

ENVIRONMENTAL BULLETIN OF KERKIRA “IOANNIS KAPODISTRIAS” AIRPORT (CFU)

Reference year 2020

Fraport Regional Airports of Greece A S.A.

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1. INTRODUCTION

1.1. Location

Kerkira Airport “Ioannis Kapodistrias” is located S-SW of the city of Kerkira and east of Chalikiopoulos lagoon in an area of approximately 760 acres.

1.2. Administration

The Airport administratively belongs to the Regional Unit of Kerkira of the Region of the Ionian Islands in the Municipal Unit of Kerkira of the Municipality of Kerkira.

1.3. Environmental licensing

Approved Environmental Terms	
E.T. Decision Reference number	11945/08.03.2017
E.T. Amendment Decision Reference Number	7208/30.03.2018

1.4. Airport Basic Data

Airport name IATA / ICAO	CFU / LGKR
Airport location – Airport Reference Point (ARP)	Latitude : 39° 36' 07" N Longitude : 19° 54' 42" E
Altitude	2m
Number of runways	1
Operation hours (summer)	0:01-24:00
Operation hours (winter)	Monday 07:00 – 19:00 Tuesday/Saturday 07:00 – 16:00 Wednesday/Friday 07:00 – 21:00 Thursday 09:00 – 21:00 Sunday 08:00 – 21:00

Runways	Length/Width			Code	
Runway	2,373 m x 45 m			17/35	
Full length of parallel taxiway	N/A				
Number of taxiways	3				
Apron capacity	A	B	C	D	E
	-	-	8	2	-

Employees	High season (31.08.2020)	Low season (30.11.2020)
Fraport Greece (FG) employees	40	39
Employees of other companies	755	460

Terminal	
➤ Total area (m ²)	31,696

Other buildings and service/storage areas	
➤ RFF Station (m ²)	1026

Parking Areas	
Car parking spaces	700
Bus parking spaces	14
Taxi parking spaces	25

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
Vehicles (total number)	22	27	24
Environmental Management System (EMS)	YES	YES	YES

2. TRAFFIC DATA STATISTICS

2.1. Annual Traffic Data

Annual Traffic Data for the year 2020	
Overall Annual Air Traffic Movements ¹	10,889
Percent of increase or decrease in relation to the previous year	-57.0%
Annual passenger traffic	961,038
Percent of increase or decrease in relation to the previous year	-70.7%
Annual cargo transferred (tn)	72
Percent of increase or decrease in relation to the previous year	-59.7%

Aircraft types	
Prevailing aircraft types for domestic flights	
Aircraft type	No. of flights
A320	817
AT45	662
AT75	396
AT72	218
DH8D	171
A32A	126
C56X	24
B712	22
A319	18
EC55	15
Other	408
Prevailing aircraft types for international flights	
Aircraft type	No. of flights
B73H	2,059
A320	1,060
A32A	903
B738	883
A321	358
A319	252
A20N	214
C56X	158
E195	140
A32B	126
Other	1,859

¹ Military and training flights not included.

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	3,217
Air traffic movements daily average number during the month with highest traffic	104

2.3. Low season traffic data

Low season traffic data (October-May)	
Lowest traffic month	April
Air traffic movements during the month with lowest traffic	122
Air traffic movements daily average number during the month with lowest traffic	4

