





Air Traffic Statistics Report

December























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1. Baku FIR Air Traffic Statistics Data

(IFR movements)

1.1 General Air Traffic Statistics Data

The number of IFR movements within Baku FIR recorded in December is 16355 ACFT. Average number of IFR movements per day is 528 ACFT (Peak day, December 09, 2022 - 574 ACFT; low day, December 31, 2022 - 468 ACFT). Comparison with December 2021 - +135.6%.



The number of IFR movements within Baku FIR recorded in Y2022 is 169181 ACFT. Average number of IFR movements per day is **464** ACFT. Comparison with the Y2021 - +109.2%.

Baku FIR - Comparative chart 2018-2022 180000 160000 140000 120000 100000 80000 60000 40000 20000 0 2018 2019 2020 2021 2022

1.2 Traffic Segments

1.2.1 The number of IFR movements within Baku FIR recorded in December is 16355 ACFT, where 11566 ACFT are overflight traffic and 4789 ACFT are aerodrome movements.



1.2.2 Total number of movements within Baku FIR recorded in December is 17752 ACFT, where 16355 ACFT are IFR movements and 1397 ACFT are VFR movements. Average number of movements per day is 573 ACFT. Comparison with December 2021 - +97.6%.



1.3 Capacity vs traffic demand

| Highest traffic recorded | 48 ACFT (Dec | emb |
|-------------------------------------|--------------|-----|
| Peak hours (December average data): | 00:00-01:00 | 37 |
| | 01:00-02:00 | 29 |
| | 23:00-00:00 | 29 |
| | 11:00-12:00 | 28 |
| | 12:00-13:00 | 27 |

The following picture reflects the traffic demand by hour vs capacity of Baku FIR





per 28, 2022 00:00-01:00) 7 ACFT ACFT ACFT ACFT 7 ACFT

5



2. Aerodrome Movements Statistics Data

2.1 Heydar Aliyev International airport

2.1.1 Total number of movements at Baku/Heydar Intl' Aliyev airport recorded in December is **4592** ACFT. Average number of movements per day is **149** ACFT (Peak day, December 08, 2022 – **162** ACFT; low day, December 31, 2022 – **119** ACFT).

Comparison with December 2021 - +34.7%.





2.1.2 Comparative chart 2018 - 2022

The number of movements at Baku/Heydar Intl' Aliyev airport recorded in Y2022 is **52585** ACFT. Average number of movements per day is **145** ACFT. Comparison with Y2021 – **+60.0%**.



2.1.3 Air traffic flows – Load of SIDs. Baku/Heydar Aliyev



2.1.4 Air traffic flows - Load of STARs.

Baku/Heydar Aliyev Arrival Flows









2.1.6 Types of flights



2.1.7 Passenger flights (Budget/low-cost vs classic)

Budget/low-cost airlines: **Buta Airways, Fly Dubai**, **Air Arabia**, **Air Arabia Abu Dhabi**, **Jazeera Airways**, **Pegasus Airlines**, **Flynas**, **Fly Arystan**, **WizzAir** and **WizzAir Abu Dhabi**.





2.1.8 Aircraft Operators - Top 6 Airspace Users



Note: This chart shows the number of flights in December 2022

2.1.9 Aircraft Operators – Airlines of Azerbaijan vs international airlines



2.1.10 Traffic segments - Domestic vs International



2.2 Nakhchivan International airport

Total number of movements at Nakhchivan International airport recorded in December is **355** ACFT. Average number of movements per day is **12** ACFT. Comparison with December 2021 - -3.5%.





The number of movements at Nakhchivan International airport recorded in Y2022 is 6132 ACFT. Average number of movements per day is 17 ACFT. Comparison with Y2021 - +33.7%.





2022 Air

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2.3 Ganja International airport

Total number of movements at Ganja International airport recorded in December is 144 ACFT. Average number of movements per day is 5 ACFT. Comparison with December 2021 - +136.1%.



The number of movements at Ganja International airport recorded in Y2022 is 1393 ACFT. Average number of movements per day is 4 ACFT. Comparison with Y2021 - +213.0%.



2.4 Gabala International airport

Total number of movements at Gabala International airport recorded in December is 8 ACFT. Average number of movements per day is 0.3. Comparison with December 2021 - -50.0%.





The number of movements at Gabala International airport recorded in Y2022 is 301 ACFT. Average number of movements per day is 0.8. Comparison with Y2021 - +63.6%.





UBBQ - Gabala



2.5 Lenkoran International airport

Total number of movements at Lenkoran International airport recorded in December is 26 ACFT. Average number of movements per day is 0.8. Comparison with December 2021 - -7.1%.



