

ENVIRONMENTAL BULLETIN OF MIKONOS AIRPORT (JMK)

Reference year 2021

Fraport Regional Airports of Greece B S.A.

Issue year: 2022

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1. INTRODUCTION

1.1. 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.

1.2. 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.

1.3. Environmental licensing

Approved Environmental Terms	
E.T. Decision Reference number	32650/04.11.1994
E.T. Amendment Decision Reference Number	103324/18.04.2016
	175511/15.10.2014
	39773/26.09.2017
	2976/02.02.2018

1.4. Airport Basic Data

Airport name IATA / ICAO	JMK / LGMK
Airport location – Airport Reference Point (ARP)	Latitude: 37° 26' 14" N Longitude: 25° 20' 50" E
Altitude	123.45m
Number of runways	1
Operation hours (summer)	00:01-24:00
Operation hours (winter)	Monday /Thursday /Friday 09:30 – 13:30 Wednesday 13:30 – 17:30 Tuesday /Saturday /Sunday CLOSED

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 (31.08.2021)					Low season (30.11.2021)
Fraport Greece (FG) employees	31					25
Employees of other companies	450					190

Terminal	
➤ Total area (m ²)	14.304

Other buildings and service/storage areas	
➤ RFF Station (m ²)	1.144

Parking Areas	
Car parking spaces	53
Bus parking spaces	34
Taxi parking spaces	15

1.5. Airport facilities

1.5.1. Fuel Handlers

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

Installations inside the airport	EKO	GISSCO	HAFCO
Environmental Management System (EMS)	YES	YES	Not operating at the airport

1.5.2. Ground Handlers

Number of ground handler companies	
Number of ground handler companies operating at the Airport	3

Installations inside the airport	SKYSERV	SWISSPORT	GOLDAIR
Environmental Management System (EMS)	YES	YES	YES

2. TRAFFIC DATA STATISTICS

2.1. Annual Traffic Data

Annual Traffic Data for the year 2021	
Overall Annual Air Traffic Movements ¹	16.297
Percent of increase or decrease in relation to the previous year	115,7%
Annual passenger traffic	1.052.080
Percent of increase or decrease in relation to the previous year	157,2%
Annual cargo transferred (tn)	76
Percent of increase or decrease in relation to the previous year	61,7 %

Aircraft types	
Prevailing aircraft types for domestic flights	
Aircraft type	No. of flights
DH8D	976
A320	809
A319	430
A32A	325
EC20	232
AT76	204
AT75	193
A20N	164
AT72	160
EC35	118
Other	1.784
Prevailing aircraft types for international flights	
Aircraft type	No. of flights
A320	1.895
A32A	1.145
B73H	782
A319	708
B738	655
A20N	585
C56X	439
E190	231
CL60	229
E35L	226
Other	4.007

¹ Military and training flights not included.

2.2. High season traffic data

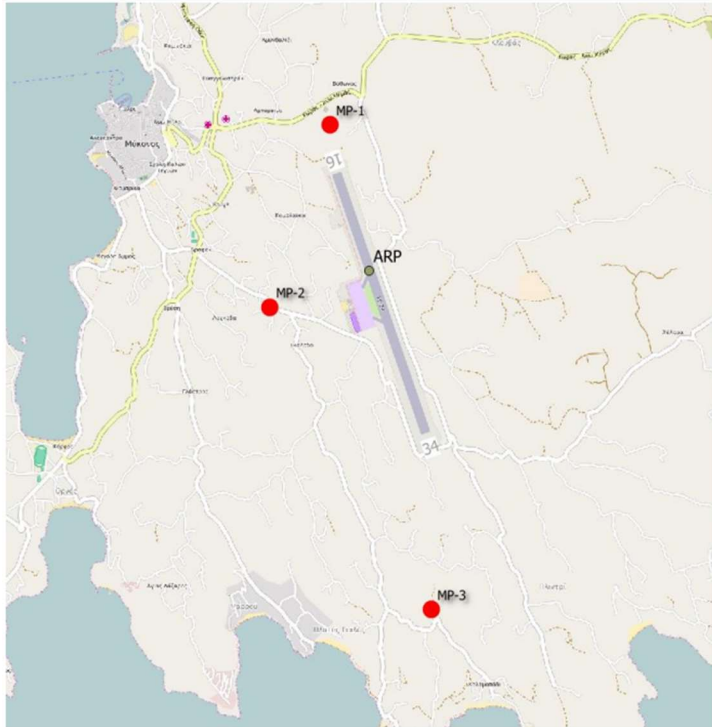
High season traffic data (June-September)	
Highest traffic month	July
Air traffic movements during the month with highest traffic	4.510
Air traffic movements daily average number during the month with highest traffic	145

