

AIR TRAFFIC
**STATISTICS
REPORT**



NOVEMBER 2021



AZANS
AZERAERONAVIGATION

25
1996-2021
ANNIVERSARY



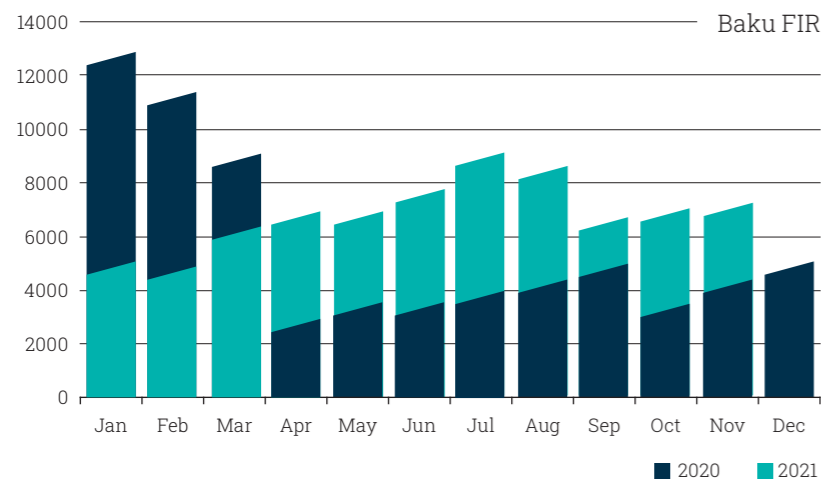
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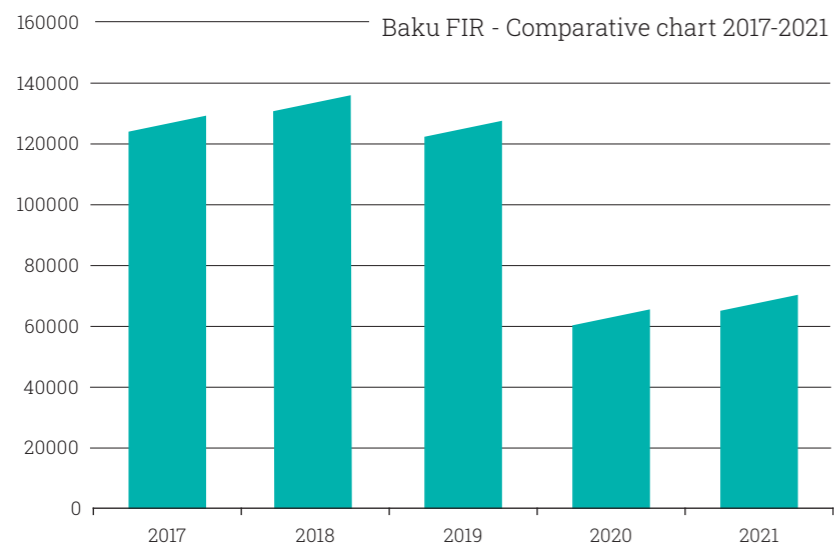
1. Baku FIR Air Traffic Statistics Data (IFR movements).

1.1 General Air Traffic Statistics Data

The number of IFR movements within Baku FIR recorded in November is **6757** ACFT. Average number of IFR movements per day is **226** ACFT (Peak day, November 07, 2021 – **296** ACFT; low day, November 22, 2021 – **198** ACFT). Comparison with November 2020 – **+55.1%**.



The number of IFR movements within Baku FIR recorded for eleven months 2021 is **73345** ACFT. Average number of IFR movements per day is **219** ACFT. Comparison with the same period of 2020 – **+13.9%**.



The number of IFR movements within Baku recorded in November
6757 ACFT



Average number of IFR movements per day
226 ACFT

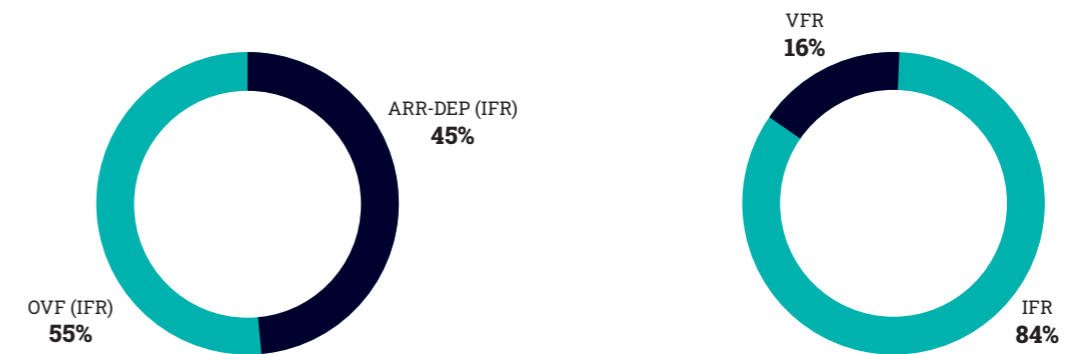


Comparison with November 2020
+55.1%

1.2 Traffic Segments.

1.2.1 The number of IFR movements within Baku FIR recorded in November is **6757** ACFT, where **3695** ACFT are overflight traffic and **3062** ACFT are aerodrome movements.

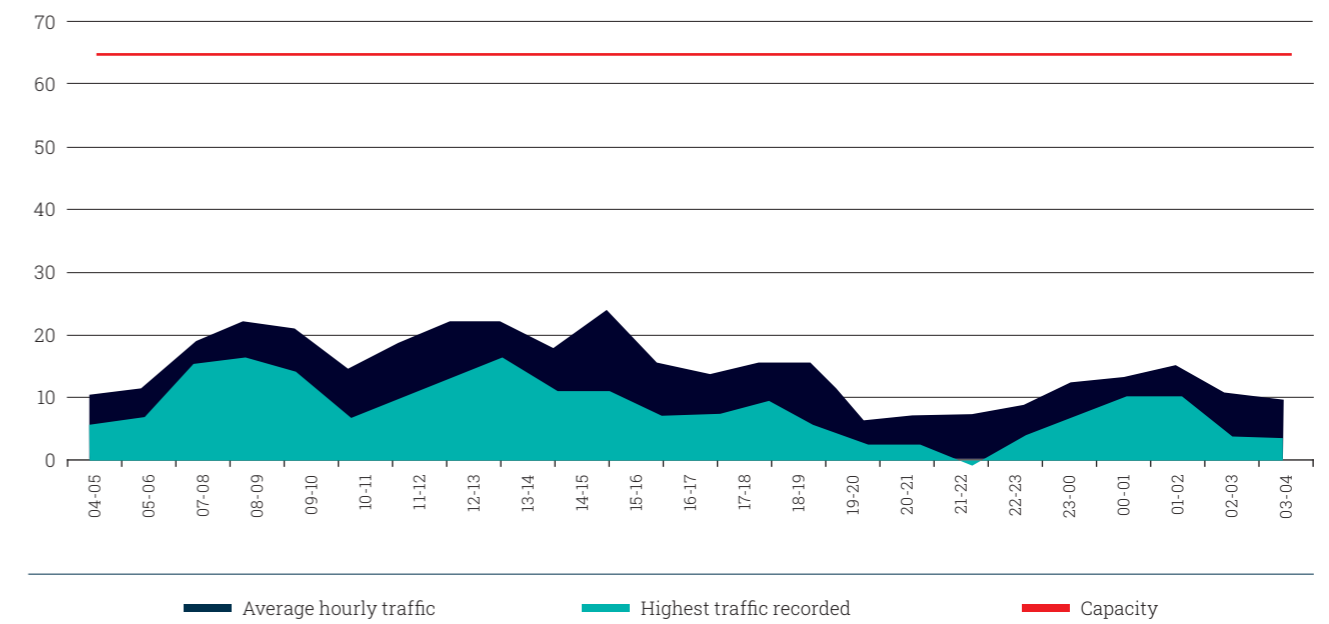
1.2.2 Total number of movements within Baku FIR recorded in November is **7997** ACFT, where **6757** ACFT are IFR movements and **1240** ACFT are VFR movements. Average number of movements per day is **267** ACFT. Comparison with November 2020 – **+50.2%**.