The number of movements at Lenkoran International airport recorded in Y2022 is 326 ACFT. Average number of movements per day is 0.9. Comparison with Y2021 - +33.1%.



2.6 Fuzuli International airport

Total number of movements - 4 ACFT Average number of movements per day - 0.2

2.7 Zagatala International airport

No movements were recorded

2.8 Zangilan airport

Total number of movements - 6 ACFT Average number of movements per day - 0.2.

2.9 Yevlakh airport

No movements were recorded

3. VFR Movements Statistics data

3.1 Baku/Zabrat airport

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Total number of VFR movements at Baku/Zabrat airport recorded in December is 1229 ACFT. Average number of movements per day is 40 ACFT Comparison with December 2021 - -5.5%.



The Baku/Zabrat aerodrome is the base of training flights for student pilots of the National Aviation Academy. The student pilot training program includes en-route flight training and training maneuvers (take-off, landing, go-around) on the Cessna-172 aircraft.

JUN

JUL







SEP

AUG



3.2 Pirallahi heliport

Total number of VFR movements at Pirallahi heliport recorded in December is 436 ACFT. Average number of movements per day is 15 ACFT Comparison with December 2021 - +7.9%.



3.3 Chilov heliport



Total number of VFR movements at Chilov heliport recorded in December is 412 ACFT. Average number of movements per day is 14 ACFT Comparison with December 2021 - -4.6%.

3.4 Neft Dashlari heliport

Total number of VFR movements at Neft Dashlari heliport recorded in December is 284 ACFT. Average number of movements per day is 10 ACFT. Comparison with December 2021 - -0.7%.





3.5 Helipads on the ships and offshore drilling rigs in the Caspian Sea.

Total number of VFR movements at helipads on the ships and offshore drilling rigs in the Caspian Sea recorded in December is 203 ACFT. Average number of movements per day is 7 ACFT

Comparison with December 2021 - -7.7%.





2022





2022 ŏ Air _____



4. Overflight Air Traffic Statistics Data

4.1 General Air Traffic Statistics Data

The number of overflights via Baku FIR recorded in December is 11566 ACFT. Average number of overflights per day is 374 ACFT (Peak day, December 09, 2022 - 418 ACFT; low day, December 31, 2022 - 341 ACFT). Comparison with December 2021 - +186.9%.



The number of overflights via Baku FIR recorded in Y2022 is 114875 ACFT. Average number of overflights per day is 315 ACFT. Comparison with Y2021 - +144.1%.

Overflight traffic - Comparative chart 2018-2022 120000 100000 90000 80000 70000 60000 50000 40000 30000 20000 10000 0 2018 2019 2020 2021 2022



4.4 Air traffic flows - main overflight flows







5. Key Performance Indicators (KPIs)

This report presents Key Performance Indicators (KPIs) to assess the operational efficiency of the "Azeraeronavigation" ATD in terms of provision of air traffic services. All the calculations are done for "Bakuaeronavigation" due to low traffic at the regional airports.

5.1 KPI – Staff Productivity

KPI Staff productivity is a measure of the production output per staff member employed or per hours worked.

«KPI – Staff Productivity» is calculated by the formula: the value of "number of aircraft" is divided by the value of "number of ATCOs"

| Droductivity - | Number of ACFT |
|----------------|----------------|
| FIGURE FIGURE | Number of ATCO |

5.1.1 KPI – En-route (ENR)

Overflight traffic data only is used for calculation of Staff productivity (Enroute). KPI is ACFT/ATCO

KPI Staff Productivity - ENR 252 ACFT/ATCO.

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 2021 | 70 | 67 | 88 | 92 | 94 | 100 | 110 | 94 | 69 | 76 | 81 | 88 |
| 2022 | 89 | 86 | 187 | 183 | 210 | 236 | 257 | 259 | 249 | 251 | 244 | 252 |



5.1.2 KPI – Staff productivity (Baku TMA)

Aerodrome movements data of Baku/Heydar Aliyev and other aerodromes within Baku TMA is used for calculation for KPI - Staff productivity (Baku TMA). KPI is ACFT/ATCO

KPI Staff productivity - Baku TMA

| 61 ACFT | ATCO. |
|---------|-------|
| - | |

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 2021 | 22 | 22 | 29 | 29 | 32 | 42 | 48 | 48 | 40 |
| 2022 | 43 | 36 | 49 | 43 | 53 | 64 | 77 | 76 | 66 |

KPI Staff Productivity - Baku TMA



71 Hour/ATCO.

5.1.3 KPI - Staff Productivity (ATCO's workload)

«KPI – Staff Productivity (ATCO's workload)» is calculated by the formula: the value of "flight hours controlled" is divided by the value of "number of ATCOs". KPI is Hour/ATCO