2.3. Low season traffic data

Low season traffic data (October-May)	
Lowest traffic month	February
Air traffic movements during the month with lowest traffic	68
Air traffic movements daily average number during the month with lowest traffic	2

3. AIRCRAFT NOISE

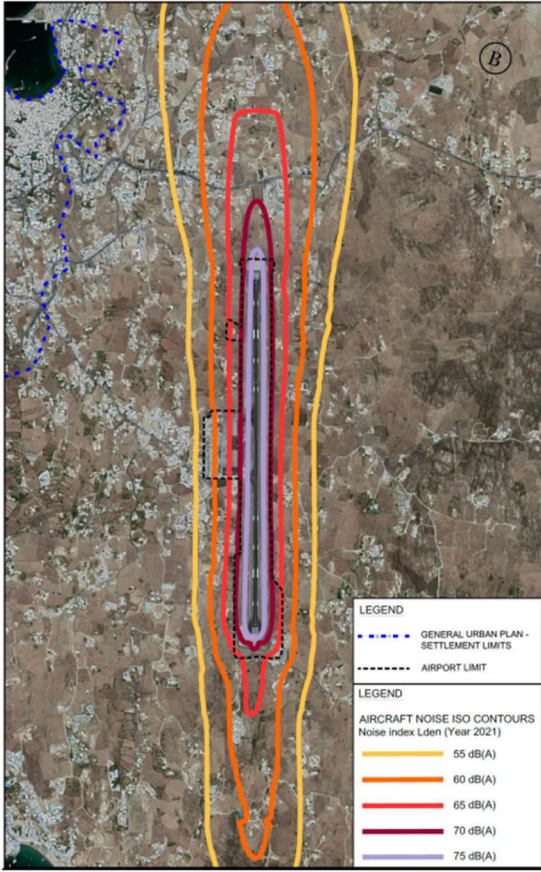
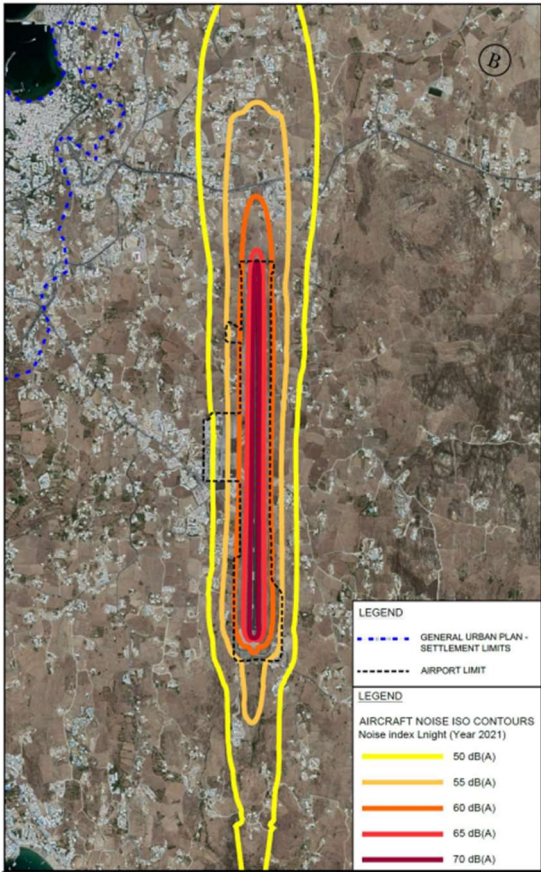
3.1. Noise measurements during the reference year