3. AIRCRAFT NOISE

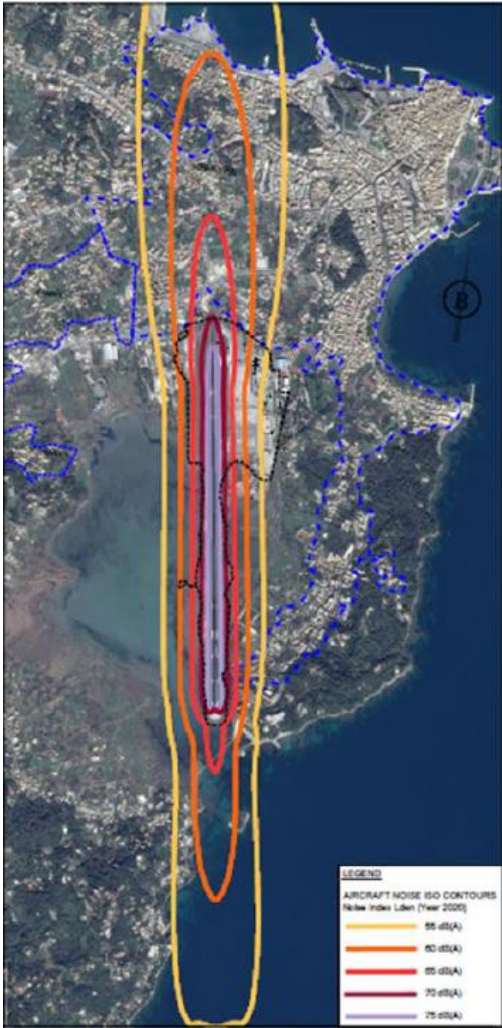
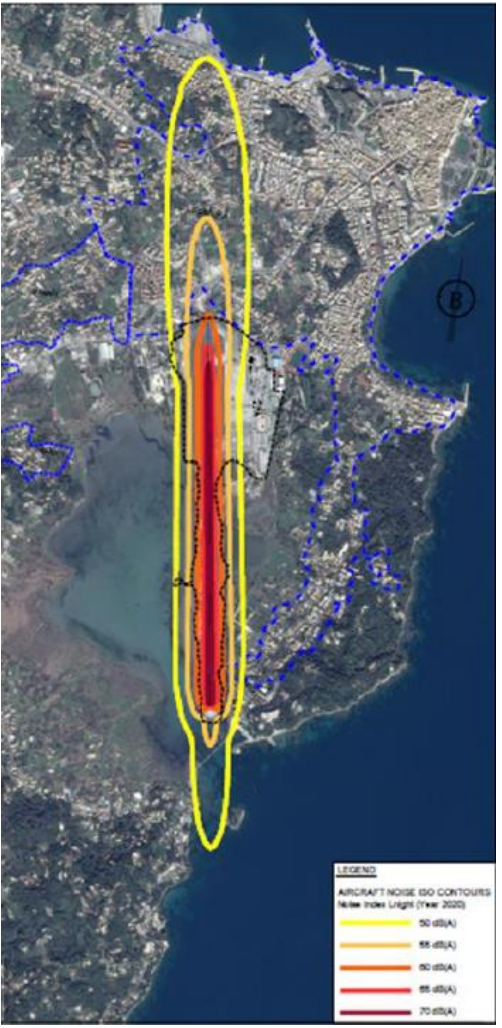
3.1. Noise measurements during the reference year

Have noise measurements at the airport's surrounding area been performed during the reference year?		YES
Measurement points		
		
Measurement points coordinates	Measurement points description	
1) Position: 39° 36' 44" N 19° 54' 28" E	Located north of the runway in an empty property. Affected by arrivals in runway 17 and departures from runway 35.	
2) Position: 39° 36' 25" N 19° 55' 10" E	Located east of the runway in a house yard. Affected from arrivals and departures in both directions.	
3) Position: 39° 34' 50" N 19° 54' 44" E	Located in Perama, south of the runway in the garden of a hotel. Affected by departures from runway 17 and arrivals on runway 35.	
Measurement period	16.07.2020 – 17.07.2020	
Noise indicators	Lden, Nnight	

Summary of measurement results:

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

3.2. Noise levels calculation based on noise simulation software

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

Summary of results:

For the year 2020 no populations or buildings within 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). Due to the COVID-19 pandemic the aircraft movements in Kerkira airport showed a substantial decrease by 57,0%. This decrease affected the shape and area of the noise contours, which were significantly smaller compared to last year, which reflects the absence of exceedances.

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?		NO*
Measurement points		
N/A		
Measurement points	Measurement points description	
N/A	N/A	
Measurement period:	N/A	
Pollutants measured:	N/A	

Summary of measurement results:

*Fraport Greece, during the years 2018-2019, has implemented a noise & air pollution monitoring program, according to the Approved Environmental Terms of the airport. The monitoring program included the implementation of special simulation tools in combination with confirmation measurements, of air pollution and noise, in representative positions around the airport. At the end of the two year period of the program in April 2020, in implementation of the Environmental Terms, a Technical Evaluation Report was submitted to the Directorate for Climate Change and Air Pollution of the Ministry for Environment & Energy, with proposals for the most suitable in terms of effectiveness, air pollution & noise monitoring program for the years ahead (ref. number 39833/833/29.4.2020).

Given the situation with the COVID-19 pandemic and the subsequent dramatic decrease of the airport traffic no air pollution measurements were performed during the peak period of the reference year and the competent Ministry for Environment & Energy was informed accordingly.

4.2. Air pollutants emission and dispersion modelling

Calculation of air pollutants concentrations based on an emission and dispersion modelling software		NO*
Software used: N/A		
Pollutants concentrations and respective contours calculation: N/A		
PM ₁₀		N/A
NO _x		N/A
SO _x		N/A
Benzene (C ₆ H ₆)		N/A

Summary of results:

*Fraport Greece, during the years 2018-2019, has implemented a noise & air pollution monitoring program, according to the Approved Environmental Terms of the airport. The monitoring program included the implementation of special simulation tools in combination with confirmation measurements, of air pollution and noise, in representative positions around the airport. At the end of the two year period of the program in April 2020, in implementation of the Environmental Terms, a Technical Evaluation Report was submitted to the Directorate for Climate Change and Air Pollution of the Ministry for Environment & Energy, with proposals for the most suitable in terms of effectiveness, air pollution & noise monitoring program for the years ahead (ref. number 39833/833/29.4.2020).

Given the situation with the COVID-19 pandemic and the subsequent dramatic decrease of the airport traffic no air pollution software simulation was performed during the peak period of the reference year and the competent Ministry for Environment & Energy was informed accordingly.

