Environmental Bulletin of Chania Airport "Ioannis Daskalogiannis" (CHQ)

Reference year 2023

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Fraport Regional Airports of Greece A S.A.

Chania Airport

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1. Introduction

1.1 Location

Chania Airport is located at the centre of the Akrotiri peninsula, to the north-east of the town of Chania at a distance of approximately 15km from the town, and operates within the military airport, in an area provided by HASGS for this purpose.

1.2 Administration

The Airport belongs to the Region of Crete, Regional Unit of Chania, and specifically to the Municipality of Chania, encompassing the former Municipalities of Akrotiri, El. Venizelos, Keramies, Nea Kidonia, Therisos, Souda and Chania.

1.3 Environmental licensing

Approved Environmental Terms	
E.T. Decision Reference number	51226/25.10.2016
E.T. Amendment Decision Reference Number	5100/05.03.2018
	62349/4292/17.06.2022
	72735/4749/05.07.2023

1.4 Airport Basic Data

Airport name IATA / ICAO	CHQ/LGSA
Airport location – Airport Reference Point (ARP)	Latitude: 35° 31' 53" N Longitude: 24° 09' 04" E
Altitude	149,4m
Number of runways	1
Operation hours (summer)	00:00 – 23:59
Operation hours (winter)	06:30 – 22:30

Runways	***Length/Width***		***Code***		
Runway	3,348m x 45m		11/29		
Full length of parallel taxiway	3.348m				
Number of taxiways	6				
Apron capacity	A	B	C	D	E
	-	-	8	-	2

Terminal	
Total area (m^2)	36.196

Other buildings and service/storage areas	
RFF Station (m^2)	2.566

Employees	***High season (31.08.2023)***	***Low season (30.11.2023)***
Fraport Greece (FG) employees	46	40
Employees of other companies	919	569

Parking Areas	
Car parking spaces	586
Bus parking spaces	56
Taxi parking spaces	82

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 2023		
Overall Annual Air Traffic Movements *24.678*	Percent of increase or decrease in relation to the previous year	*6,0%*
Annual passenger traffic *3.648.416*		*10,9%*
Annual cargo transferred (tn) *257*		*44%*

Aircraft types

Prevailing aircraft types for domestic flights	
Aircraft type	No. of flights
A320	3.019
AT76	1.424
A20N	1.317
B738	651
A321	112
A21N	96
P28R	82
DA40	34
PC12	23
GLF5	20
Other	235
Prevailing aircraft types for international flights	
Aircraft type	No. of flights
B738	8.593
A320	3.379
A20N	2.353
A321	1.338
A21N	638
A319	433
B734	136
B737	118
E290	66
B753	60
Other	551

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	4.189
Air traffic movements daily average number during the month with highest traffic	135

2.3 Low season traffic data

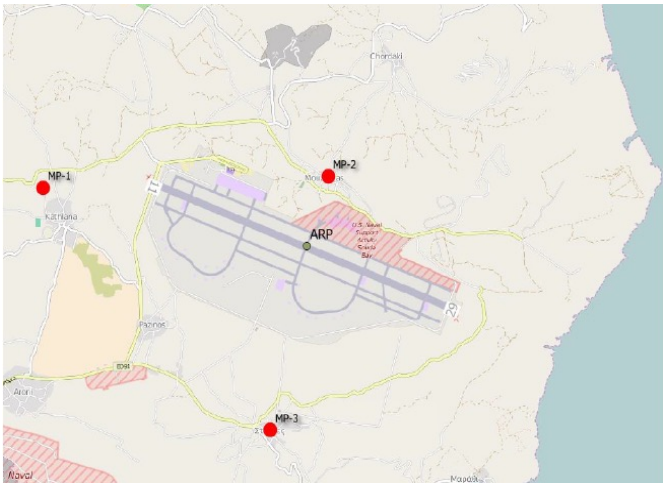
Low season traffic data (October-May)

Lowest traffic month	February
Air traffic movements during the month with lowest traffic	490
Air traffic movements daily average number during the month with lowest traffic	17