Have noise measurements at the airport's surrounding area been performed during the reference year?		YES
Measurement points		
		
Measurement points coordinates	Measurement points description	
Θέση 1: 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.	
Θέση 2: 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 arrivals and departures to and from all directions	
Θέση 3: 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	18.07.2021-19.07.2021	
Noise indicators	L _{den} , L _{night}	

Summary of measurement results:

Noise levels are monitored according to the airport's monitoring program.
 No exceedance of noise indicators levels L_{den}=70 dB(A) and L_{night}=60 dB(A) was observed.

3.2. Noise levels calculation based on noise simulation software

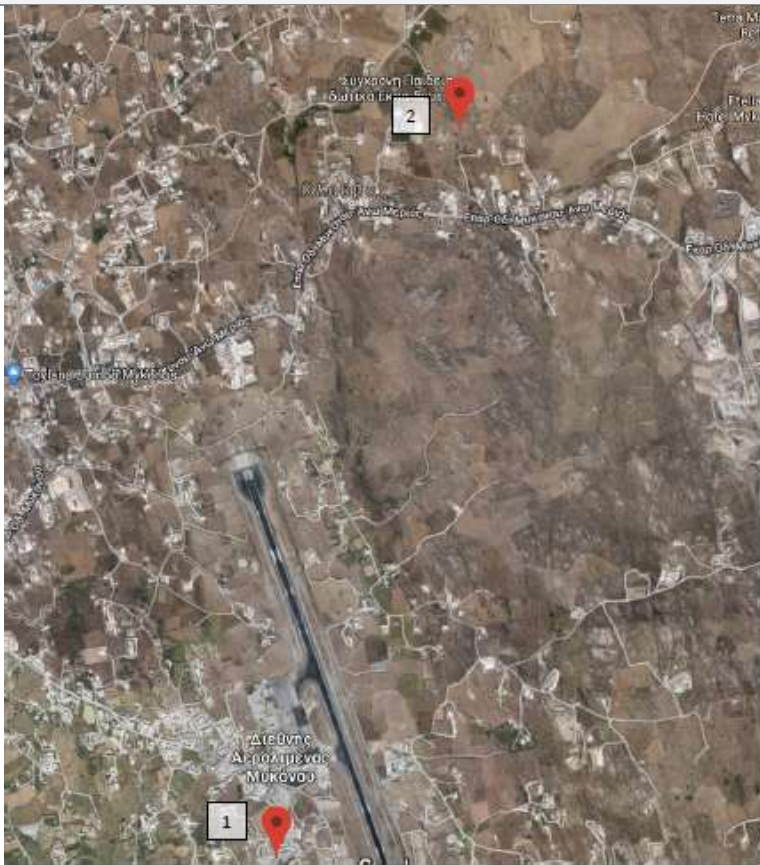
<p>Aircraft noise levels calculation based on noise simulation software</p>	<p>YES</p>
<p>Software used: IMMI Noise Prediction Software (evaluation method CNOSSOS-EU according Directive 2015/996/EU)</p>	
<p>Noise indicators and respective contours calculation: L_{den}, L_{night}</p>	
<p>Noise contours:</p>	
 <p style="text-align: center;">L_{den}</p>	 <p style="text-align: center;">L_{night}</p>

Summary of results:

For the year 2021 no populations or buildings inside official settlement boundaries 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

