

Environmental Bulletin of Mytilene “Odysseas Elytis” Airport

Reference year 2018

Fraport Greece

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1. INTRODUCTION

Location

The “Odysseas Elytis” airport of Mytilene is located at a distance of 6km from the capital of Mytilene island, near the east coast of the island. At the south-west the settlements Akrotiri, Taxiarches and Aghia Marina are located, at the north the settlements Neapoli and Vareia are located, whereas at the south the village Agrilia Kratigos is located.

Administration

The airport administratively belongs to the Municipal Community of Mytilene and the Local Community of Aghia Marina of the Municipal Unit of Mytilene of the Municipality of Lesvos of the homonym Regional Unit that belongs to the Region of South Aegean

Environmental licensing

Approved Environmental Terms	
E.T. Decision Reference number	JMD 81441/20.12.2002
E.T. Amendment Decision Reference number	Ref. No οικ. 23984/11.05.2016
	Ref. No οικ. 1004/16.01.2018

1.1. Airport Basic Data

Airport Basic Data					
Airport name IATA / ICAO	MJT / LGMT				
Airport position – Airport Reference Point (ARP)	Latitude: 39° 03' 28" N Longitude: 26° 35' 55" E				
Altitude:	18.41 m				
Number of runways	1				
Operation hours (high season)	Monday: 06:00 – 22:00 Tuesday: 06:15 – 22:40 Wednesday - Saturday: 06:00 – 22:40 Sunday: 06:00 – 23:30				
Runways	Length / Width			Code	
Runway	2,406m x 45m			14/32	
Full length of parallel taxiway	N/A				
Number of taxiways	5				
Apron capacity	A	B	C	D	E
Employees	High season			Low season	
Fraport Greece (FG) employees	23			23	
Employees of other companies	63			31	
Terminal					
➤ Total area (m ²)	2,718				
Other buildings and service/storage areas					

➤ RFF (m ²)	Temporarily housed in ISOBOX until completion of new RFF
Parking Areas	
Car parking spaces	-
Bus parking spaces	11
Taxi parking spaces	20

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)		10	14	49
Environmental Management System (EMS)	(YES/NO)	YES	YES	YES

2. TRAFFIC DATA STATISTICS

2.1. Annual Traffic Data

Annual Traffic Data for the year 2018	
Overall Annual Air Traffic Movements ¹	6,157
Percent of increase or decrease in relation to the previous year	9.6%
Annual passenger traffic	477,056
Percent of increase or decrease in relation to the previous year	9.4%
Annual cargo transferred (tn)	384
Percent of increase or decrease in relation to the previous year	-1.60%
Aircraft types	
Prevailing aircraft types for domestic flights	
Aircraft type	No. of flights
DH8D	1252
A320	1097

¹ Military and training flights not included.

AT45	918
AT43	636
JS41	398
A32A	286
AT72	200
AT75	90
B463	64
C172	44
Other	178
Prevailing aircraft types for international flights	
Aircraft type	No. of flights
B73H	218
B738	172
A321	108
B737	106
B463	70
A32B	66
B73W	58
A319	50
A318	25
7S8	20
Other	101

2.2. High season traffic data

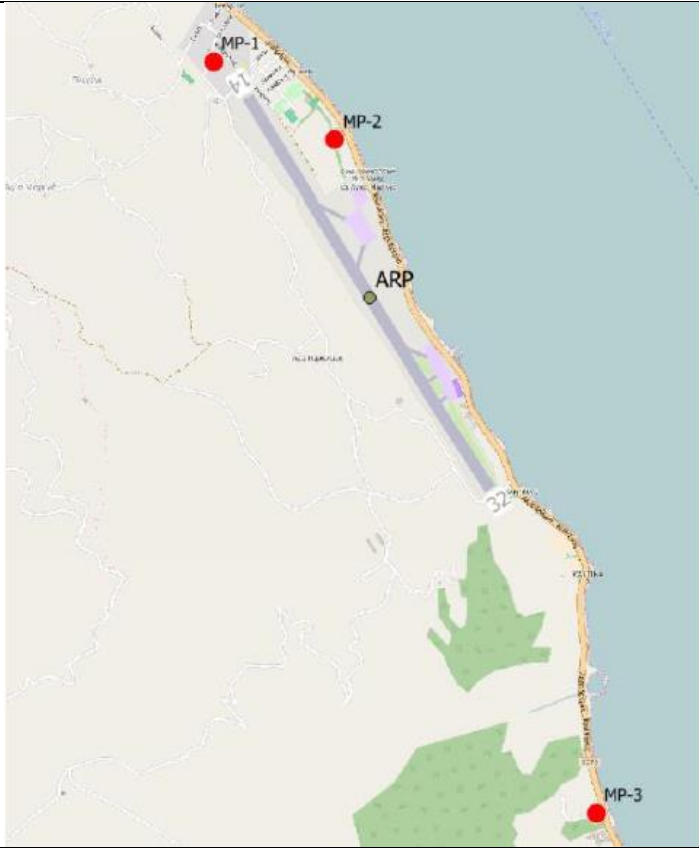
High season traffic data (June-September)	
Highest traffic month	August
Air traffic movements during the month with highest traffic	816
Air traffic movements daily average number during the month with highest traffic	26

