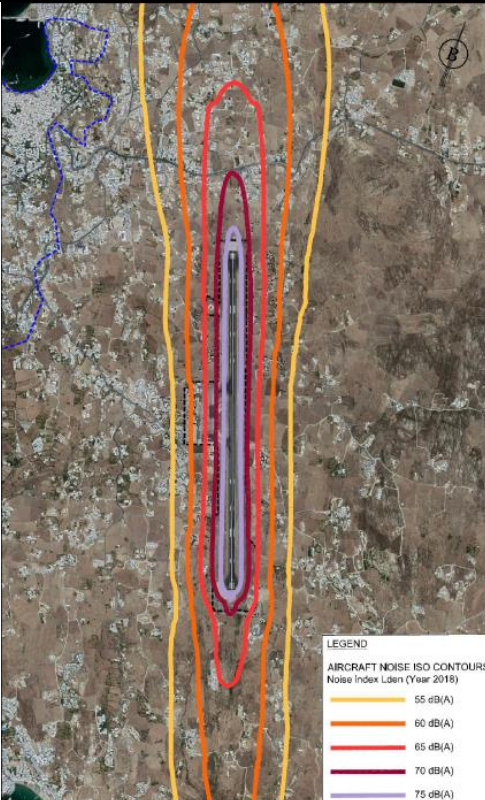
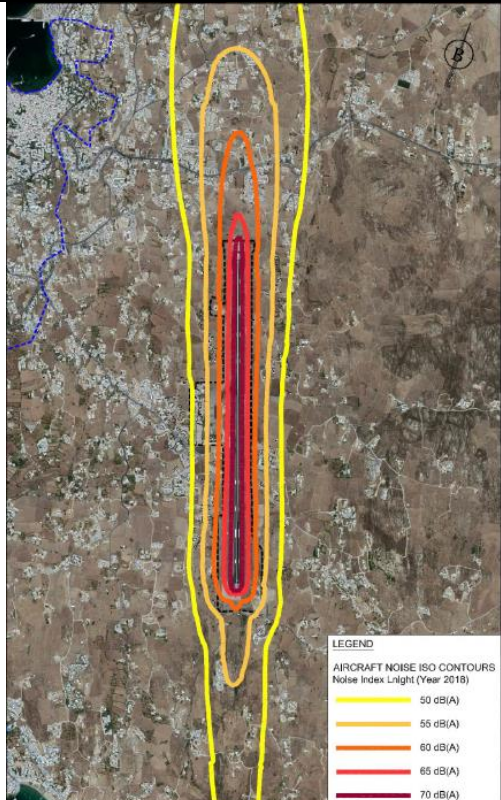
Low season traffic data (October-May)	
Lowest traffic month	January
Air traffic movements during the month with lowest traffic	78
Air traffic movements daily average number during the month with lowest traffic	4