1.3 Capacity vs traffic demand

Highest traffic recorded	25 ACFT (November 06, 2021 14:00-15:00)
Peak hour (November average data)	07:00-08:00 15 ACFT 12:00-13:00 15 ACFT

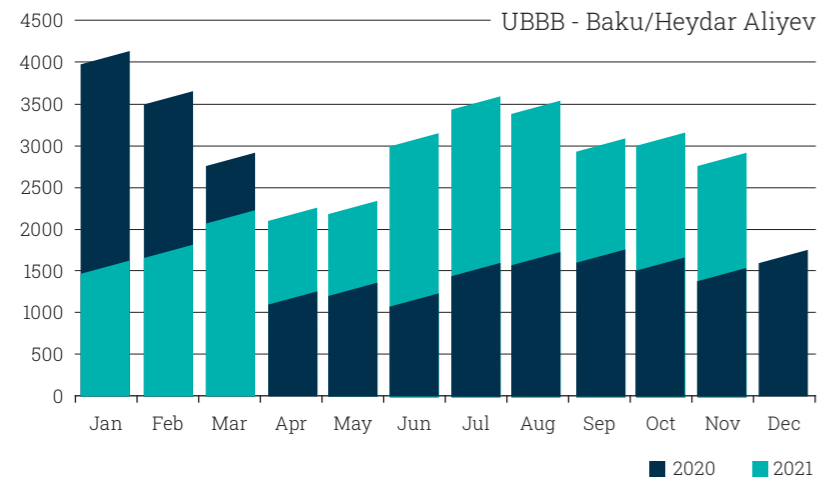
The following picture reflects the traffic demand by hour vs capacity of Baku FIR.



2. Aerodrome Movements Statistics Data.

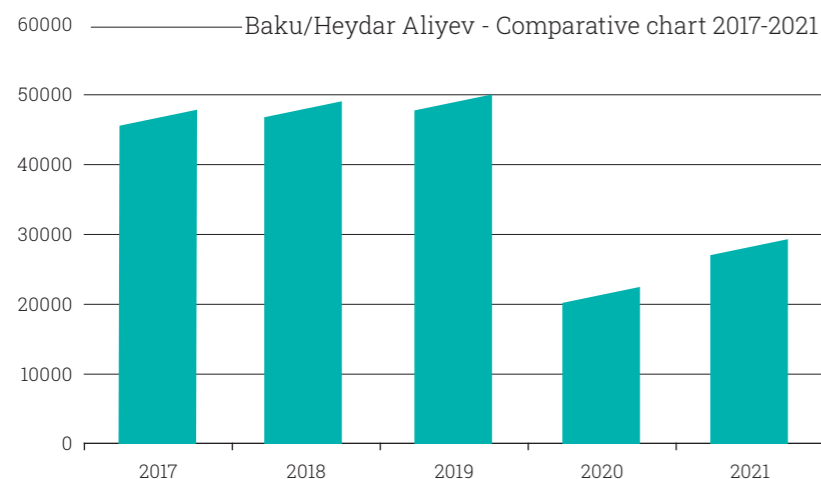
2.1 Heydar Aliyev International airport.

2.1.1 Total number of movements at Baku/Heydar Intl' Aliyev airport recorded in November is **2965** ACFT. Average number of movements per day is **99** ACFT (Peak day, November 26, 2021 – **114** ACFT; low day, November 22, 2021 – **82** ACFT). Comparison with November 2020 – **+95.7%**.



2.1.2 Comparative chart 2017 - 2021

The number of movements at Baku/Heydar Intl' Aliyev airport recorded for eleven months 2021 is **29459** ACFT. Average number of movements per day is **88** ACFT. Comparison with the same period of 2020 – **+30.4%**.



Total number of movements at Baku/Heydar Aliyev airport recorded in November 2021

2965 ACFT



Average number of movements per day

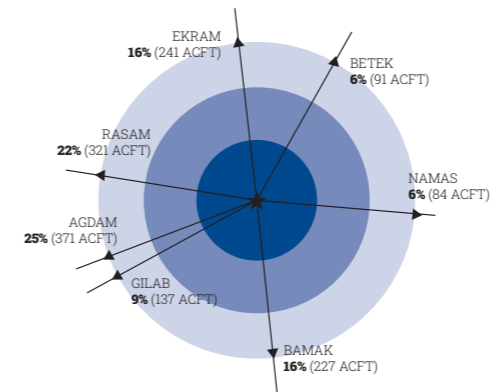
99 ACFT



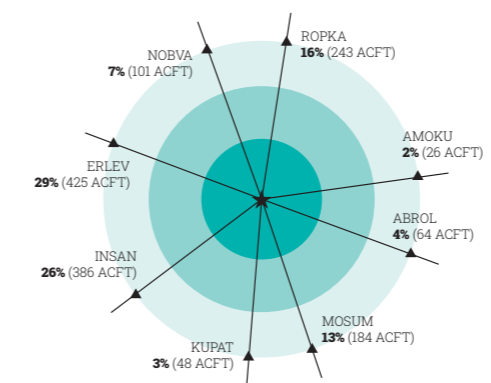
Comparison with November 2020

+95.7%

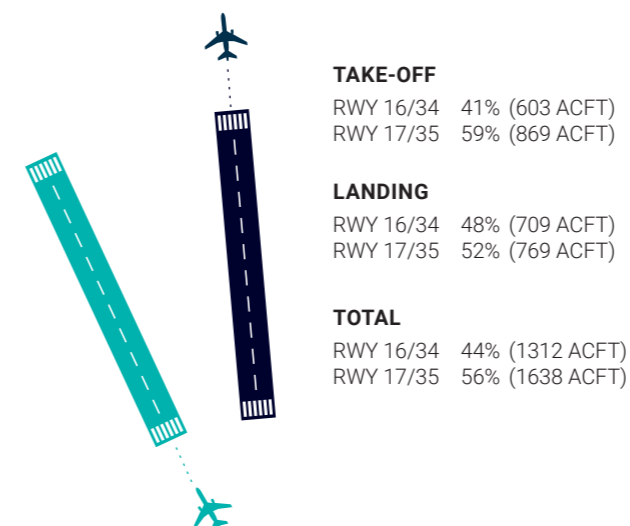
2.1.3 Air traffic flows – Load of SIDs.



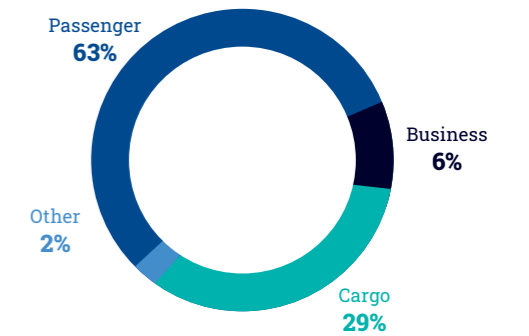
2.1.4 Air traffic flows – Load of STARs.