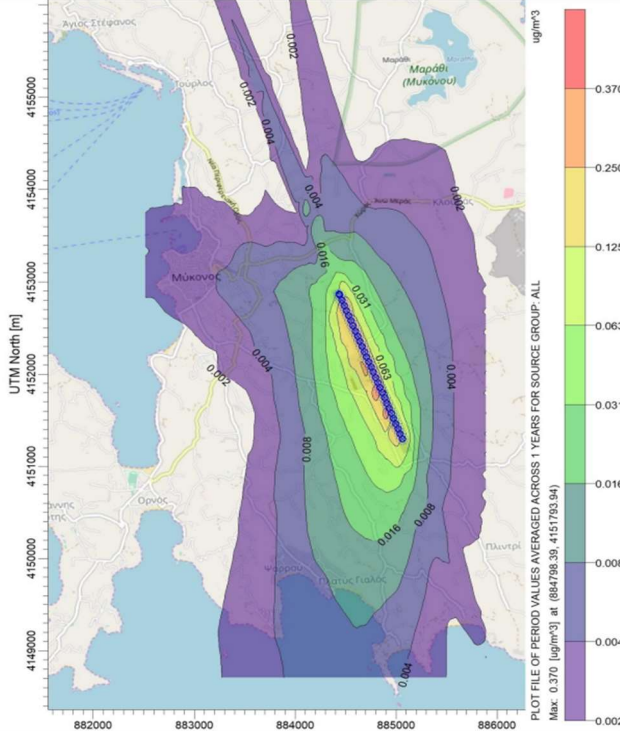
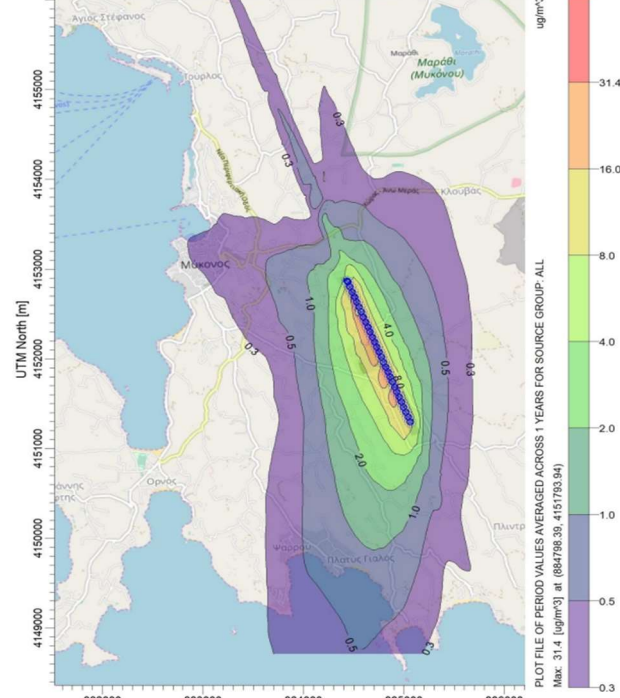
4.1. Air quality measurements during the reference year