KPI Staff Productivity (ATCO's workload)

Total Flight Duration ATC Staff Productivity = Number of ATCO

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 2021 | 21 | 20 | 27 | 28 | 29 | 34 | 37 | 35 | 27 |
| 2022 | 32 | 30 | 53 | 50 | 59 | 68 | 75 | 75 | 70 |





| Oct | Nov | Dec |
|-----|-----|-----|
| 40 | 39 | 45 |
| 65 | 60 | 61 |

Oct Nov Dec

19



5.2 KPI – Traffic Efficiency

«KPI – Traffic Efficiency» is calculated by the formula the value of "total flown distance in nautical miles" is divided by the value of "number of ATCOs". KPI is NM/ACFT

| Efficiency | _ | Total Distance |
|------------|---|----------------------|
| Eniciency | = | Total Number of ACFT |

KPI Efficiency (FIR)

232 NM/ACFT.

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 2021 | 218 | 219 | 224 | 228 | 225 | 224 | 226 | 223 | 218 | 218 | 220 | 221 |
| 2022 | 223 | 227 | 230 | 232 | 229 | 228 | 227 | 228 | 228 | 229 | 231 | 232 |



KPI Efficiency (ENR)

253 NM/ACFT.

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 2021 | 242 | 244 | 251 | 255 | 256 | 258 | 259 | 257 | 250 | 250 | 251 | 255 |
| 2022 | 257 | 259 | 250 | 250 | 248 | 249 | 250 | 250 | 250 | 251 | 253 | 253 |





5.3 KPI – Capacity Utilization

Capacity utilisation assesses how effectively capacity is managed. It is a measure of accommodated demand, compared to the available capacity of Baku FIR.

KPI - Capacity Utilization is calculated by the formula: the value of "accommodated demand" is divided by the value of "capacity" and is multiplied by 100%.

KPI Capacity Utilization 34%





Air



5.4 KPI – Distance flown

5.4.1 Baku FIR (Combined en-route traffic and aerodrome movements).

| | Jan | Feb | Mar | Apr | May | Jun |
|------|-----------|-----------|-----------|-----------|-----------|-----------|
| 2021 | 1 062 507 | 1 039 863 | 1 400 218 | 1 460 423 | 1 515 413 | 1 744 515 |
| 2022 | 1 629 180 | 1 527 413 | 2 833 417 | 2 711 652 | 3 161 927 | 3 618 131 |
| | | | | | | |
| | Jul | Aug | Sep | Oct | Nov | Dec |
| | | | | | | |
| 2021 | 1964 845 | 1796 349 | 1 370 123 | 1 442 685 | 1 484 969 | 1 661 711 |

Total Distance Flown (NM) - Baku FIR



| | Jan | Feb | Mar | Apr | May | Jun |
|------|-----------|-----------|-----------|-----------|-----------|-----------|
| 2021 | 772 898 | 742 082 | 1 012 422 | 1 067 976 | 1 093 656 | 1 183 017 |
| 2022 | 1 041 895 | 1 012 702 | 2 132 958 | 2 093 070 | 2 391 688 | 2 693 565 |

| | Jul | Aug | Sep | Oct | Nov | Dec |
|------|-----------|-----------|-----------|-----------|-----------|-----------|
| 2021 | 1 298 719 | 1 106 725 | 792 689 | 869 290 | 924 948 | 1025002 |
| 2022 | 2 937 509 | 2 974 850 | 2 851 526 | 2 884 351 | 2 823 208 | 2 922 520 |





5.4.3 Aerodrome movements

| | Jan | Feb | Mar | Apr | May |
|------|---------|---------|---------|---------|--------|
| 2021 | 289 609 | 297 781 | 387 796 | 392 447 | 421 75 |
| 2022 | 587 285 | 514 711 | 700 459 | 618 582 | 770 23 |
| | | | | | |

| | Jul | Aug | Sep | Oct | No |
|------|-----------|-----------|---------|---------|------|
| 2021 | 666 126 | 689 624 | 577 434 | 573 395 | 560 |
| 2022 | 1 100 805 | 1 091 989 | 938 149 | 939 124 | 8512 |



5.5 KPI – Number of airspace users

The main goal of AZANS, as an air navigation services provider, is to ensure flight safety and provide high-quality air navigation services. One of the indicators is the preservation and increase in the number of the service users - airlines.