3. AIRCRAFT NOISE

3.1. Noise measurements during the reference year

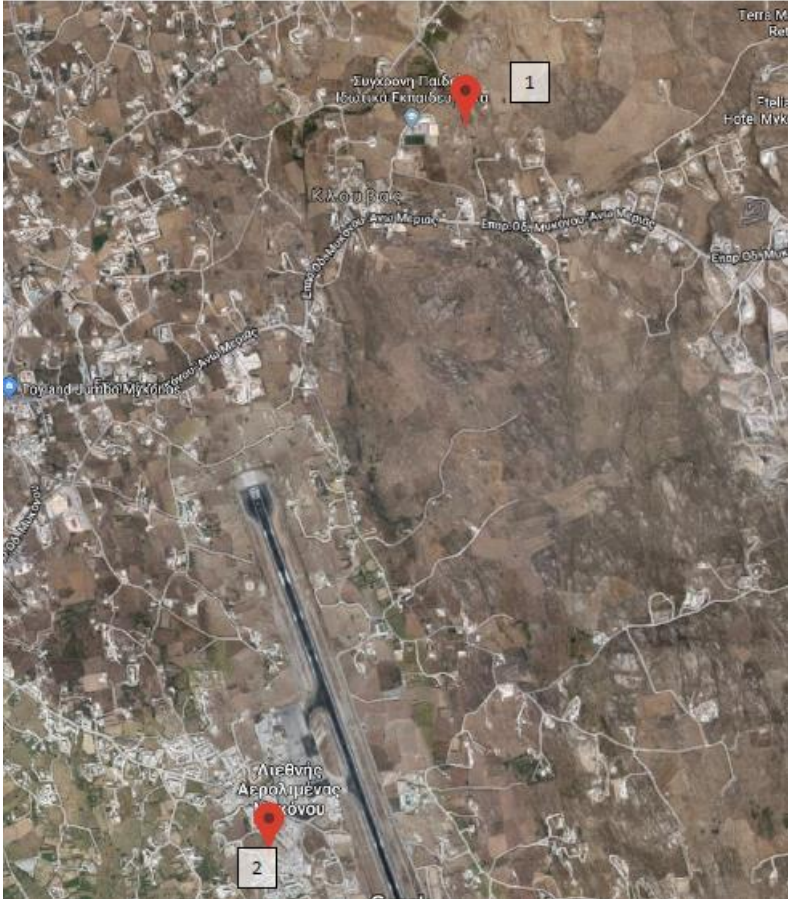
Have noise measurements at the airport's surrounding area been performed during the reference year? [YES/NO]		YES
Measurement points		
		
Measurement points coordinates		Measurement points description
1) Position: 37° 26' 46" N 25° 20' 39" E		West of Mykonos city, north of the runway on a house roof. Affected by arrivals RWY 16 and departures RWY 34.
2) Position: 37° 26' 06" N 25° 20' 21" E		In the north west section of Mykonos city, west of the runway on a hotel roof. Affected by all procedures to and from all directions
3) Position: 37° 24' 58" N 25° 21' 07" E		Platis Gialos area, south of the runway in a hotel's yard. Affected by arrivals RWY 34 and departures RWY 16.
Measurement period		27.07.2018 – 28.07.2018
Noise indicators		Lden, Lnight
Summary of measurement results:		
<p>Noise levels are monitored according to the airport's monitoring program. At measurement points 2 & 3 no exceedance was recorded in the noise indicators levels Lden = 70 dB(A) & Lnight = 60 dB. At measurement point 1 a slight exceedance of the Lden & Lnight indicators was recorded.</p>		