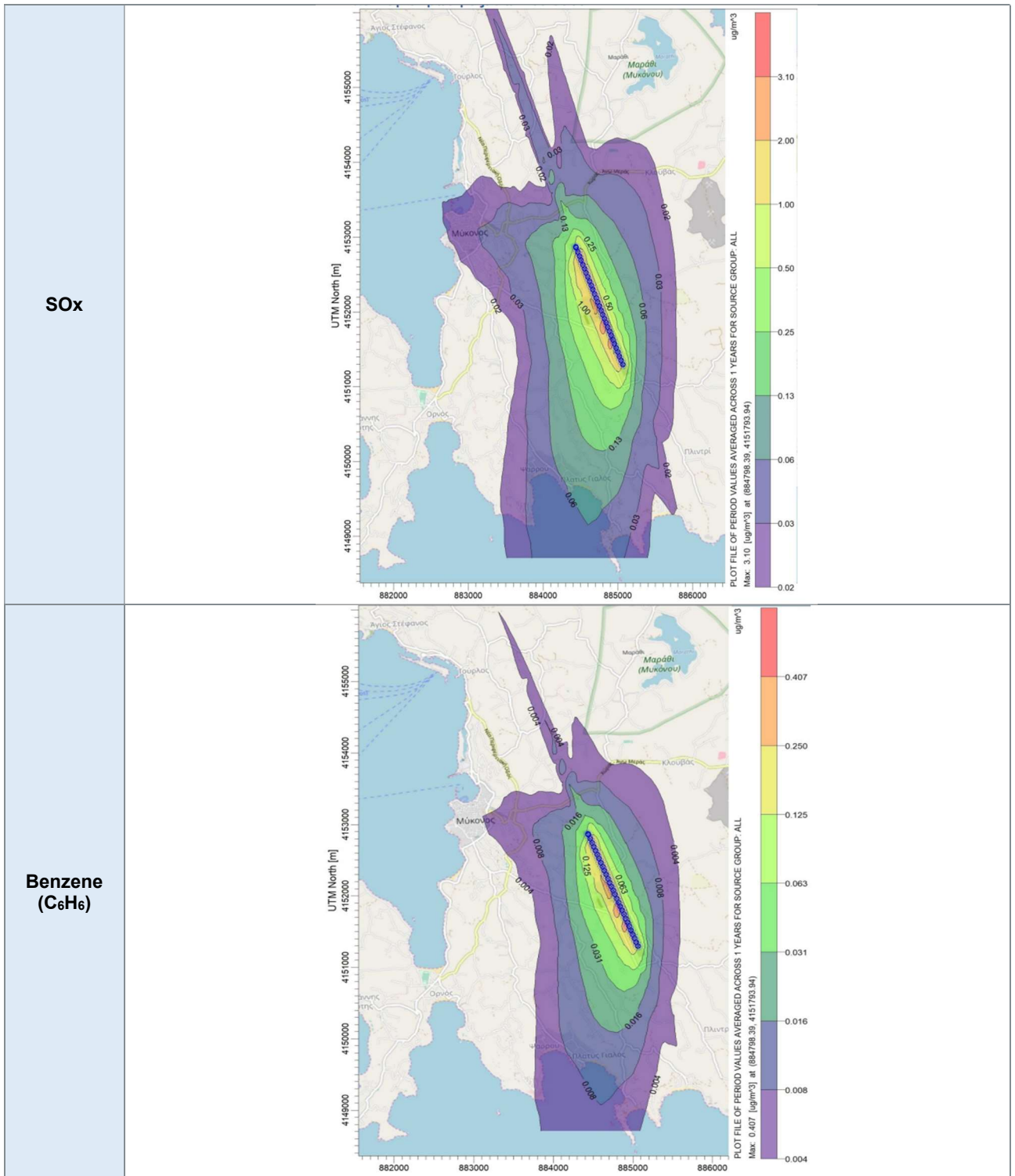
Have air quality measurements at the airport's surrounding area been performed during the reference year?		YES
Measurement points		
		
Measurement points	Measurement points description	
Position 1	Airport parking area at a distance less than 500 meters.	
Position 2	At a distance of approximately 1.6km, to the north of the airport in the area of the Modern Education Private Schools.	
Measurement period:	11.01.2021 - 26.02.2021 06.12.2021 - 22.12.2021	
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 at measurement position 2. In position 1, only at the first campaign, there was a small exceedance in PM₁₀ (dust), which is most likely not attributed to airport operations, rather than the on-going construction works near the measurement point. The remaining pollutants of position 1 were within limits.

4.2. Air pollutants emission and dispersion modelling

Calculation of air pollutants concentrations based on an emission and dispersion modelling software		YES
Software used: Aviation Environmental Design Tool (AEDT) - US Federal Aviation Administration & US Environmental Protection Agency AERMOD		
Pollutants concentrations and respective contours calculation: PM ₁₀ , NO _x , SO _x , C ₆ H ₆		
PM₁₀		
NO_x		



Summary of results:

Air quality is monitored according to the airport's monitoring program.
 No exceedance of the air quality limits was observed.