2.3. Low season traffic data



Low season traffic data (October-May)	
Lowest traffic month	February
Air traffic movements during the month with lowest traffic	280
Air traffic movements daily average number during the month with lowest traffic	10

3. AIRCRAFT NOISE

3.1. Noise measurements during the reference year

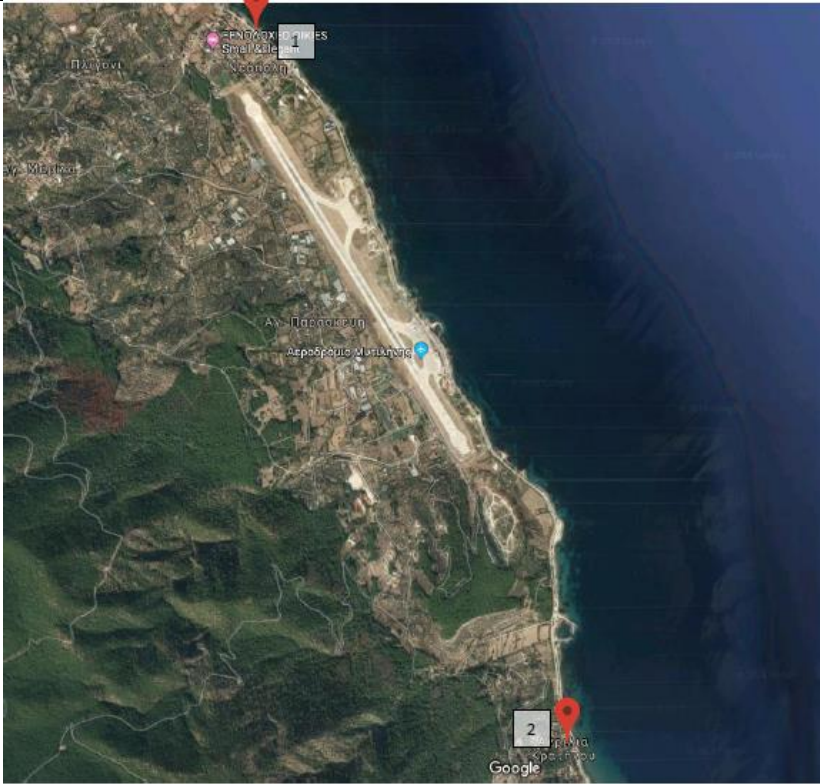
Have noise measurements at the airport's surrounding area been performed during the reference year? [YES/NO]		YES
Measurement points		
		
Measurement points coordinates	Measurement points description	
1) Position: 39° 04' 10" N 26° 35' 19" E	Neapoli area, north of the runway in a hotel yard. Affected by arrivals RWY 14 and departures RWY 32.	
2) Position: 39° 03' 56" N 26° 35' 47" E	East of the runway on a hotel roof. Affected by all procedures to and from all directions	
3) Position: 39° 01' 56" N 26° 36' 47" E	To the south of the runway, in the private area of a hotel. Affected by arrivals RWY 32 and departures RWY 14.	
Measurement period	31.07.2018 – 01.08.2018	
Noise indicators	Lden, Lnight	
Summary of measurement results:		
Noise levels are monitored according to the airport's monitoring program. No exceedance of noise indicators levels Lden = 70 dB (A) and Lnight = 60 dB (A) was observed.		