2.1.5 Use of RWY 16/34 and 17/35



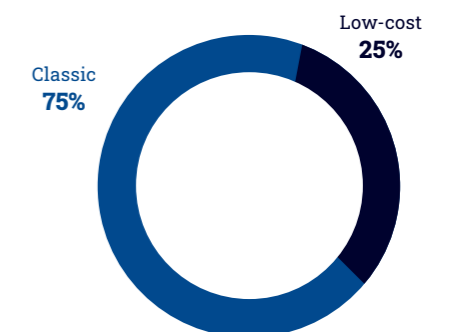
2.1.6 Types of flights



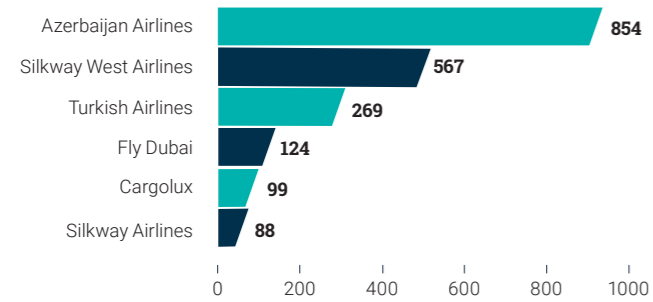
2.1.7 Passenger flights (Budget/low-cost vs classic)

Regular passenger flights, including low-cost flights, have been partially recovered since June 2021:

- Buta Airways to Astrakhan, Kiev, Tbilisi, Ankara, Istanbul (Sabiha Gokcen) and Izmir);
- Fly Dubai from Dubai
- Air Arabia from Sharjah
- Jazeera Airways from Kuwait
- WizzAir from Budapest
- Pegasus Airlines from Izmir

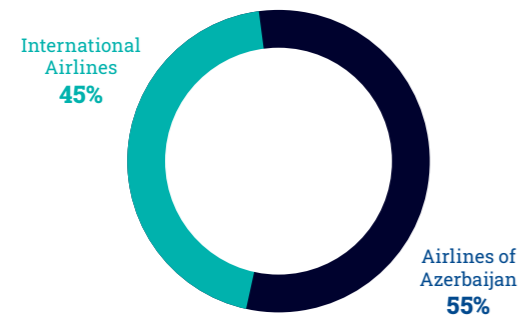


2.1.8 Aircraft Operators – Top 6 Airspace Users

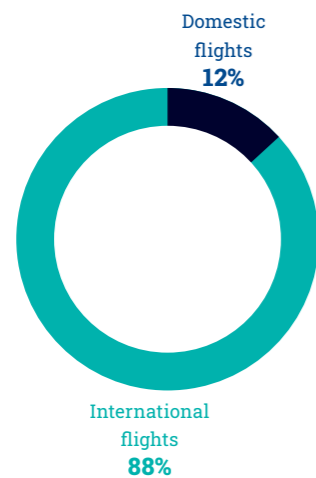


Note: This chart shows the number of flights in November 2021.

2.1.9 Aircraft Operators – Airlines of Azerbaijan vs international airlines.



2.1.10 Traffic segments – Domestic vs International.



2.2 Regional airports

The following regular passenger services have been recovered:
 - from Baku, Ganja, Moscow and Istanbul to Nakhchivan;
 - from Moscow, Saint Petersburg and Istanbul to Ganja;
 - from Moscow and Saint Petersburg to Lenkoran.

November 2021 aerodrome movements statistics data:

Nakhchivan International airport
 Total number of movements - **419** ACFT, Average number of movements per day - **12** ACFT

Ganja International airport
 Total number of movements - **46** ACFT, Average number of movements per day - **2**

Gabala International airport
 Total number of movements - **14** ACFT, Average number of movements per day - **0.5**

Lenkoran International airport
 Total number of movements - **24** ACFT, Average number of movements per day - **0.8**

Fuzuli International airport
 Total number of movements - **22** ACFT, Average number of movements per day - **0.8**

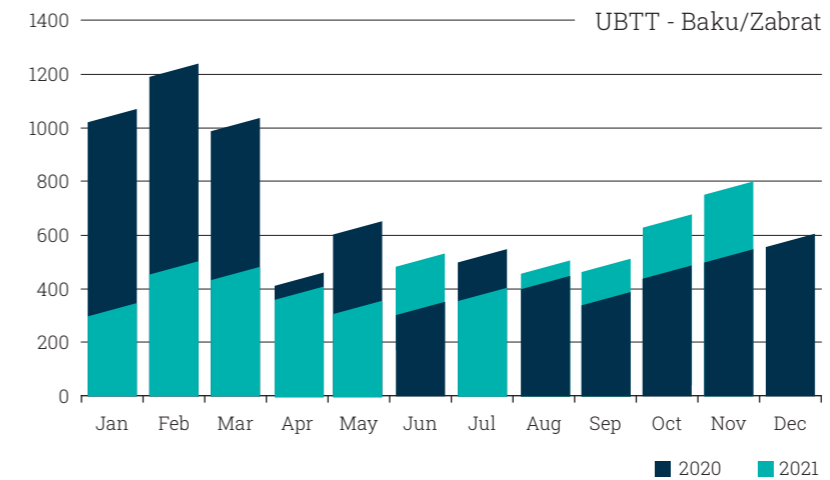
Zagatala International airport
 No movements were recorded

Yevlakh airport
 No movements were recorded

3. VFR Movements Statistics data.

3.1 Baku/Zabrat airport.

Total number of VFR movements at Baku/Zabrat airport recorded in November is **800** ACFT. Average number of movements per day is **27** ACFT. Comparison with November 2020 – **+46.8%**.



Total number of VFR movements at Baku/Zabrat airport recorded in November 2021

800 ACFT



Average number of movements per day

27 ACFT



Comparison with November 2020

+46.8%

3.2 Pirallahi heliport.



Total number of VFR movements at Pirallahi heliport recorded in November 2021

380 ACFT



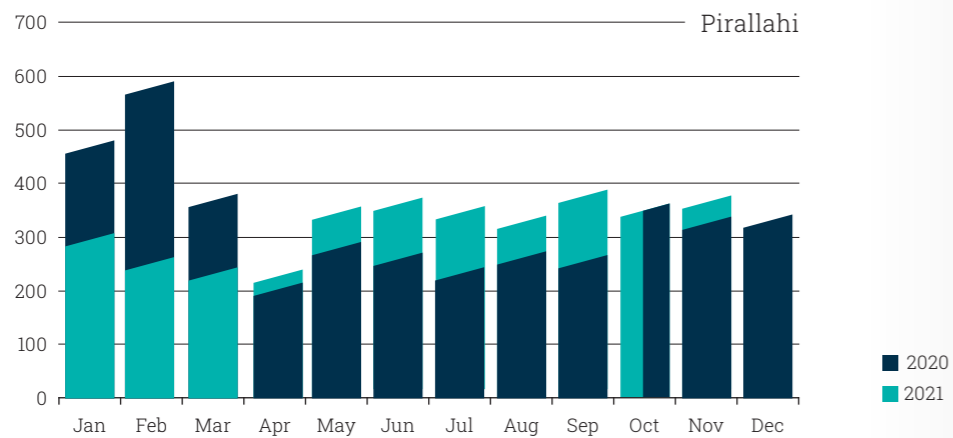
Average number of movements per day

13 ACFT



Comparison with November 2020

+13.4%



3.3 Chilov heliport.



Total number of VFR movements at Chilov heliport recorded in November 2021

400 ACFT



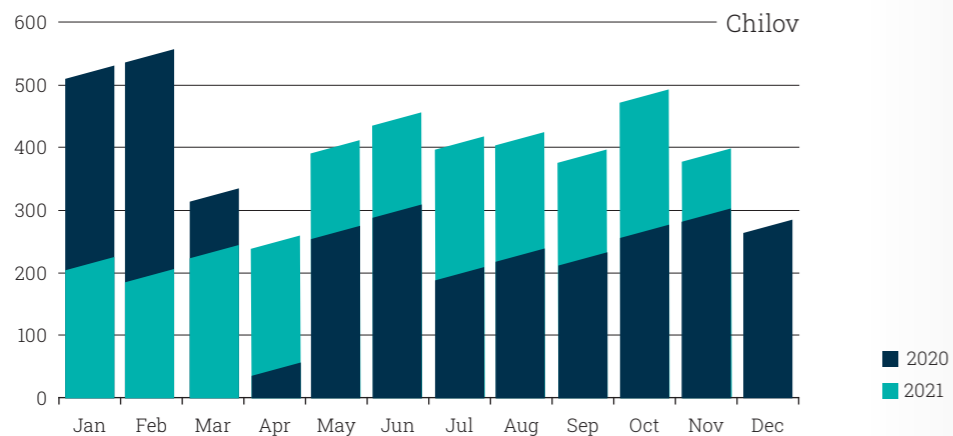
Average number of movements per day

14 ACFT



Comparison with November 2020

+31.6%



3.4 Neft Dashlari heliport.



Total number of VFR movements at Neft Dashlari heliport recorded in November 2021