5. WASTE MANAGEMENT

Waste	Collection	Management/Disposal
Recyclables (paper, plastic, metals, glass)	Separate collection by the Municipality of Mikonos	Disposal at material recovery facility for recycling
Residues (Mixed Waste) and Bulky Waste	Collection by the Municipality of Mikonos	Disposal in landfill

Notes:

1. Regarding the different categories of the MSW (recyclables, mixed waste, bulky waste), the Airport Users handle their waste together with Fraport Greece B (central management).
2. Regarding the 'alternative management' waste categories (Waste lubricant oil WLO, WEEE, etc.):
 - i. Waste Lubricant Oil (WLO): Collection and management by authorized collector "CYTOP S.A."
 - ii. Waste Electrical & Electronic Equipment (WEEE): Collection and management by alternative management system "Appliances Recycling S.A."
 - iii. Accumulators: Collection and management by alternative management system "Re-Battery S.A."
 - iv. Small batteries: Collection and management by alternative management system "AFIS S.A."
 - v. Used tires: Collection and management by alternative management system "ECOELASTIKA S.A."
3. The total quantities of the hazardous waste further to the above-mentioned and produced at the airport, are managed by licensed private companies which have a contract with Fraport Greece B, according to the provisions of the legislation in force.
4. The total quantities of the produced waste by category resulting from all activities of the airport, the collectors and final recipients, are recorded by Fraport Greece B and submitted in the Electronic Waste Registry of the Ministry for Environment and Energy via the Annual Waste Producer Report according to the provisions of the legislation in force.

6. ECOSYSTEM AROUND THE AIRPORT

6.1. Flora-Fauna

Flora	
Are there protected zones of vegetation/habitats in the broader airport area?	NO
(if YES) Short description:	
Fauna	
Are there protected species of fauna/birds in the broader airport area?	YES
(if YES) Short description: The protected bird species that have been observed at Mikonos airport since April 2017 are presented below: <i>Collared pratincole (Glareola pratincola), Long-legged buzzard (Buteo rufinus), White stork (Ciconia ciconia)</i>	

6.2. Ecologically fragile areas

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

In Mikonos 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 Mikonou" (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 Mikonos)" (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 strikes and wildlife hazard management measures	
Wildlife species that suffered a strike	Strikes (%)
Yellow-legged gull (<i>Larus michahellis</i>)	60%
Common kestrel (<i>Falco tinninulus</i>)	10%
Hooded crow (<i>Corvus cornix</i>)	10%
Little owl (<i>Athene noctua</i>)	10%
Little-ringed plover (<i>Charadrius dubius</i>)	10%
Wildlife strike risk mitigation measures:	
<ul style="list-style-type: none"> • Inspections of the manoeuvring area for wildlife monitoring and control at regular intervals • Drainage ditches are regularly monitored and when necessary cleaned, to ensure efficient water run-off and, thus, reducing the attractiveness of the airside to the wildlife • Regular grass cutting at the airside. Mikonos airport is equipped with lawn mower • Fence maintenance • Systematic monitoring of bird species populations and their habitat on and off-airport (at a distance of 13km from the airport) • Holding of the wildlife strike committee meeting, to raise awareness across the airport users and local authorities about the risk of the wildlife strikes on aircraft and the measures applied to mitigate such a risk 	
Reference year summary results:	
<p>Hellenic Civil Aviation Authority (Safety and occurrence management division) receives annual reports referring to the risk assessment of the wildlife hazard as well as to the wildlife hazard management at the 12 regional airports operating by Fraport Greece. Aktion Airport and Chania Airport “Ioannis Daskalogiannis” are excluded, in accordance with the Concession Agreement, Annex 20, paragraph 6.3.3 & 6.3.4.</p>	

8. CULTURAL HERITAGE

Have new cultural heritage properties been discovered during the reporting period?	NO
<i>(if YES)</i> 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)	
Total annual electric energy consumption (in Kwh)	2.444.000