3.2. Noise levels calculation based on noise simulation software

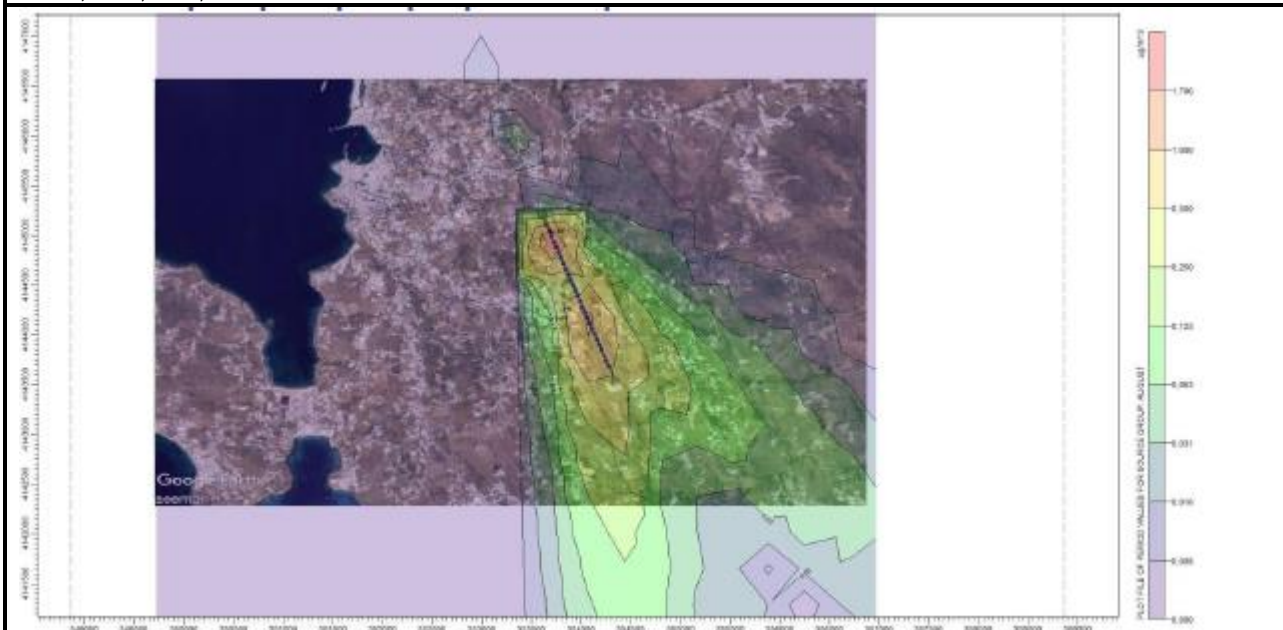
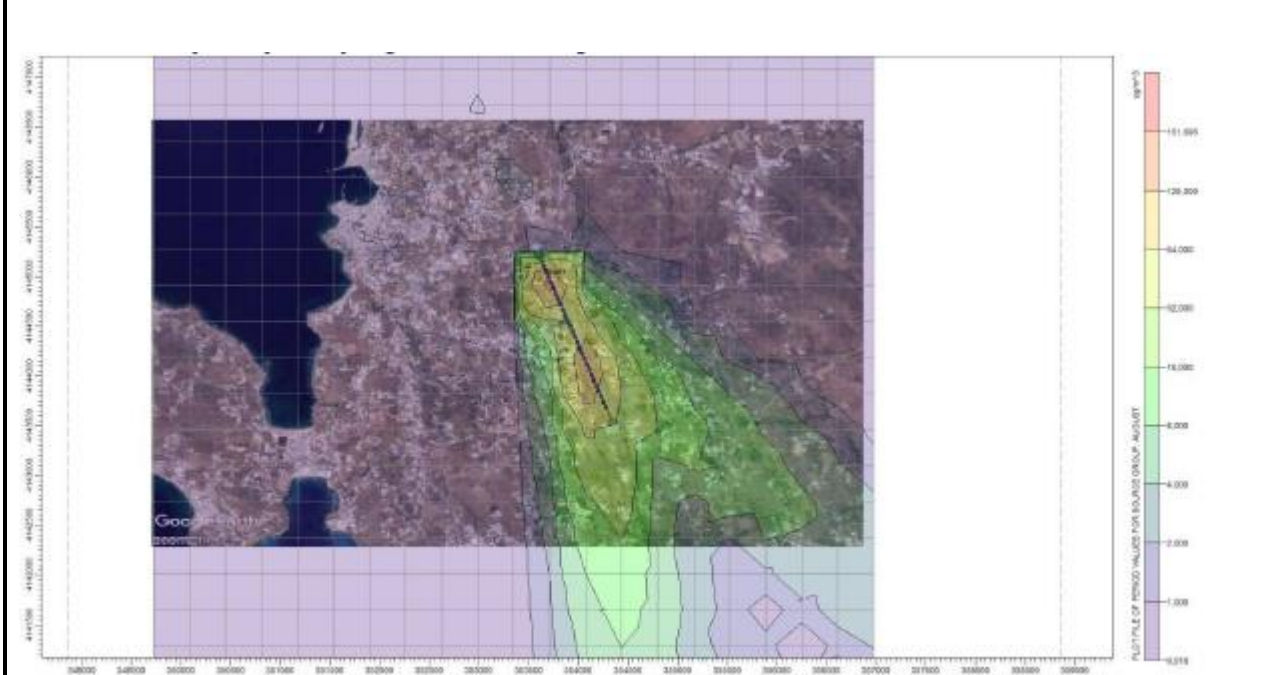
Aircraft noise levels calculation based on simulation software [YES/NO]	YES
Software used: IMMI Noise Prediction Software	
Noise indicators and respective contours calculation:	Lden, Lnight
 <p style="text-align: center;">Lden</p>	 <p style="text-align: center;">Lnight</p>
Summary of results:	
For the year 2018 some residential buildings within settlements that have an existing regulatory plan within a limited area in the vicinity of the airport are exposed to noise levels higher than the limits Lden = 70 dB(A) and Lnight = 60 dB(A).	