3.2. Noise levels calculation based on noise simulation software


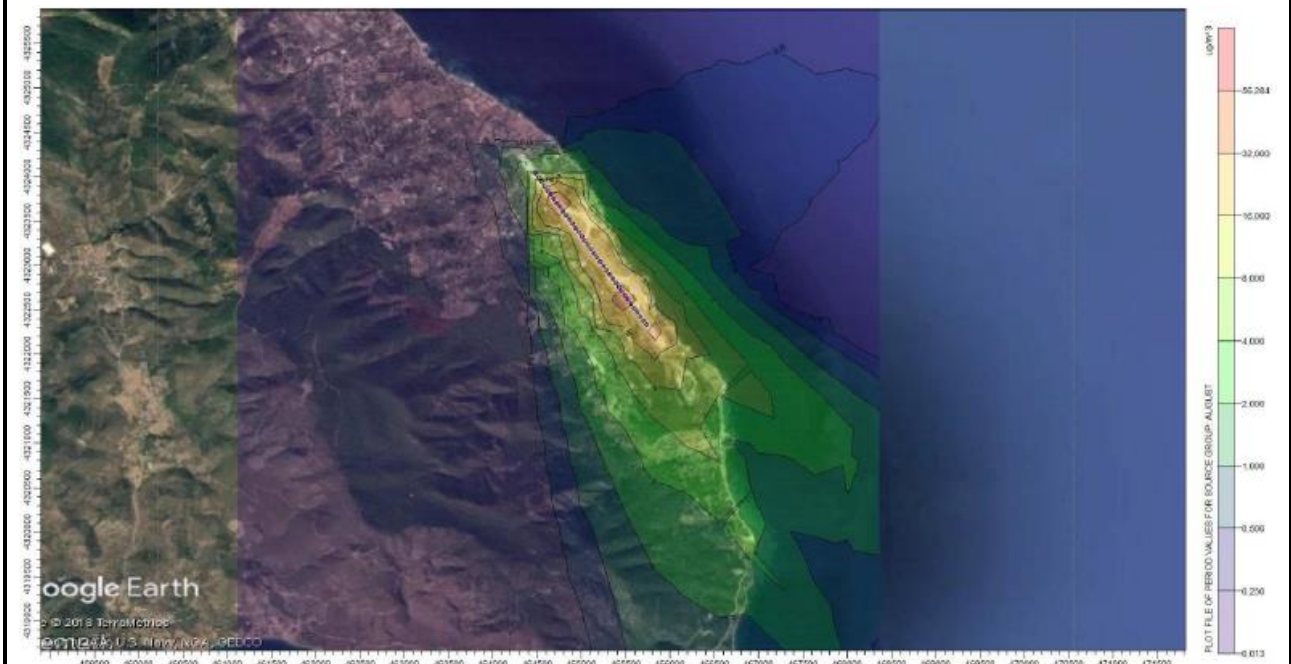
Aircraft noise levels calculation based on simulation software [YES/NO]		YES
Software used: IMMI Noise Prediction Software		
Noise indicators and respective contours calculation:		L_{den}, L_{night}
 <p style="text-align: center;">L_{den}</p>	 <p style="text-align: center;">L_{night}</p>	
Summary of results:		
For the year 2018 no populations or buildings within residential areas were found to be exposed to noise levels higher than the limits L _{den} = 70 dB(A) and L _{night} = 60 dB(A).		