5. WASTE MANAGEMENT

Waste	Collection	Management/Disposal
Recyclables (paper, plastic, metals, glass)	Separate collection by appropriately licensed private company	Disposal at Kerkira material recovery facility for recycling
Residues (Mixed Waste) and Bulky Waste	Separate collection by appropriately licensed private company	Disposal at Kerkira material recovery facility for materials recovery and disposal to landfill afterwards

Notes:

1. Regarding the different categories of the MSW (recyclables, mixed waste, bulky waste), the Airport Users handle their waste together with Fraport Greece A in most cases (central management), while in a few other cases they handled them autonomously. The implementation of a fully central system by Fraport Greece A is expected.
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 A, 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 A 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?	YES
(if YES) Short description: Kerkira Airport is adjacent to the protected site GR2230005 “PARAKTIA THALASSIA ZONI APO KANONI EOS MESONGI (KERKYRA)” of the Natura 2000 network. The marine region is characterized by a great diversity of flora. The area also includes Chalikiopoulos lagoon (type of priority habitat of the Directive 92/43/EC, 1150* Coastal lagoons)	
Fauna	
Are there protected species of fauna/birds in the broader airport area?	NO
(if YES) Short description:	

6.2. Ecologically fragile areas

Kerkira Airport is adjacent to the protected site GR2230005 “PARAKTIA THALASSIA ZONI APO KANONI EOS MESONGI (KERKYRA)” of the Natura 2000 network. The marine region is characterized by a great diversity of flora. The area also includes Chalikiopoulos lagoon (type of priority habitat of the Directive 92/43/EC, 1150* Coastal lagoons)

7. WILDLIFE HAZARD MANAGEMENT

Wildlife strikes and wildlife hazard management measures	
Wildlife species that suffered a strike	Strikes (%)
<i>Columba livia</i> (Pigeon)	33%
<i>Phasianus colchicus</i> (Common pheasant)	25%
Passeriformes spp.	17%
<i>Ardea cinerea</i> (Grey heron)	8%
<i>Larus michahellis</i> (Yellow-legged gull)	8%
<i>Pica pica</i> (Magpie)	8%
Wildlife strike risk mitigation measures:	
<ul style="list-style-type: none"> • Pyrotechnics application by the use of signal pistols to scare birds away from the manoeuvring area • 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 • Fence maintenance • Systematic monitoring of bird species populations and their habitat on and off-airport (at a distance of 13km from the airport). • Seminar awareness video on the identification, conservation and safe relocation of reptiles (snakes), under the collaboration with the Lalitsa Non-Profit Association • Awareness video on the safe handling and relocation of stray dogs • 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>The Hellenic Civil Aviation Authority (Section D3/B, Wildlife Strike Risk Prevention Office) 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)	4,517,130

9.2. Fuel consumption

Fuel consumption		
Number of FG vehicles at the airport	11	
Number of firefighting vehicles at the airport	4	
Total annual fuel consumption	Diesel (lt)	22,948
	Unleaded gasoline (lt)	226

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. Water consumption

Water consumption	
Total annual consumption (m ³)	10,127

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)
	2020
Direct emissions form heating fuel (scope 1)	0,0
Direct emissions from fuel used for fleet vehicles (scope 1)	38.1
Direct emissions from fuel used for firefighting vehicles (scope 1)	23.7
Direct emissions from fuel used for generators (scope 1)	20.0
Direct emissions from refrigerants scope 1)	-
Indirect emissions from electricity consumption (scope 2)	2,814.2
Total (t)	2,896,0
Kg CO₂ /passenger	3.01

Notes:

Fraport Greece A 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)	Municipal Water & Sewage Company of Kerkira
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 provided by the Municipal Water & Sewage Company of Kerkira is non potable due to high concentration of sulphates. The rest of the results of the microbiological and chemical analyses show that the parameters analyzed as regards the airport's water network are within the legislative limits defined by the Ministerial Decision Γ1 (δ)/ΓΠ οικ. 67322/ ΦΕΚ 3282 Β/19-9-2017 regarding the quality of human consumption water.</p>	

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.	

*Two (2) oil separators were installed during the reference year as part of the Imminent Works.

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: TPH, BTEX, MTBE, PAH	
Summary of results:	
Groundwater quality is monitored according to the airport’s monitoring program. In addition the fuel handling companies monitor the quality of groundwater according to the environmental terms. According to the environmental monitoring reports of the fuel handlers, and based on the New Dutch List (2013) which is adopted in the absence of relevant national specifications/limits, the environmental condition of the ground water and soil gas is found adequate and no decontamination 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. The decontamination works at the area of GISSCO installation and one area identified from the 2017 Environmental Baseline Study, were successfully completed during the reference year.	

**During the reference year and due to the low level of the groundwater aquifer it was not possible for samples to be collected from the boreholes managed by Fraport Greece. The results indicated above refer to the samplings performed by the Fuel Handlers.*

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