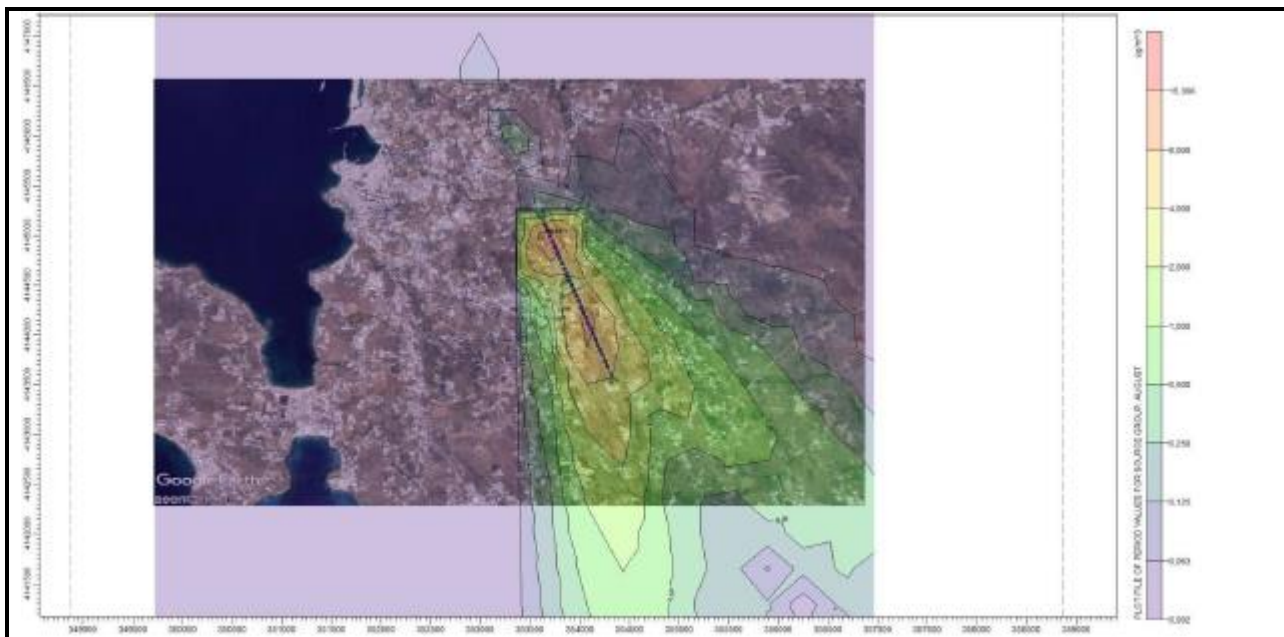
4. AIR QUALITY

4.1. Air quality measurements during the reference year

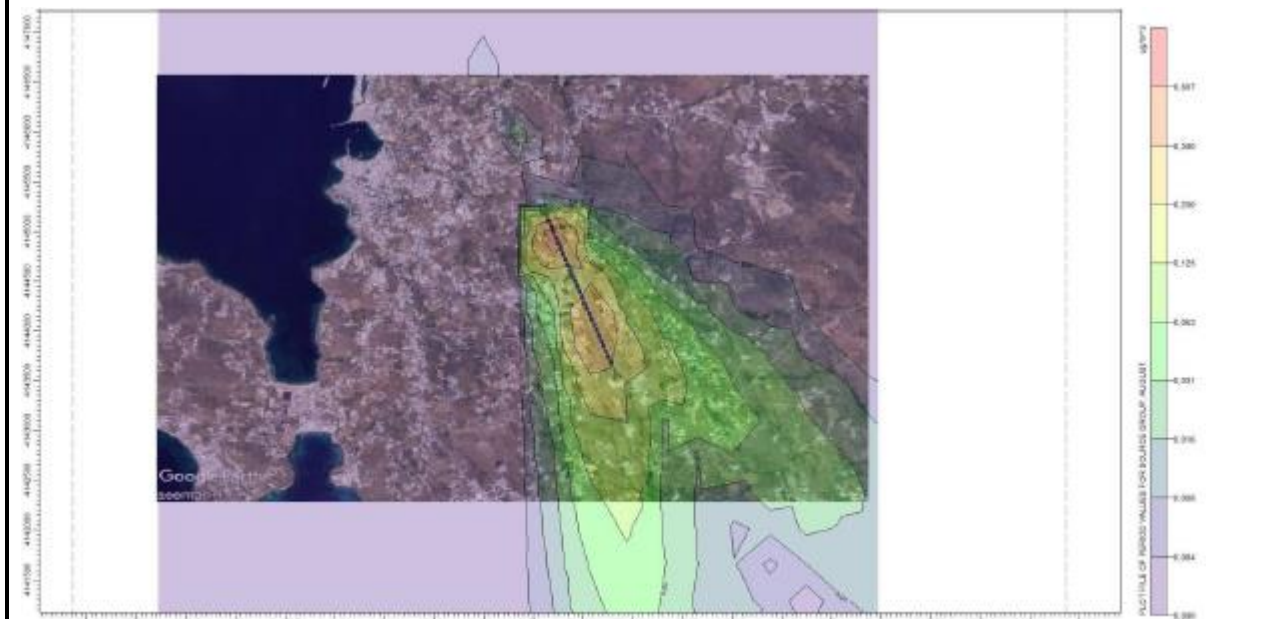
Have air quality measurements at the airport's surrounding area been performed during the reference year? [YES/NO]		YES
Measurement points		
		
Measurement points coordinates	Measurement points description	
1) Position: --° --' --" N --° --' --" E	At a distance of approximately 1.6km, to the north of the airport in the area of the Modern Education Private Schools.	
2) Position: --° --' --" N --° --' --" E	Airport parking area at a distance less than 500 meters.	
Measurement period	02.10.2018 – 09.10.2018.	
Pollutants measured: PM ₁₀ , PM _{2,5} , NO ₂ , SO ₂ , C ₆ H ₆ , O ₃		
Summary of measurement results:		
Air quality is monitored according to the airport's monitoring program. No exceedance of the air quality limits was observed.		

4.2. Air pollutants emission and dispersion modelling

<p>Calculation of air pollutants concentrations based on an emission and dispersion modelling software [YES/NO]</p>	<p>YES</p>
<p>Software used: Emissions and Dispersion Modeling System (EDMS) - US Federal Aviation Administration & US EPA AERMOD</p>	
<p>Pollutants concentrations and respective contours calculation: PM₁₀, NO_x, SO_x, C₆H₆</p>	
	
<p>PM10</p>	
	
<p>NOx</p>	



SOx



Benzene

Summary of results:

Air quality is monitored according to the airport’s monitoring program.
 No exceedance of the air quality limits was observed.
 It is noted that the simulation of the ozone cycle is a difficult procedure the results of which are greatly dependent from the meteorological conditions and solar radiation data used in the photochemical model. The simulation of the specific pollutant is not possible.

5. WASTE MANAGEMENT

Waste management		
Waste	Collection	Management/Disposal
Municipal solid waste	Collection and emptying of garbage bins by an FG contractor inside the airport	Collection and management by the Municipality of Mykonos
Recyclables	Collection and emptying of garbage bins by an FG contractor inside the airport	Collection and management by the Municipality of Mykonos
Used oils	Collection by licensed collector "Cytop S.A."	Collection and management by licensed collector "Cytop S.A."
Electric & electronic waste	Collection by alternative management system "Appliances recycling S.A."	Collection and management by alternative management system "Appliances recycling S.A."
Accumulators	Collection by alternative management system "Re-Battery S.A."	Collection and management by alternative management system "Re-Battery S.A."
Small batteries	Collection in special bins of the company AFIS S.A. inside the airport	Collection and management by alternative management system "AFIS S.A."
Used tires	Collection by alternative management system "ECOELASTIKA S.A."	Collection and management by alternative management system "ECOELASTIKA S.A."