270 ACFT



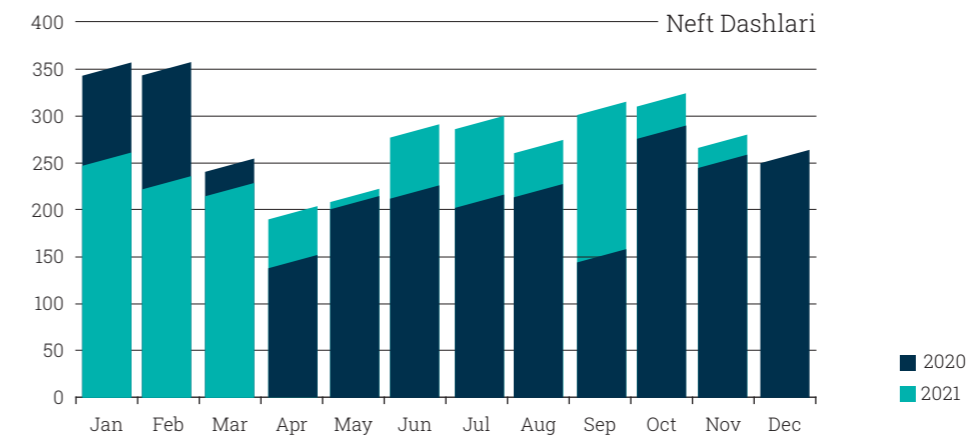
Average number of movements per day

9 ACFT



Comparison with November 2020

+5.5%



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 November 2021

282 ACFT



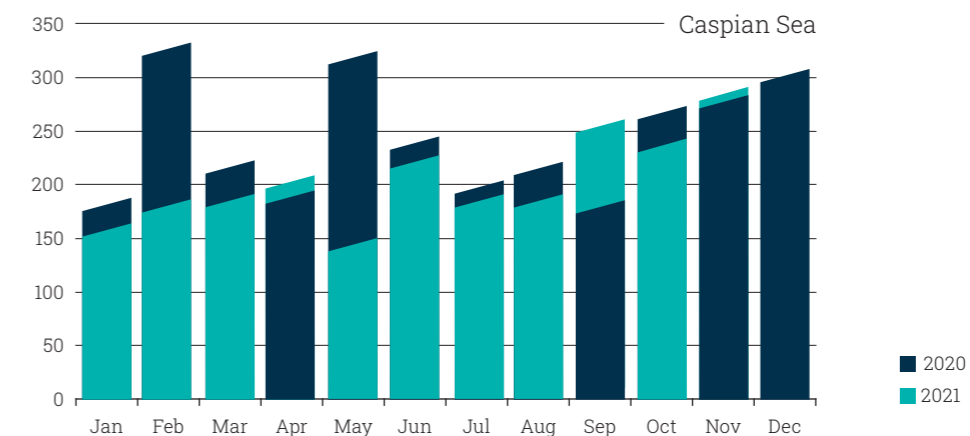
Average number of movements per day

10 ACFT



Comparison with November 2020

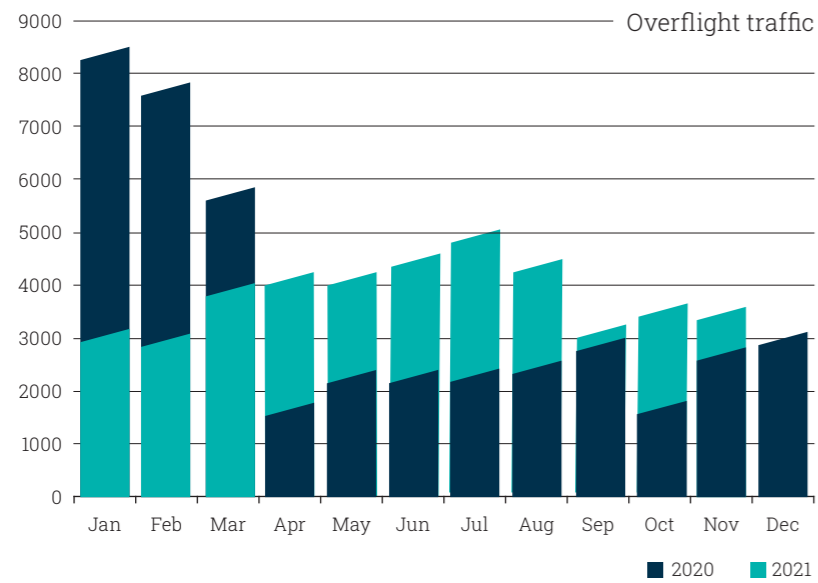
+17.5%



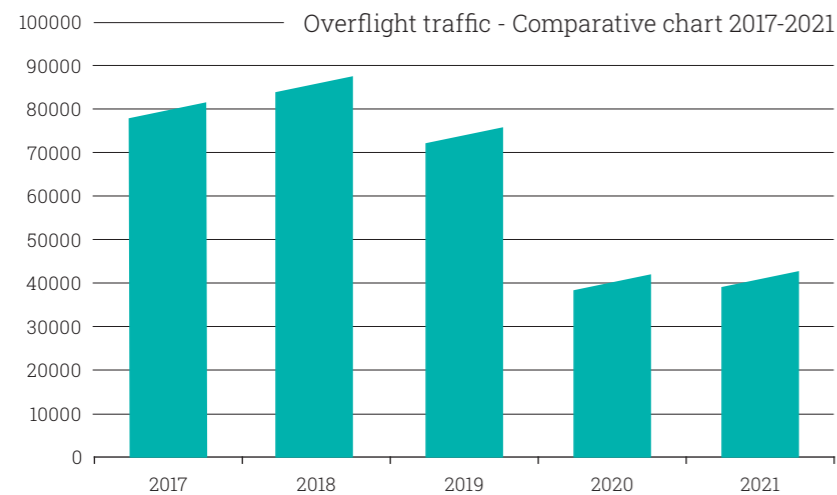
4. Overflight Air Traffic Statistics Data.

4.1 General Air Traffic Statistics Data

The number of overflights via Baku FIR recorded in November is **3695 ACFT**. Average number of overflights per day is **124 ACFT** (Peak day, November 07, 2021 – **193 ACFT**; low day, November 01, 2021 – **97 ACFT**). Comparison with November 2020 – **+32.3%**.



The number of overflights via Baku FIR recorded for eleven months 2021 is **43033 ACFT**. Average number of overflights per day is **129 ACFT**. Comparison with the same period of 2020 – **+4.5%**.