Only commercial airlines operating cargo and passenger transportation were used to measure KPI – Number of airspace users. State and general aviation were not taken into account.

| KPI - Number of airspace users (FIR) | 172 Airlines |
|--------------------------------------|---------------|
| KPI - Number of airspace users (ENR) | 158 Airlines. |
| KPI - Number of airspace users (AD) | 43 Airlines |
| | |





| , | Jun |
|----|---------|
| 57 | 561 498 |
| 39 | 924 566 |
| | |

| | Dec |
|----|---------|
| 21 | 636 709 |
| 69 | 867 531 |
| | |

Aerodrome movements

KPI – Number of airspace users

Air _____



5.6 KPI – CO2 emissions

Aviation's impact on climate change is measured on an analysis of fuel use and CO2 reduction. AZANS does its part to reduce aviation's impact on the environment by introducing a range of initiatives to improve ATM efficiency:

- Improving airspace utilisation and route network;
- Efficient TMAs design;
- Required Navigation Performance Approach and Departure Procedures;
- · Continuous Descent Approach;
- Priority clearance from air traffic control for taxiing and departure;
- Real time updates of current weather and wind conditions that allow the flight crew to modify their flight path.

All the KPI's for CO2 emission is calculated for FIR, En-route (ENR and Landing-take-off Operations (LTO).

5.6.1 Total CO2 emissions

| KPI - Total CO2 (FIR) | 133 393 tons. |
|-----------------------|---------------|
| KPI - Total CO2 (ENR) | 112 911 tons. |
| KPI - Total CO2 (LTO) | 20 482 tons. |



🛑 LTO 🛛 🔵 ENR

5.6.2 Average CO2 per a flight hour

KPI - Average CO2 per flight hour (FIR) KPI - Average CO2 per flight hour (ENR) KPI - Average CO2 per flight hour (LTO) 15.5 ton/hour 18.0 ton/hour 8.7 ton/hour







5.6.3 Average CO2 per a nautical mile flight distance

| (PI - Average CO2 per NM (FIR) | 35 kg/NM |
|--------------------------------|----------|
| (PI - Average CO2 per NM (ENR) | 39 kg/NM |
| (PI - Average CO2 per NM (LTO) | 24 kg/NM |



ENR





Average CO2 per a nautical mile flight distance



ber 2022 ŏ Air



5.6.4 Average CO2 a per flight

KPI - Average CO2 per ACFT (FIR) KPI - Average CO2 per ACFT (ENR) KPI - Average CO2 per ACFT (LTO)

10







5.7 CANSO Productivity KPIs

5.7.1 ATCO in OPS hour productivity (CANSO KPI 2B)

KPI "ATCO in OPS hour productivity" is calculated by formula "IFR flight hours" divided by "ATCOs in OPS hours"

| ATCO in OPS hour productivity (AZANS) | 0.785 |
|--|-------|
| ATCO in OPS hour productivity (Baku ATCC) | 1.643 |
| ATCO in OPS hour productivity (Regional ATCCs) | 0.05 |



5.7.2 Working hours per ATCO in OPS (CANSO KPI 3B)

KPI "Working hours per ATCO in OPS" is calculated by formula "ATCO in OPS hours" divided by "No of ATCO in OPS"

Monthly working hours per ATCO in OPS (AZANS) Monthly working hours per ATCO in OPS (Baku ATCC) Monthly working hours per ATCO in OPS (Regional ATCCs)



5.7.3 IFR hours per ATCO in OPS (CANSO KPI 3C)

KPI "IFR hours per ATCO in OPS" is calculated by formula "IFR flight hours" divided by "No of ATCO in OPS"

Annual IFR hours per ATCO in OPS (AZANS) Annual IFR hours per ATCO in OPS (Baku ATCC) Annual IFR hours per ATCO in OPS (Regional ATCCs)



Baku ATCC







Monthly IFR hours per ATCO in OPS





5.7.4 Ratio of Frontline Service Staff to ATCO in OPS (CANSO KPI 3D)

KPI "Ratio of Frontline Service Staff to ATCO in OPS" is calculated by formula "No. Frontline Service Support Staff" divided by "No of ATCO in OPS"

Ratio of Frontline Service Staff to ATCO in OPS - 1.48

Ratio of Frontline Service Staff to ATCO in OPS



5.8 KPI – CCO/CDO operations

Introducing of CCO (Continues Climb Operations) and CDO (Continues Descend Operations) is an initiative to improve ATM efficiency, decrease fuel use and CO2 reduction.

«KPI – CCO/CDO operations » measures percentage of ACFT flown as CCO/ CDO at airport Baku/Heydar Aliyev.

KPI - CCO/CDO operations December 2022 98%



Flights receiving optimum climb/descend profiles (%)



AIR TRAFFIC DEPARTMENT AZERAERONAVIGATION

Heydar Aliyev International Airport AZ1044–Baku | Azerbaijan