Notes:
<ol style="list-style-type: none"> 1. Ground handlers and fuel handlers manage all the categories of waste they produce independently 2. The total quantities of the produced waste by category resulting from all activities of the airport are recorded by Fraport Greece B and submitted in the Electronic Waste Registry via the Annual Waste Producer Report as provided for by the applicable legislation.

6. ECOSYSTEM AROUND THE AIRPORT

6.1. Flora-Fauna

ECOSYSTEM AROUND THE AIRPORT	
Flora	
Are there protected zones of vegetation/habitats in the broader airport area? [YES/NO]	NO
(If YES) Short description:	
Fauna	
Are there protected zones of fauna/birds in the broader airport area? [YES/NO]	NO
(If YES) Short description:	

6.2. Ecologically fragile areas

The airport of Mykonos is outside the limits of protected areas included in the National Network of Protected Areas, at long distances from them.

In Mykonos there are no areas included in the NATURA 2000 network. The Natura 2000 network area which is closest to the airport is the area called “Nisides Mykonou” (Rineia, Chtapodia, Tragonisi)” with code GR4220027 which is listed as SPA, based on Directive 2009/147/EC on birds.

The “Wildlife Sanctuary” which is nearest to the airport is “Marathi (of Mykonos)” (K463) (GG 687/B/1995), which is to the north of the airport at a distance of approximately 1.2Km.

7. WILDLIFE HAZARD MANAGEMENT

Wildlife hazard management	
Extent of the problem (bird species):	Birdstrikes
<i>Columba livia</i> (common pigeon)	3
<i>Larus michahellis</i> (herring gull)	4
Adopted measures :	
The following reports have been submitted to the Department of Airports Operation (D3/B) of the Hellenic Civil Aviation Authority:	
1. “Wildlife hazard risk identification and management, Fraport Regional Airports of Greece A S.A., Reference period: 11 April - 31 December 2017”	
2. “Wildlife hazard risk identification and management, Fraport Regional Airports of Greece B S.A., Reference period: 11 April - 31 December 2017”. These reports provide information about:	
<ul style="list-style-type: none"> • Bird and other animal species management is done by FG in all airports with the exception of Aktion and Chania airports where wildlife hazard management belongs to the Hellenic Air Force • Birdstrikes or other species strikes on aircrafts data refer to the period between April 11-December 31 2017 • Birdstrikes or other species strikes on aircraft risk evaluation (strikes indicator is taken under account (birdstrikes number to the total ATMs) • Wildlife hazard management measures 	
Reference year summary results:	
The number of strikes of birds or other animals to aircrafts cannot reduce the population of even endangered species, since only a limited number can be involved in a strike event (stochastic events). The loss of a limited number of animals cannot change the population status of the species.	

8. CULTURAL HERITAGE

Have new cultural heritage properties been discovered during the reporting period? [YES/NO]				NO
(if YES) Details provided in the table below:				
Location	Date of discovery	Type of discovery	Additional protection measures taken	

9. RESOURCES CONSUMPTION

9.1. Energy consumption

Energy consumption (monthly electric energy consumption, in Kwh)	
MONTH	Kwh
January	83,424.91
February	70,557.42
March	82,575.78
April	113,716.96
May	170,860.33
June	220,180.25
July	134,006.63
August	123,529.71
September	93,308.56
October	60,534.77
November	42,522.70
December	68,822.59
Total annual electric energy consumption (in Kwh)	1,264,040.61

9.2. Fuel consumption

Fuel consumption		
Number of FG vehicles at the airport	9	
Number of firefighting vehicles at the airport	3	
Total annual fuel consumption	Diesel (lt)	9,821.36
	Unleaded gasoline (lt)	12,136.31