The number of overflights via Baku FIR recorded in November 2021

3695 ACFT



Average number of overflights per day

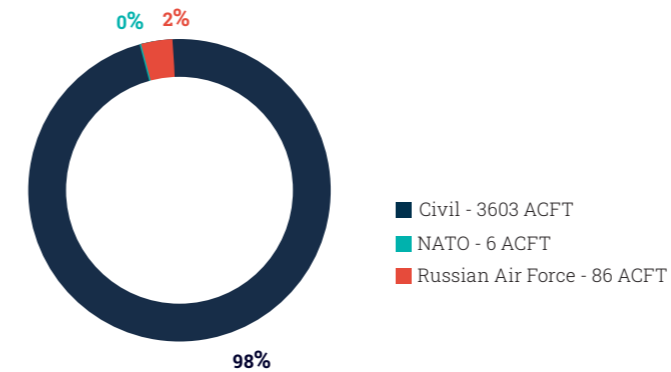
124 ACFT



Comparison with November 2020

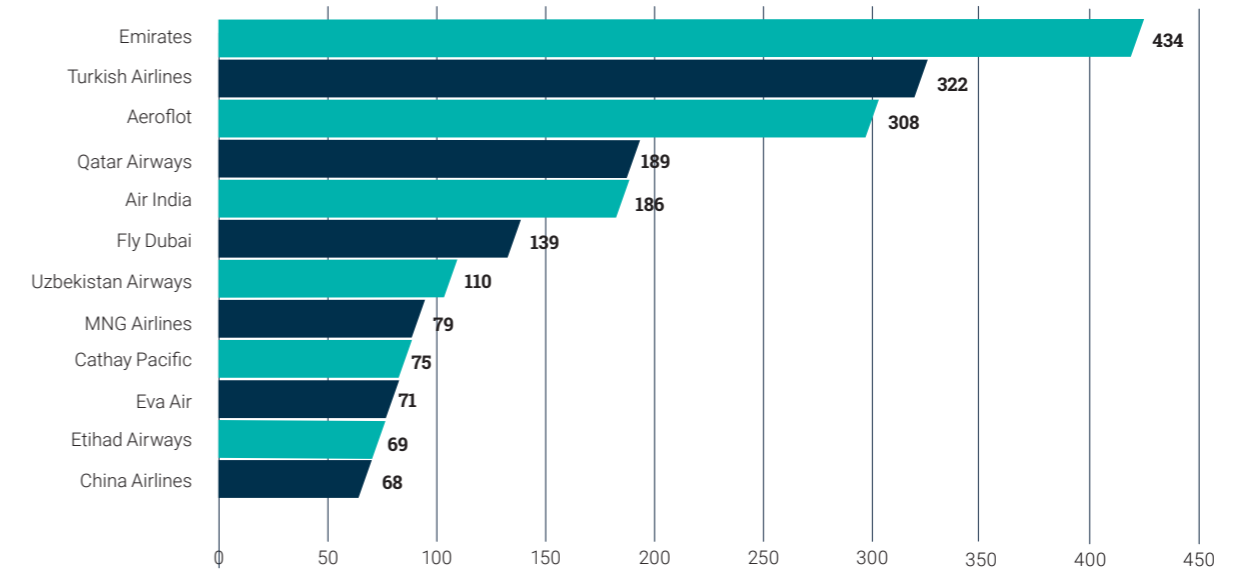
+32.3%

4.2 Traffic segments.



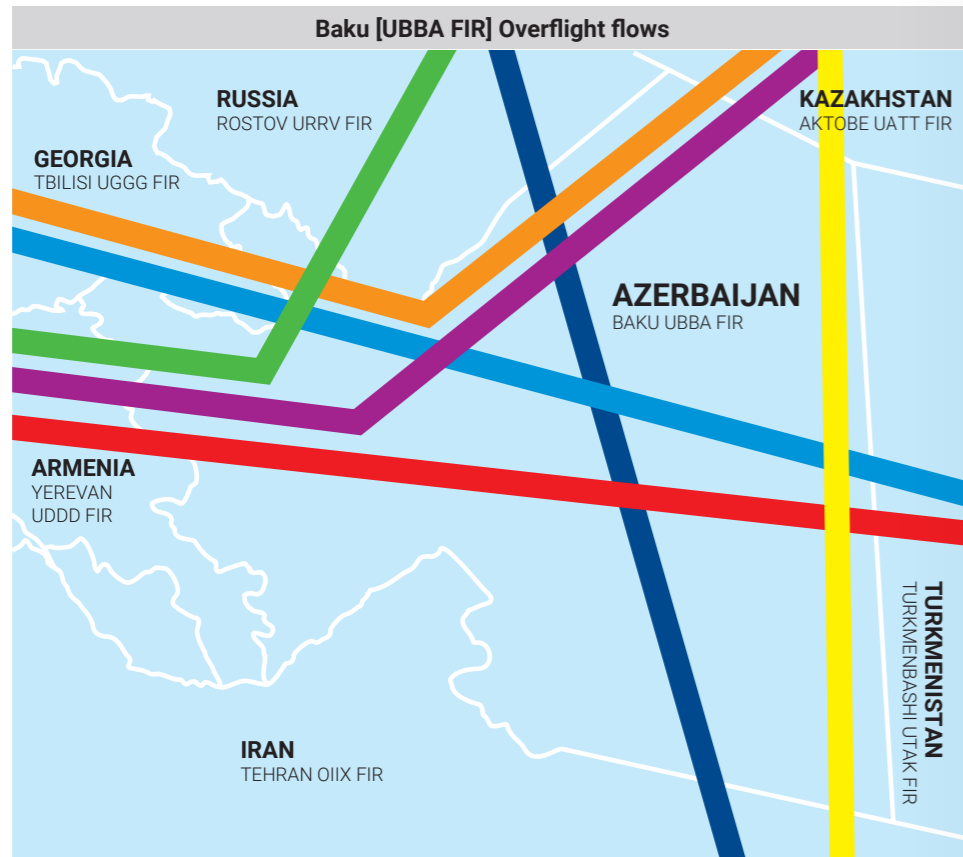
4.3 Aircraft Operators - Top 12 Airspace Users.

4.3.1 Top 12 Airlines



Note: This chart shows the number of flights in November 2021.

4.4 Air traffic flows – main overflight flows.



Georgia - Turkmenistan and v.v.	16% (583 ACFT)
Georgia - Kazakhstan and v.v.	8% (304 ACFT)
Iran - Russia and v.v.	48% (1790 ACFT)
Turkmenistan - Armenia and v.v.	7% (274 ACFT)
Kazakhstan - Armenia and v.v.	4% (128 ACFT)
Kazakhstan - Iran and v.v.	5% (192 ACFT)
Armenia - Russia and v.v.	4% (132 ACFT)
Other directions (Total)	8% (292 ACFT)

5. Key Performance Indicators (KPIs).

This report presents Key Performance Indicators (KPIs) to assess the operational efficiency of the "Azeranavigation" 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"

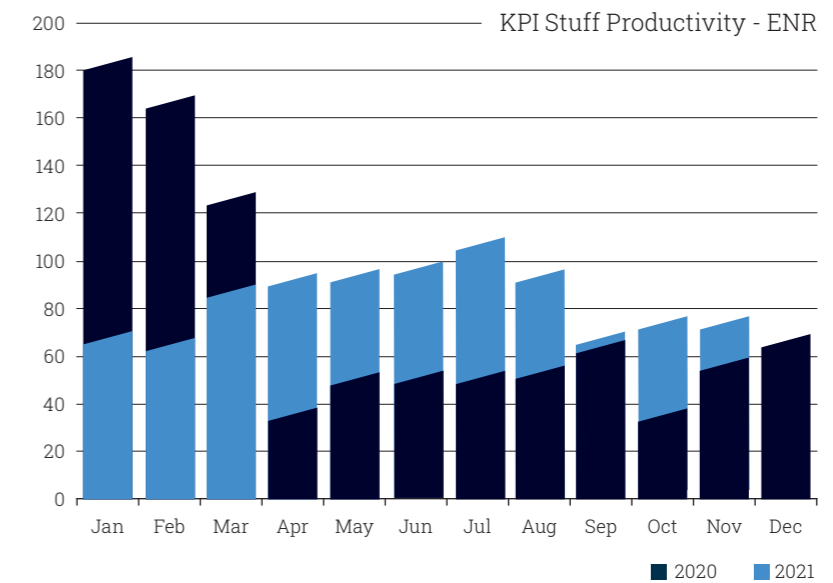
$$\text{Productivity} = \frac{\text{Number of ACFT}}{\text{Number of ATCO}}$$

