

# ENVIRONMENTAL BULLETIN OF AKTION AIRPORT (PVK)

## Reference year 2020

Fraport Regional Airports of Greece A S.A.

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## 1. INTRODUCTION

### 1.1. Location

Aktion (PVK) airport is located in the west part of Sterea Ellada, at a distance of 4 km from Preveza, 16km from Vonitsa and 20 km from Lefkada. Cape Aktio is surrounded to the east by Amvrakikos Gulf and to the west by the Ionian Sea.

### 1.2. Administration

The airport administratively belongs to the Regional Unit (RU) of Aitoloakarnania of the Region of West Greece and the Ionian and more specifically to the Municipal Unit of Anaktorio of the Municipality of Aktio – Vonitsa, Local Community of Aghios Nikolaos Vonitsis..

### 1.3. Environmental licensing

Approved Environmental Terms	
E.T. Decision Reference number	Ref. No οικ. 11543/07.03.2017
E.T. Amendment Decision Reference Number	Ref. No οικ.50502/08.12.2017

### 1.4. Airport Basic Data

Airport name IATA / ICAO	PVK / LGPZ
Airport location – Airport Reference Point (ARP)	Latitude: 38° 55' 32" N Longitude: 20° 45' 55" E
Altitude	3.32 m
Number of runways	2
Operation hours (summer)	Monday – Friday & Sunday 07:15 – 23:15 Saturday 07:15 – 01:30 (Sunday)
Operation hours (winter)	Monday /Wednesday /Friday /Sunday CLOSED Tuesday 10:00 – 16:00 Thursday /Saturday 09:30 – 17:00

Runways	Length/Width		Code		
Runway	2,871m x 45m		07L-25R		
Runway	2,974 x 30m		07R-25L		
Full length of parallel taxiway	2,974m				
Number of taxiways	3				
Apron capacity	A	B	C	D	E
	-	-	3	-	1 (MARS)

Employees	High season (31.08.2020)	Low season (30.11.2020)
Fraport Greece (FG) employees	22	19
Employees of other companies	227	136

<b>Terminal</b>	
➤ Total area (m <sup>2</sup> )	9,648

<b>Other buildings and service/storage areas</b>	
➤ RFF Station (m <sup>2</sup> )	Housed in HAF facilities

<b>Parking Areas</b>	
Car parking spaces	50
Bus parking spaces	18
Taxi parking spaces	12

## 1.5. Airport facilities

### 1.5.1. Fuel Handlers

<b>Number of fuel handler companies</b>	
Number of fuel handler companies operating at the Airport	1

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

### 1.5.2. Ground Handlers

<b>Number of ground handler companies</b>	
Number of ground handler companies operating at the Airport	3

<b>Installations inside the airport</b>	<b>SKYSERV</b>	<b>SWISSPORT</b>	<b>GOLDAIR</b>
Vehicles (total number)	12	17	19
Environmental Management System (EMS)	YES	YES	YES

## 2. TRAFFIC DATA STATISTICS

### 2.1. Annual Traffic Data

<b>Annual Traffic Data for the year 2020</b>	
Overall Annual Air Traffic Movements <sup>1</sup>	2,342
Percent of increase or decrease in relation to the previous year	-58.1%
Annual passenger traffic	161,408
Percent of increase or decrease in relation to the previous year	-74.2%
Annual cargo transferred (tn)	0
Percent of increase or decrease in relation to the previous year	0

<b>Aircraft types</b>	
<b>Prevailing aircraft types for domestic flights</b>	
Aircraft type	No. of flights
AT45	532
AT75	126
AT72	36
EC55	36
A320	14
C550	8
A139	5
PIVI	4
EXPL	4
E550	4
Other	64
<b>Prevailing aircraft types for international flights</b>	
Aircraft type	No. of flights
A320	305
B73H	269
A32A	153
A20N	101
A21N	73
A32B	56
B738	51
A319	40
B753	38
A321	37
Other	386

<sup>1</sup> 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	668
Air traffic movements daily average number during the month with highest traffic	22

## 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	50
Air traffic movements daily average number during the month with lowest traffic	2

### 3. AIRCRAFT NOISE

#### 3.1. Noise measurements during the reference year

<b>Have noise measurements at the airport's surrounding area been performed during the reference year?</b>		NO*
<b>Measurement points</b>		
N/A		
<b>Measurement points coordinates</b>	<b>Measurement points description</b>	
1) Position: N/A	N/A	
2) Position: N/A	N/A	
3) Position: N/A	N/A	
<b>Measurement period</b>	N/A	
<b>Noise indicators</b>	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 noise measurements were performed during the peak period of the reference year and the competent Ministry for Environment & Energy was informed accordingly.

#### 3.2. Noise levels calculation based on noise simulation software

<b>Aircraft noise levels calculation based on noise simulation software</b>	NO*
<b>Software used:</b> N/A	
<b>Noise indicators and respective contours calculation:</b> N/A	
<b>Noise contours:</b> 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 noise software simulation was performed during the peak period of the reference year and the competent Ministry for Environment & Energy was informed accordingly.