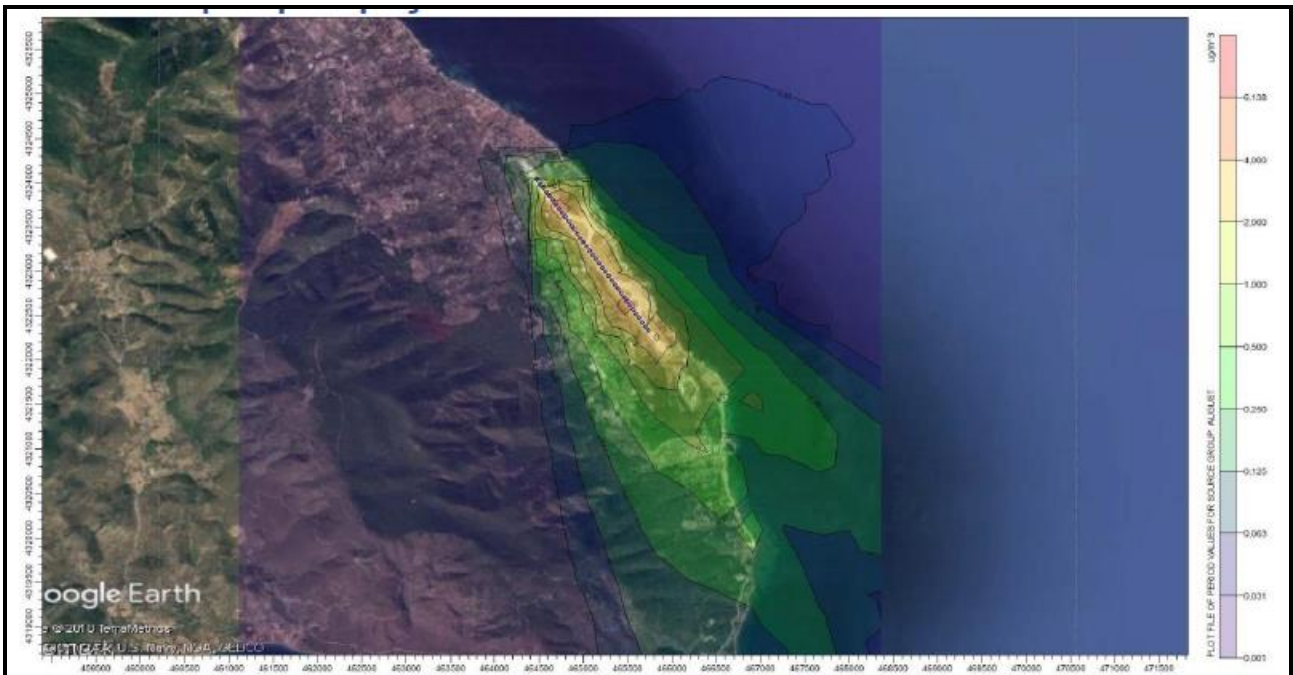
4. AIR QUALITY

4.1. Air quality measurements during the reference year

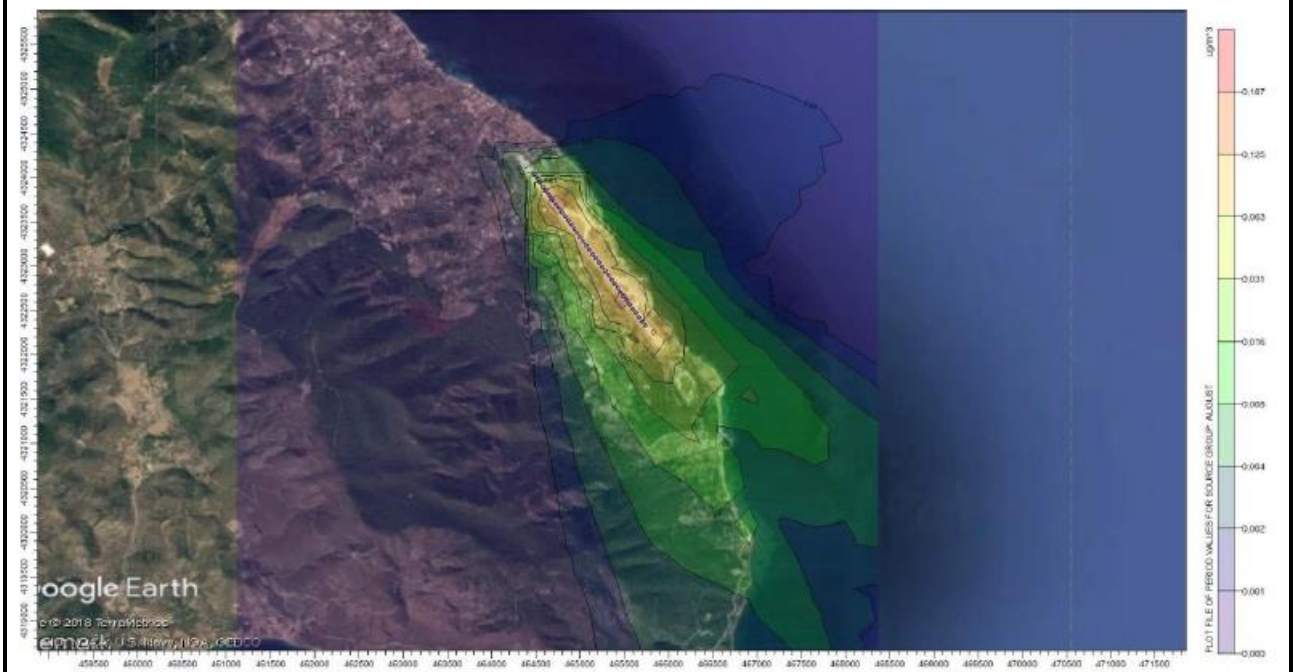
Have air quality measurements at the airport's surrounding area been performed during the reference year? [YES/NO]		YES
Measurement points		
		