5.1.1 KPI – (ENR)

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

KPI Staff Productivity - ENR November 2021 **81 ACFT/ATCO**.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	185	170	127	39	52	53	53	54	66	39	61	68
2021	70	67	88	92	94	100	110	94	69	76	81	

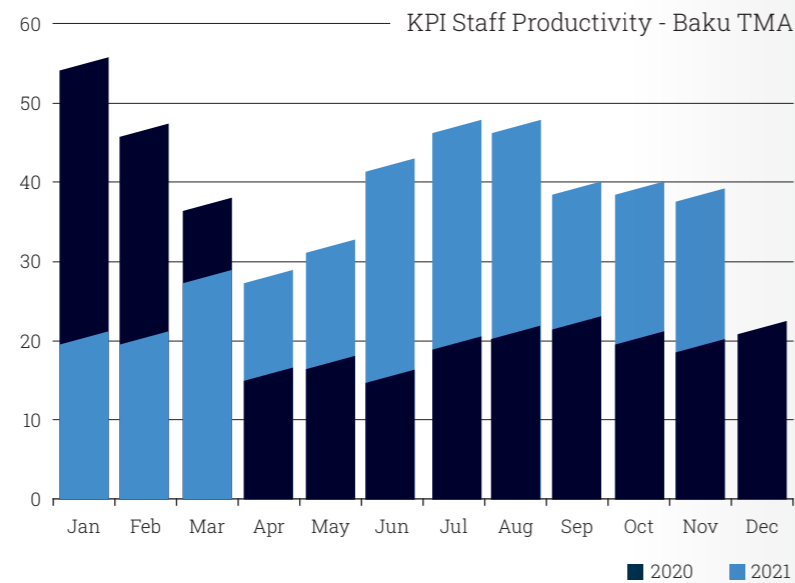


5.1.2 KPI – Staff productivity (Baku TMA)

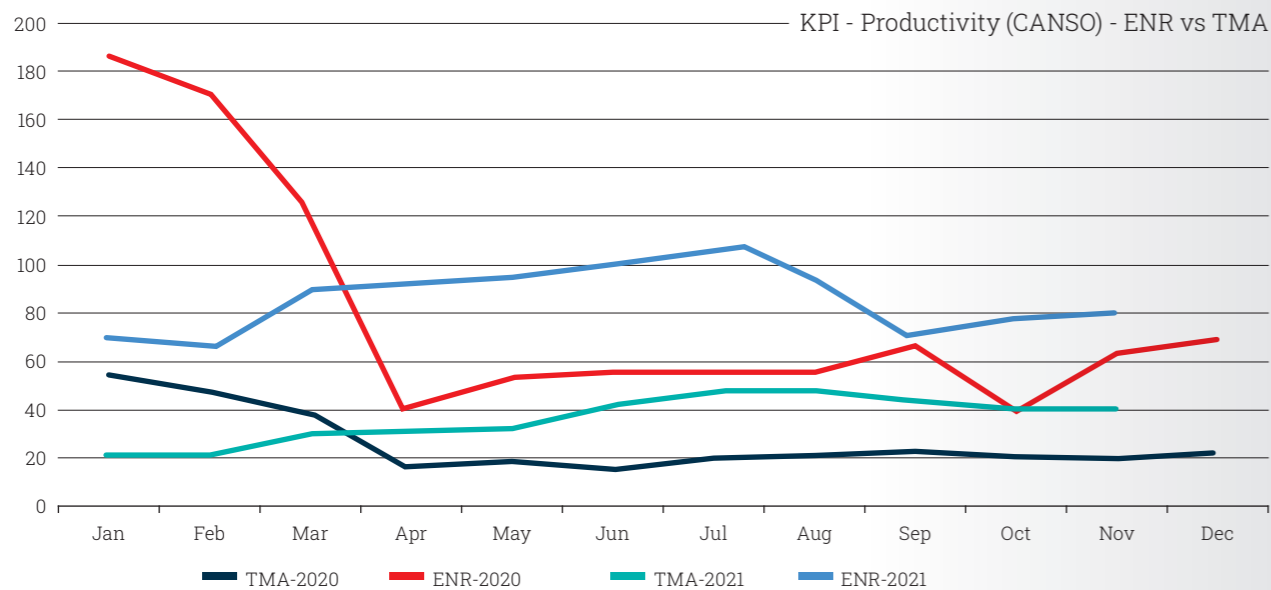
Aerodrome movements data of Baku/Heydar Aliyev and other aerodromes within Baku TMA is used for calculation for KPI – Staff productivity (Baku TMA). KPI is ACFT/ATCO

KPI Staff productivity - Baku TMA November 2021 **39 ACFT/ATCO.**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	54	47	38	18	19	17	21	23	23	22	20	23
2021	22	22	29	29	32	42	48	48	40	40	39	



5.1.3 KPI – Staff productivity (ENR vs Baku TMA)



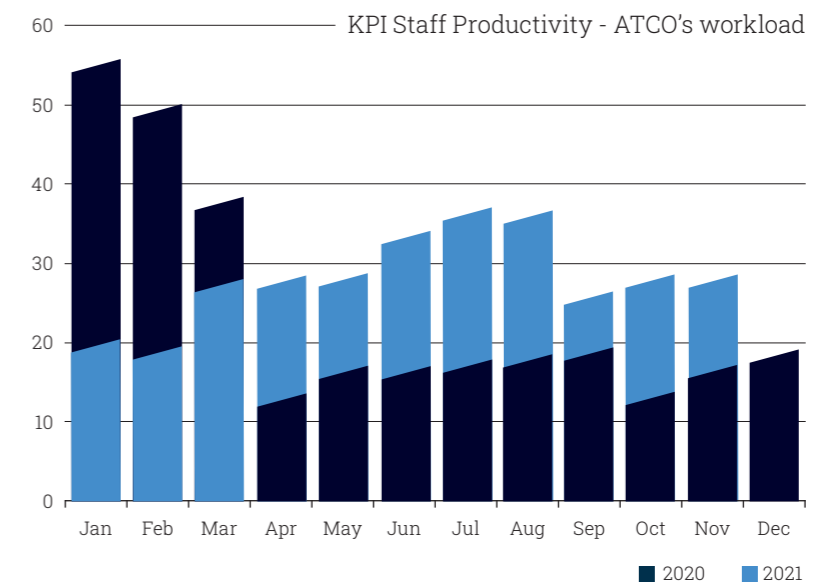
5.1.4 KPI – Staff Productivity (ATCO's workload).