9.3. Heating oil or natural gas consumption

Heating oil or natural gas consumption	
Total annual heating oil consumption (lt)	7,000.00
Total annual heating natural gas consumption (m ³)	-

9.4. Water consumption

Water consumption	
Period	Consumption [m ³]
Total annual consumption	20,000m³*

*Estimation

10. GREENHOUSE GAS EMISSIONS & CARBON FOOTPRINT

Greenhouse gas emissions that were included in the carbon footprint calculation are the CO₂ emissions included in scope 1 & 2 of the GHG protocol:

- Scope 1: Direct GHG emissions that occur from sources that are owned and/or controlled by the airport.
- Scope 2: Indirect GHG emissions from the generation of purchased electricity, steam, heat or cooling consumed by the airport.

SOURCE FLOWS	TOTAL CO ₂ EMISSIONS (t)
	2018
Direct emissions from heating fuel (scope 1)	18.7
Direct emissions from fuel used for fleet vehicles (scope 1)	42.6
Direct emissions from fuel used for firefighting vehicles (scope 1)	13.1
Direct emissions from fuel used for generators (scope 1)	11.2
Indirect emissions from electricity consumption (scope 2)	769.8
Total (t)	855.4
Kilos CO₂/ passenger	0.61

Notes:

Fraport Greece B committed to the monitoring, management and reduction of its airports carbon footprint. In order for this target to be achieved:

- Direct and indirect carbon emissions from all the emission sources in the airports' boundaries are calculated and reported, based on the GHG Protocol (scope 1 & 2)
- The airport is certified according to ISO 14064 regarding greenhouse gas emission by an independent certification body

11. HUMAN CONSUMPTION WATER MONITORING PROGRAM

Human consumption water quality	
Water supply (public water network or airport's boreholes)	Private borehole
Is sampling of the airport's water network performed? [YES/NO]	YES
(if YES) Sampling frequency:	Quarterly
Summary of results: The results of the chemical analyses show that the water supplied from the private drilling is not potable due to the existence of high concentrations of Sodium and Chlorine (brackish water). Relevant information signs have been placed for the information of the public. The results of the microbiological and chemical analyses show that the parameters analysed as regards the airport's water network are within the legislative limits defined by the Ministerial Decision Γ1 (δ)/ΓΠ οικ. 67322/ GG 3282 B/19-9-2017 regarding the quality of human consumption water.	

12. RAINWATER

RAINWATER (collection, treatment disposal and recipient)		[YES/NO]
Area	Collection/treatment/disposal	
Apron and manoeuvring area	Collected in drainage ditches leading to the sea	YES

Other runoffs (runway etc.)	Collected in drainage ditches leading to the sea	YES
Treatment of rainwater by oil-separator		NO

13. GROUNDWATER MONITORING PROGRAM

Groundwater quality	
Is sampling of the airport's groundwater performed? [YES/NO]	YES
(if YES) Sampling frequency:	According to the frequency specified by the ETs.
Parameters analysed: pH, Conductivity, DO, TPH, BTEX, Heavy metals,	
Summary of results: Groundwater quality is monitored according to the airport's monitoring program. Due to the low level of the aquifer it was not possible to take underwater samples. EKO's facility is under remediation according to a programme approved by HAF.	

14. SEWAGE TREATMENT & DISPOSAL

Sewage	
Sewage network to the municipal waste water treatment plant (WWTP)	YES
Autonomous airport's waste water treatment plant (WWTP)	NO
Short description:	
Blue water	
Collection and disposal: Collection in septic tank and disposal to the municipal sewage network.	

Waste water treatment plant description (where applicable)	
<i>Description of characteristics and condition of the airport's WWTP including possible problems. Type and frequency of the effluent quality measurements</i>	
Degree of treatment of airport's WWTP	N/A
Treatment method	N/A
Disposal of treated wastewater	N/A
Sludge disposal	N/A
Sampling frequency of WWTP effluent	N/A
Parameters analysed	N/A
Summary of quality of WWTP effluent	N/A