Measurement points coordinates	Measurement points description	
1) Position: --° --' --" N --° --' --" E	At a distance of approximately 700 meters to the north of the runway.	
2) Position: --° --' --" N --° --' --" E	Settlement Agrilia Kratigos at a distance of approximately 2 km from the runway	
Measurement period	07.11.2018 – 14.11.2018	
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 Lesvos
Recyclables	Collection and emptying of garbage bins by an FG contractor inside the airport	Collection and management by the Municipality of Lesvos
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 Mytilene Airport is located outside the limits of the protected areas included in the National Protected Areas Network and is at long distance from them.

The nearest areas of the NATURA 2000 network is the SCI & SAC “Lesvos: Kolpos Geras, Elos Dipi and Mount Olympos” (GR4110005) and the SPA “Lesvos: Kolpos Geras, Eli Dipi and Charamida” (GR4110013), at a distance of approximately 5km from the airport.

The nearest Wildlife Sanctuary (WS) is “Divolo-Akothi (Loutron)” with code K293, also at a distance of approximately 5km from the airport.

7. WILDLIFE HAZARD MANAGEMENT

Wildlife hazard management	
Extent of the problem (bird species):	Birdstrikes
<i>Passer domesticus</i> (House sparrow)	1
<i>Larus michahellis</i> (Herring Gull)	5
Adopted measures :	
The following reports have been submitted to the Department of Airports Operation of the Hellenic Civil Aviation Authority:	
<ol style="list-style-type: none"> “Wildlife hazard risk identification and management, Fraport Regional Airports of Greece A S.A., Reference period: 11 April - 31 December 2017” “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	93,222.81
February	73,950.99
March	65,217.90
April	56,542.26
May	73,068.66
June	88,425.72
July	111,675.63
August	114,616.59
September	93,079.32
October	71,001.69
November	72,057.24
December	95,108.55
Total annual electric energy consumption (in Kwh)	1,007,967

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)	9,660.52
	Unleaded gasoline (lt)	-

9.3. Heating oil or natural gas consumption

Heating oil or natural gas consumption	
Total annual heating oil consumption (lt)	1,500.00
Total annual heating natural gas consumption (m ³)	-

9.4. Water consumption

Water consumption	
Period	Consumption [m ³]
January – March	2192
April - June	3272
July - September	2690

October - December	1415
Total annual consumption	9,569 m³

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)	4.0
Direct emissions from fuel used for fleet vehicles (scope 1)	13.4
Direct emissions from fuel used for firefighting vehicles (scope 1)	12.3
Direct emissions from fuel used for generators (scope 1)	3.9
Indirect emissions from electricity consumption (scope 2)	613.9
Total (t)	647.5
Kilos CO₂/ passenger	1.36

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
- The airport is planned to be certified according to ACA (Airport Carbon Accreditation).

11. HUMAN CONSUMPTION WATER MONITORING PROGRAM

Human consumption water quality	
Water supply (public water network or airport's boreholes)	Municipal Water & Sewage Company (DEYA) of Lesvos
Is sampling of the airport's water network performed? [YES/NO]	YES
(if YES) Sampling frequency:	Quarterly
Summary of results: 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. EKO and GISCO facilities are currently under remediation according to a programme approved by HCAA.	

14. SEWAGE TREATMENT & DISPOSAL

Sewage	
Sewage network to the municipal waste water treatment plant (WWTP)	NO
Autonomous airport's waste water treatment plant (WWTP)	YES
Short description: The airport waste water is collected through an integrated sewage network and taken to the WWTP inside the airport.	
Blue water	
Collection and disposal: Collection in a tank in the WWTP area and disposal inside the airport WWTP for further process.	

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	Secondary treatment and chlorination
Treatment method	Prolonged ventilation
Disposal of treated wastewater	Limited irrigation during March-October Enrichment of the aquifer during the period from November to February.
Sludge disposal	Landfill
Sampling frequency of WWTP effluent	Monthly
Parameters analysed	BOD, COD, SS, TN,TP, T. Coliforms, E.Coli, pH, residual Cl ₂

Summary of quality of WWTP effluent	The WWTP effluent observes the limits set out in JMD 145116/2001 and particularly Table 1.
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