«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

$$\text{ATCO Staff Productivity} = \frac{\text{Total Flight Duration}}{\text{Number of ATCO}}$$

KPI Staff Productivity (ATCO's workload) November 2021 **29 Hour/ATCO.**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	55	50	39	14	16	16	17	18	20	14	17	20
2021	21	20	27	28	29	34	37	35	27	29	29	



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.

$$\text{Efficiency} = \frac{\text{Total Distance}}{\text{Total Number of ACFT}}$$

KPI Efficiency November 2021 (FIR) **220 NM/ACFT**

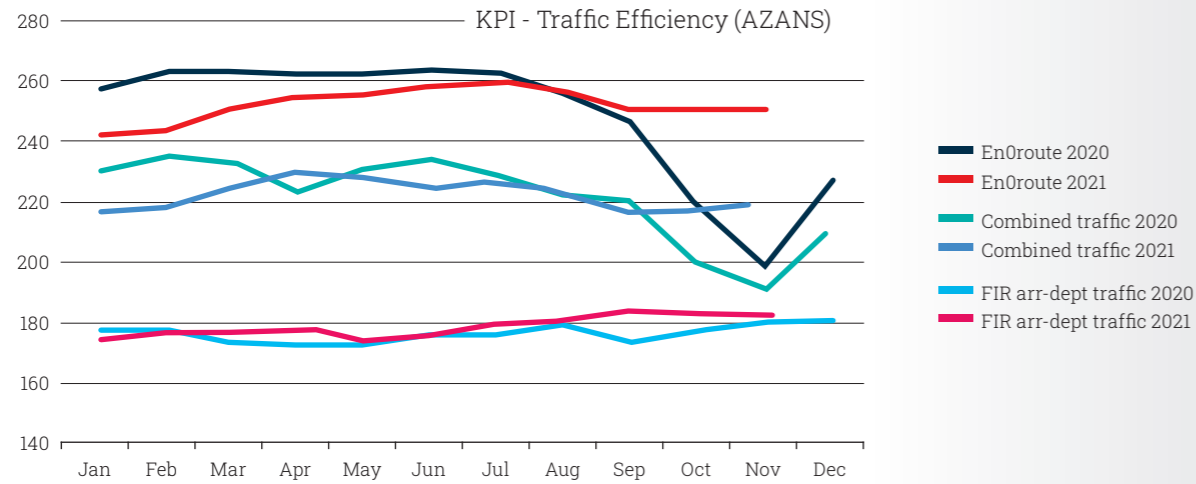
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	232	236	233	224	229	233	228	224	221	200	192	210
2021	218	219	224	228	225	224	226	223	218	218	220	

KPI Efficiency November 2021 (ENR) **251 NM/ACFT**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	259	264	264	262	263	263	262	257	248	221	198	227
2021	242	244	251	255	256	258	259	257	250	250	251	

KPI Efficiency November 2021 (AD) **183 NM/ACFT**

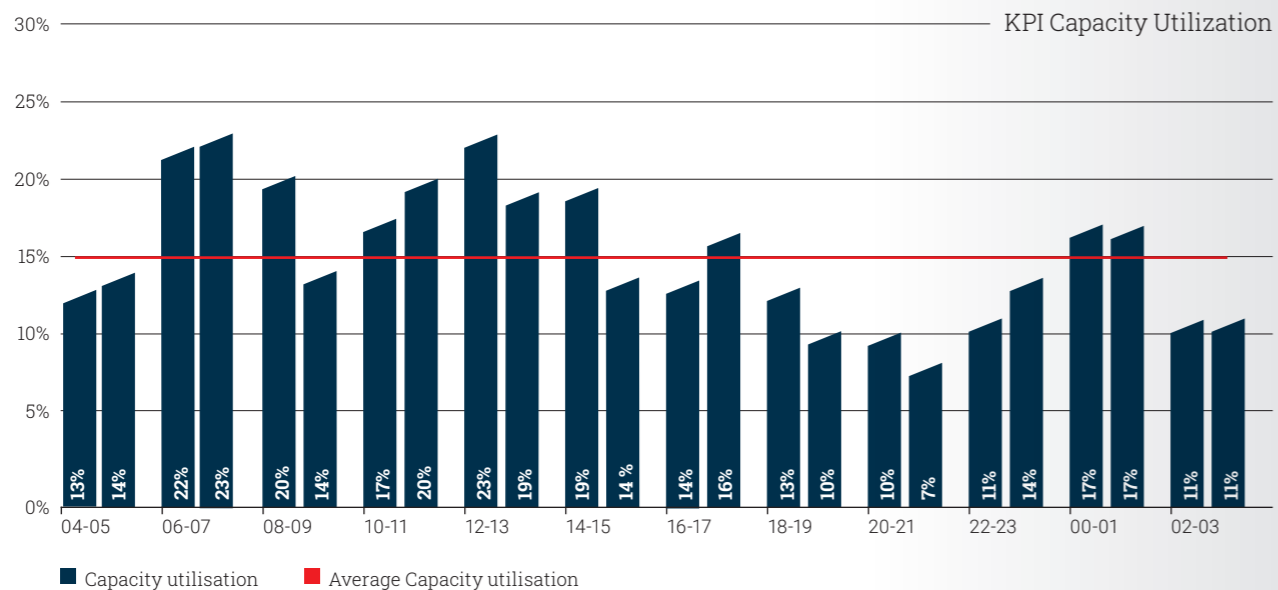
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	177	176	173	172	171	176	175	179	174	177	179	180
2021	172	175	175	177	173	175	181	183	184	183	183	



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%.

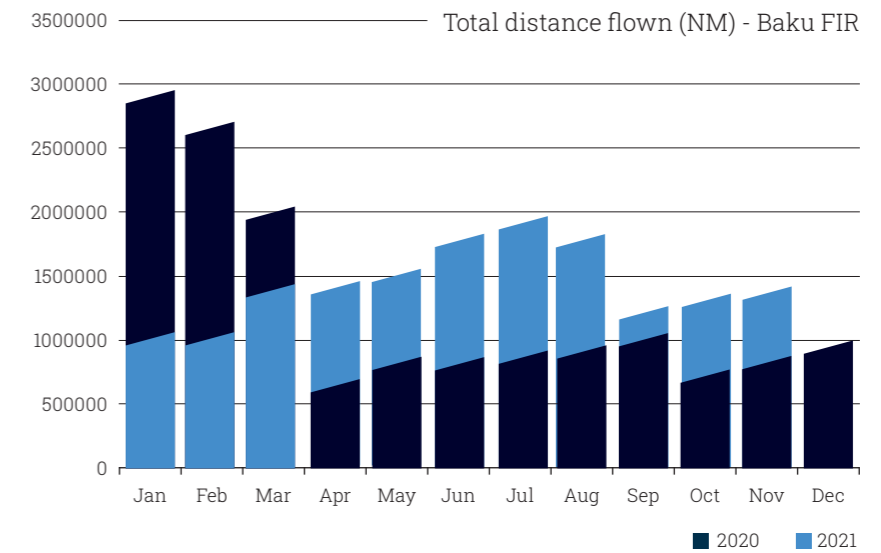


5.4 KPI – Distance flown

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

	Jan	Feb	Mar	Apr	May	Jun
2020	2 947 057	2 700 965	2 048 001	693 603	853 686	854 161
2021	1 062 507	1 039 863	1 400 218	1 460 423	1 515 413	1 744 515

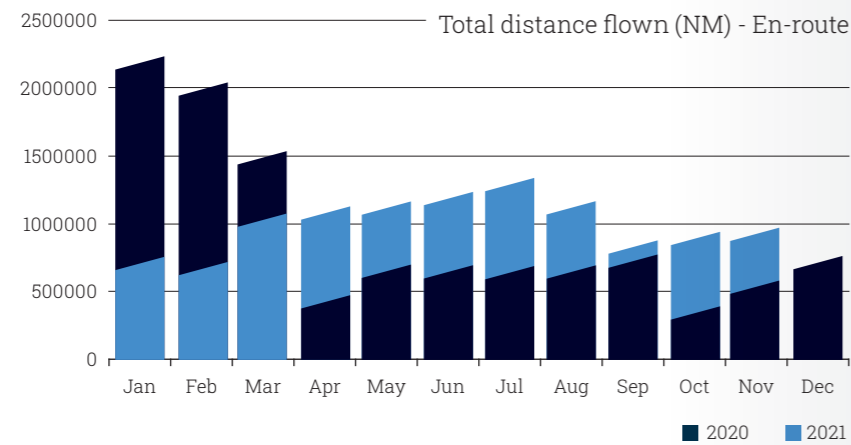
	Jul	Aug	Sep	Oct	Nov	Dec
2020	908 545	944 883	1 056 546	687 240	832 357	1 018 449
2021	1 964 845	1 796 349	1 370 123	1 442 685	1 484 969	