## 4. AIR QUALITY

### 4.1. Air quality measurements during the reference year

<b>Have air quality measurements at the airport's surrounding area been performed during the reference year?</b>		<b>NO*</b>
<b>Measurement points</b>		
N/A		
<b>Measurement points</b>	<b>Measurement points description</b>	
N/A	N/A	
<b>Measurement period:</b>	N/A	
<b>Pollutants measured:</b>	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**

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

<b>Summary of results:</b>	
<p>*Fraport Greece, during the years 2018-2019, has implemented a noise &amp; 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 &amp; Energy, with proposals for the most suitable in terms of effectiveness, air pollution &amp; noise monitoring program for the years ahead (ref. number 39833/833/29.4.2020).</p> <p>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 &amp; Energy was informed accordingly.</p>	

## 5. WASTE MANAGEMENT

Waste	Collection	Management/Disposal
<b>Recyclables (paper, plastic, metals, glass)</b>	Separate collection by the Municipality of Vonitsa	Disposal in material recovery facility for recycling
<b>Residues (Mixed Waste) and Bulky Waste</b>	Collection by the Municipality of Vonitsa	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 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, 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**

<b>Flora</b>	
Are there protected zones of vegetation/habitats in the broader airport area?	YES
<i>(if YES)</i> Short description: see §6.2	
<b>Fauna</b>	
Are there protected species of fauna/birds in the broader airport area?	YES
<i>(if YES)</i> Short description: see §6.2	

### **6.2. Ecologically fragile areas**

In the broader area of Amvrakikos bay, sites that belong to the “NATURA 2000” network exist, such as the broader area of the delta of the rivers Louros and Aracthos, the lagoons (Rodia, Tsoukalio, Logarou, and other smaller ones), and the marine area that surrounds them (GR2110001, GR2110004), as well as the lakes Voukaria and Saltini. The Sites GR2110001, GR2110004 and GR2310006 are additionally protected by international conventions such as the Ramsar Convention (for wetlands of international importance), the Barcelona Convention (for the protection of the Mediterranean from pollution), the Bern Convention (for the conservation of wildlife and natural habitats), as well as by the Directive 79/409/EEC (on the conservation of wild birds) and Directive 92/43/EEC (on the conservation of natural habitats and of wild fauna and flora). Site GR2310006 is also protected in a national and regional level as a wildlife sanctuary (Government GAzetter No. 671/15.9.82). In addition the broader area of Amvrakikos bay is protected by the J.M.D 30027/1193/90 and J.M.D.16611/22.02.93.

## 7. WILDLIFE HAZARD MANAGEMENT

<b>Wildlife strikes and wildlife hazard management measures</b>	
<b>Wildlife species that suffered a strike</b>	<b>Strikes (%)</b>
-	-
<b>Wildlife strike risk mitigation measures*:</b>	
*The Hellenic Air Force (HAF) is responsible for the management of birdstrike risk.	
<b>Reference year summary results:</b>	
-	

## 8. CULTURAL HERITAGE

<b>Have new cultural heritage properties been discovered during the reporting period?</b>	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)	1,268,459

### 9.2. Fuel consumption

Fuel consumption		
Number of FG vehicles at the airport	7	
Number of firefighting vehicles at the airport	Management by HAF	
Total annual fuel consumption	Diesel (lt)	2,120
	Unleaded gasoline (lt)	106

### 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 <sup>3</sup> )	N/A

\*Heating and air conditioning is performed via heat pumps

### 9.4. Water consumption

Water consumption	
Total annual consumption (m <sup>3</sup> )	4,140

## 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 <sub>2</sub> Emissions (t)
	2020
Direct emissions form heating fuel (scope 1)	0.0
Direct emissions from fuel used for fleet vehicles (scope 1)	5.9
Direct emissions from fuel used for firefighting vehicles (scope 1)	*
Direct emissions from fuel used for generators (scope 1)	2.8
Indirect emissions from electricity consumption (scope 2)	790.3
<b>Total (t)</b>	<b>799.0</b>
<b>Kg CO<sub>2</sub> /passenger</b>	<b>4.95</b>

### 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

*\*The Hellenic Air Force (HAF) is responsible for the management of the airport's RFF vehicles.*



## 11. HUMAN COMSUMPTION WATER MONITORING PROGRAM

Human consumption water quality	
Water supply (public water network or airport's boreholes)	Municipal network of Lefkada & Aetoloakarnania
Is sampling of the airport's water network performed?	YES
<b>(if YES)</b> Sampling frequency:	Quarterly
<b>Summary of results:</b> The results of the microbiological and chemical analyses show that the parameters analyzed as regards the airport's water network are <b><u>within the legislative limits</u></b> 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

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

<b>Rainwater quality</b>	
Is sampling of the airport's rainwater performed?	YES
<b>(if YES)</b> Sampling frequency:	Yearly
<b>Parameters analyzed:</b> pH, conductivity, TSS, DO, NO <sub>3</sub> , NO <sub>2</sub> , Oil & grease, BOD, COD, Total Petroleum Hydrocarbons (TPH), PAHs, BTEX, Heavy metals, PCBs, Detergents	
<b>Summary of results:</b>	
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*
<b>(if YES)</b> Sampling frequency:	According to the Environmental Terms
<b>Parameters analyzed:</b> TPH, BTEX, MTBE	
<b>Summary of results:</b>	
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 (20013) which is adopted in the absence of relevant national specifications/limits, the environmental condition of the ground water is found adequate and no decontamination measures are necessary.	

\* The above results 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)	NO
Autonomous airport's waste water treatment plant (WWTP)	YES*

Blue water
<b>Collection and disposal:</b> 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	Tertiary treatment & chlorination
Treatment method	
Disposal of treated wastewater	Drain ditch to the Ionian Sea based on Joint Ministerial Decision KYA 328925/7912 (Government Gazette 35/Δ/2017)
Sludge disposal	Landfill
Sampling frequency of WWTP effluent	Monthly based on the decision determining the recipient
Parameters analyzed	BOD, COD, TSS, T. Coliforms, E.Coli, pH, Dissolved Oxygen, Grease and Oils, Residual Chlorine
Summary of quality of WWTP effluent	The WWTP effluent quality is within the limits set out in the decision specifying the recipient

\*Due to the maintenance/upgrade works the WWTP operation has ceased and sewage is transported to Vonitsa WWTP via tank trucks