9.2. Fuel consumption

Fuel consumption		
Number of FG vehicles at the airport	5	
Number of firefighting vehicles at the airport	4	
Total annual fuel consumption	Diesel (lt)	9.861,44
	Unleaded gasoline (lt)	14.383,03

9.3. Heating oil or natural gas consumption

Heating oil or natural gas consumption	
Total annual heating oil consumption (lt)	-*
Total annual heating natural gas consumption (m ³)	N/A

*Heating and air conditioning is performed via heat pumps

9.4. Fuel consumption for generator

Water consumption	
Total annual consumption (lt)	0

9.5. Water consumption

Water consumption	
Total annual consumption (m ³)	8.243

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)
	2021
Direct emissions form heating fuel (scope 1)	0,0
Direct emissions from fuel used for fleet vehicles (scope 1)	54,4
Direct emissions from fuel used for firefighting vehicles (scope 1)	8,0
Direct emissions from fuel used for generators (scope 1)	0,0
Indirect emissions from refrigerants (scope 1)	-
Indirect emissions from electricity consumption (scope 2)	1.473
Total (t)	1.535,4
Kg CO₂ /passenger	1,46

Notes:

Fraport Greece B is 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 was certified during the reference year according to ISO 14064 regarding greenhouse gas emission by an independent certification body

11. HUMAN COMSUMPTION 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
(if YES) Sampling frequency:	Quarterly
<p>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). The results of the microbiological and chemical analyses show that the rest of parameters analyzed as regards the airport's water network are within the legislative limits defined by the Ministerial Decision Γ1 (δ)/ΓΠ οικ. 67322/ GG 3282 Β/19-9-2017 regarding the quality of human consumption water.</p>	

**During summer, there is also a supply from a private tank.*

12. RAINWATER

RAINWATER (collection, treatment disposal and recipient)		
Area	Collection/treatment/disposal	[YES/NO]
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		YES

Rainwater quality	
Is sampling of the airport's rainwater performed?	YES
(if YES) Sampling frequency:	Yearly
Parameters analyzed: pH, conductivity, TSS, DO, NO ₃ , NO ₂ , Oil & grease, BOD, COD, Total Petroleum Hydrocarbons (TPH), PAHs, BTEX, Heavy metals, PCBs, Detergents	
Summary of results:	
Surface rainwater quality is monitored according to the airport's monitoring program. Due to the absence of designated recipients and relevant national quality limits for surface rainwater, the Environmental Health & Safety Guidelines of the International Finance Corporation (IFC) are adopted. According to FG's analyses results and based on the abovementioned specifications, the airport's rainwater environmental condition is adequate and no further treatment measure is necessary.	

13. GROUNDWATER AND/OR SOIL AND/OR SOIL GAS MONITORING

Groundwater and/or soil and/or soil gas quality	
Is sampling of the airport's groundwater and/or soil and/or soil gas performed?	YES
(if YES) Sampling frequency:	According to the Environmental Terms
Parameters analyzed: Volatile hydrocarbons, aliphatic, aromatic and chlorinated (soil gas)	
Summary of results:	
<p>The results of the analyses from the airport's borehole indicate that the water no pollution is present. Due to the low level of the aquifer, it was not possible to take water samples from the fuel handler's monitoring boreholes. According to the fuel handler's environmental monitoring reports and based on the limits set in various European countries in the absence of legislative EU limits and relevant national specifications/limits, the environmental condition of soil-gas is adequate and no remediation measures are necessary. Regarding soil gas the Directive of the Munich Environmental Protection Department in force by 10.02.1998, which is the most widely accepted, is adopted as a basis for comparison. Regarding surface soil, the target limits are used as specified by CAA and NTUA.</p>	

14. SEWAGE TREATMENT AND DISPOSAL

Sewage	
Sewage network to the municipal waste water treatment plant (WWTP)	YES
Autonomous airport's waste water treatment plant (WWTP)	NO

Blue water
Collection and disposal: Collection in watertight 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 analyzed	N/A
Summary of quality of WWTP effluent	N/A