3. Aircraft noise

3.1 Noise measurements during the reference year

Measurement points



Have noise measurements at the airport's surrounding area been performed during the reference year?	***YES***

Measurement points coordinates	***Measurement points description***
Position 1: 35° 32' 1'' N 24° 06' 59'' E	Kathiana area, to the west of the runway at the center of an oil plantation. Affected by arrivals RWY 11 and departures RWY 29.
Position 2: 35° 32' 21" N 24° 09' 15" E	Mouzoura area, to the north of the runway, at the roof of the cultural centre's building. Affected by all arrivals/departures to and from both directions.
Position 3: 35° 30' 40" N 24° 08' 45" E	Sterna area, to the south of the runway, at the balcony of a public building. Affected by all arrivals/departures to and from both directions
Measurement period	12.07.2023 – 12.07.2023
Noise indicators	L_{den}, L_{night}

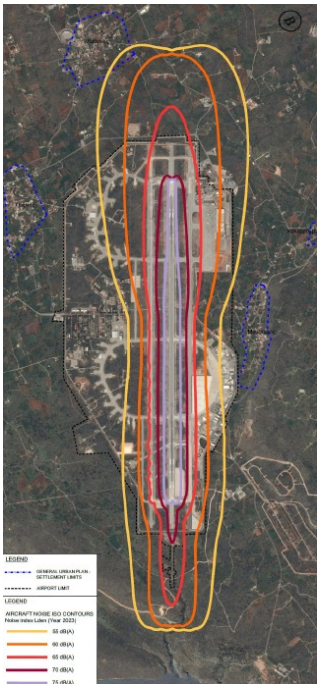
Noise complaints: 0

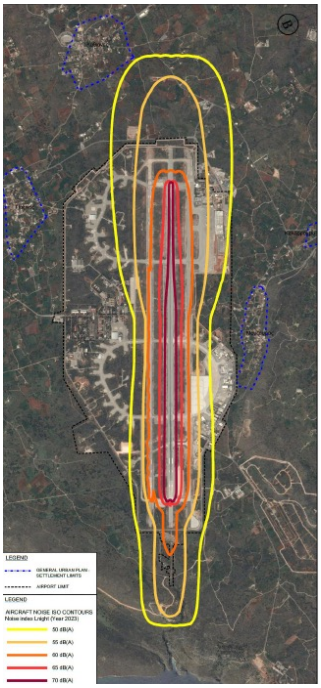
Summary of measurement results

Noise levels are monitored according to the airport's monitoring program and new approved environmental terms.
No exceedance of the 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

Noise contours





Aircraft noise levels calculation based on noise simulation software	***YES***
Software used:	IMMI Premium 2021
Noise indicators and respective contours calculation	L_{den} & L_{night}

Summary of results

For the year 2023 no 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

Measurement points

Have air quality measurements at the airport's surrounding area been performed during the reference year?	***YES***

Measurement points	***Measurement points description***
Position 1	Sterna area, approximately 2km to the south of the runway.
Position 2	Mouzoura area, approximately 700m to the north of the runway.
Measurement period	07.03.2023 – 23.03.2023 10.05.2023 – 24.05.2023 25.05.2023 – 08.06.2023 21.07.2023 – 05.08.2023 06.08.2023 – 21.08.2023
Pollutants measured: PM_{10}, $PM_{2.5}$, NO_2, SO_2, C_6H_6, O_3, CO	

Summary of measurement results

Air quality is monitored according to the airport's monitoring program, and the new provisions of environmental terms.
No exceedance of the air quality limits was observed for PM_{10}, $PM_{2.5}$, NO_2, SO_2, C6H6, O3, CO.

4.2 Air pollutants emission and dispersion modelling

Calculation of air pollutants concentrations based on an emission and dispersion modelling software	***NO***

Summary of results

According Approved Environmental Terms, in 2023 the air quality simulation was not foreseen.

5. Waste management

Waste stream	*Collection*	*Management/Disposal*
Recyclables (paper, plastic, metals, glass)	Collection by Chania Solid Waste management Body (DEDISA SA)	Disposal in a mechanical recycling-composting facility for material recovery
Residues (Mixed Waste) and Bulky Waste	Collection by Chania Solid Waste management Body (DEDISA SA)	Disposal in a mechanical recycling-composting facility for material recovery and disposal in 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 (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 A, after a Tender process according to the provisions of the legislation in force.
4. In the year 2023 Fraport Greece A managed a total of 12.0 tons of hazardous waste (FG A 9.77 tn, third parties 2.23 tn).
5. 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?	NO

Fauna	
Are there protected species of fauna/birds in the broader airport area?	NO
During the wildlife surveys there were no observations of protected species. The field survey dates will gradually increase during the following years.	

7. Wildlife hazard management

Wildlife strikes and wildlife hazard management measures	***0****

* The Hellenic Air Force (HAF) is responsible for the management of birdstrike risk.

8. Cultural heritage

Have new cultural heritage properties been discovered during the reporting period?	***NO***

9. Resources consumption

9.1 Energy consumption

Energy consumption (monthly electric energy consumption, in Kwh)	
Total annual electric energy consumption (in Kwh)	5.969.185,36*

*Third parties' consumption is excluded

9.2 Fuel consumption

Fuel consumption		
Number of FG vehicles at the airport	7	
Total annual fuel consumption	Diesel (lt)	4.187,03
	Unleaded gasoline (lt)	4.571,57

9.3 Heating oil or natural gas consumption

Heating oil or natural gas consumption	
Total annual heating oil consumption (lt)	28.062
Total annual heating natural gas consumption (m^3)	N/A

9.4 Fuel consumption for generator

Fuel consumption	
Total annual consumption (lt)	4.751,23

9.5 Water consumption

Water consumption	
Total annual consumption (m^3)	31.625,56

10. Greenhouse gas emissions & carbon footprint

Greenhouse gas emissions that were included in the carbon footprint calculation are the CO_2, CH_4 & N_2O 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_2e (t) Emissions (t)*
	2023
Direct emissions form heating fuel (scope 1)	74,0
Direct emissions from fuel used for fleet vehicles (scope 1)	22,0
Direct emissions from fuel used for firefighting vehicles (scope 1)	12,5
Direct emissions from fuel used for generators (scope 1)	0,0
Indirect emissions from electricity consumption (scope 2)	3.188,1
Total (t)	3.296,6
Kg CO_2e /passenger	0,90

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 is certified according to ACA (Airport Carbon Accreditation), Level-1

11. Human comsumption water monitoring program

Human consumption water quality	
Water supply (public water network or airport's boreholes)	Municipal Water & Sewage Company (DEYA) of Chania
Is sampling of the airport's water network performed?	YES
(if YES) Sampling frequency:	Quarterly

Summary of results

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 Δ1(δ)/ ΓΠ οικ. 27829/2023 (GG 3525/B` 25.5.2023) regarding the quality of human consumption water.

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		NO

Rainwater quality

Is sampling of the airport's rainwater performed?	YES
(if YES) Sampling frequency:	Annual
Parameters analyzed: pH, conductivity, TSS, DO, NO_3, NO_2, Oil & grease, BOD, COD, Total Petroleum Hydrocarbons (TPH), PAHs, BTEX, Heavy metals, 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. Surface rainwater monitoring for 2023, was performed and quality of the water is in accordance with the IFC guidelines. However, there is presence of pathogens recorded, which will be further investigated.

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:	Annual
Parameters analyzed: TPH, BTEX, MTBE, PAH	

Summary of results

Groundwater monitoring within airport boundary - Fraport Greece
Groundwater quality is monitored according to the airport's monitoring program, from the airport's water borehole.
The results show no exceedances.

Groundwater and/or soil and/or soil gas monitoring at fuel farms– Fuel Handlers
According to the approved environmental terms, monitoring of groundwater, soil and air from the Fuel Handlers for reference year 2023 was performed by EKO and GISSCO. Groundwater was not detected in any of the boreholes. Soil and underground air tested showed no exceedances.

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)
Description of characteristics and condition of the airport's WWTP including possible problems. Type and frequency of the effluent quality measurements.

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

Contact

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