5.4.2 En-route traffic (overflight).

	Jan	Feb	Mar	Apr	May	Jun
2020	2 195 616	2 051 936	1 534 268	467 599	617 793	628 913
2021	772 898	742 082	1 012 422	1 067 976	1 093 656	1 183 017

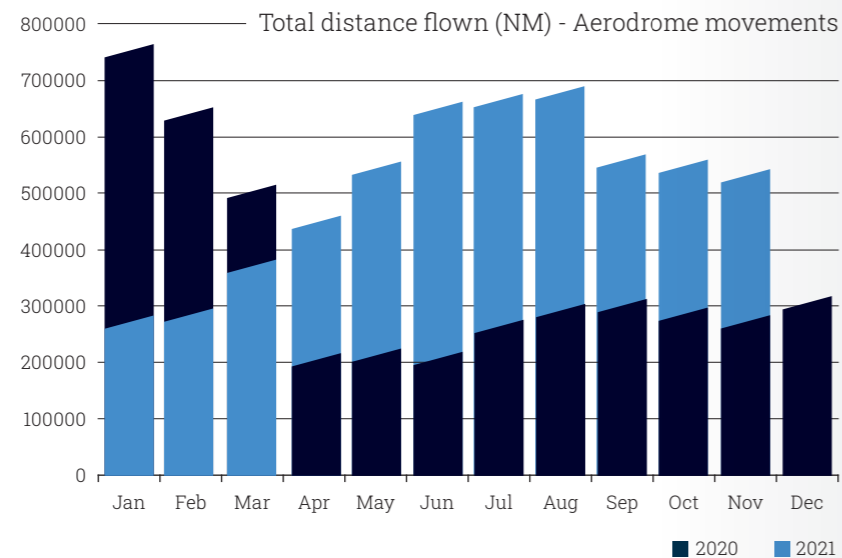
	Jul	Aug	Sep	Oct	Nov	Dec
2020	632 922	647 583	747 443	394 358	552 471	702 137
2021	1 298 719	1 106 725	792 689	869 290	924 948	



5.4.3 Aerodrome movements.

	Jan	Feb	Mar	Apr	May	Jun
2020	751 441	649 029	513 733	226 004	235 863	225 248
2021	289 609	297 781	387 796	392 447	421 757	561 498

	Jul	Aug	Sep	Oct	Nov	Dec
2020	275 623	297 300	309 103	292 882	279 886	316 312
2021	666 126	689 624	577 434	573 395	560 021	



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 November 2021 (FIR) **137 Airlines.**

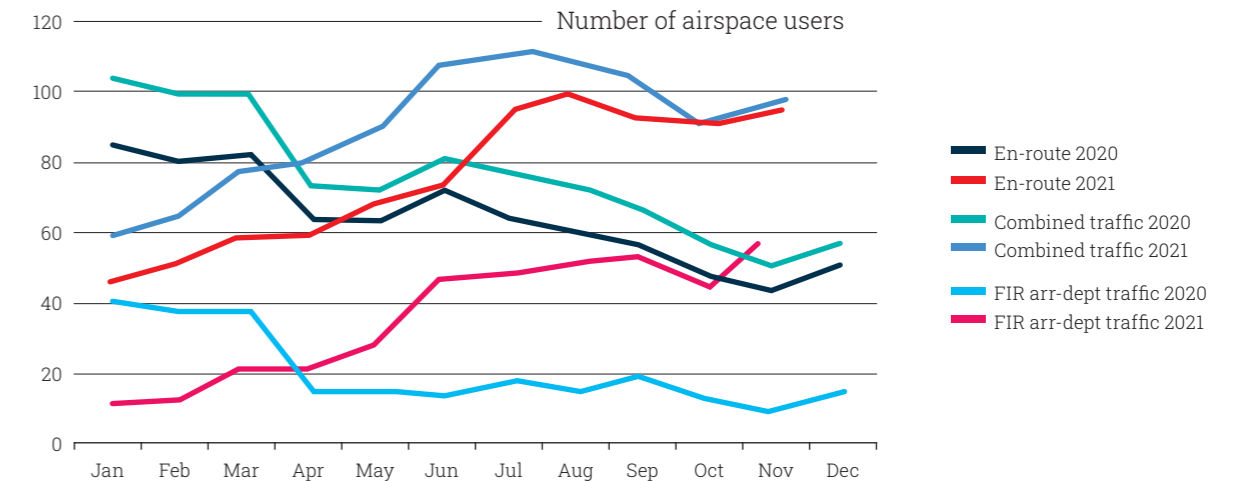
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	103	99	99	73	72	80	76	72	67	56	50	57
2021	59	64	77	80	90	106	127	136	130	116	137	

KPI - Number of airspace users November 2021 (ENR) **105 Airlines.**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	84	80	82	64	63	71	64	60	56	47	44	50
2021	51	56	63	65	73	103	103	113	98	96	105	

KPI - Number of airspace users November 2021 (AD) **53 Airlines**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	40	37	37	15	16	14	18	15	19	13	10	15
2021	13	14	22	22	29	48	48	46	49	41	53	



5.6 KPI – CO2 emission

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)).

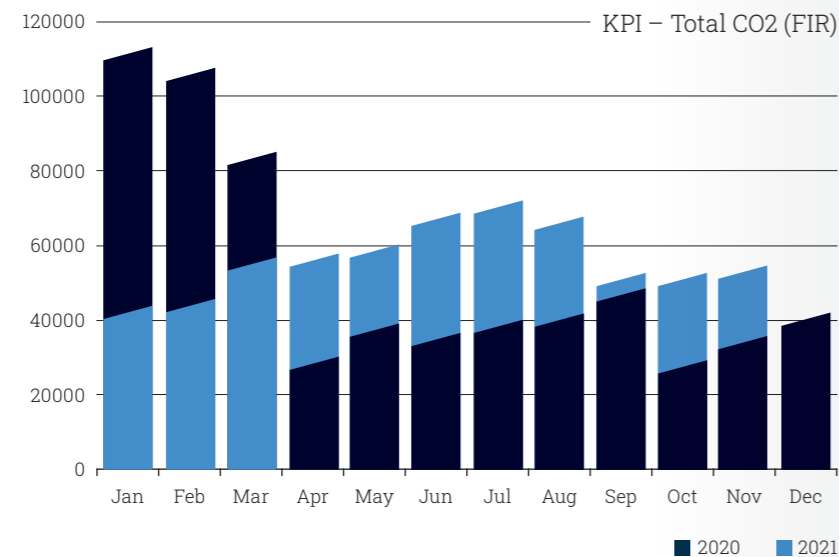
5.6.1 Total CO2 emission

5.6.1.1 KPI – Total CO2 (FIR)

KPI - Total CO2 November 2021 (FIR) **50111 tons.**

	Jan	Feb	Mar	Apr	May	Jun
2020	111 763	106 583	84 772	31 607	38 982	38 000
2021	43 576	43 699	57234	58 392	60586	67428

	Jul	Aug	Sep	Oct	Nov	Dec
2020	40 179	42 271	47776	29511	35721	42688
2021	72203	61869	46414	49214	50111	

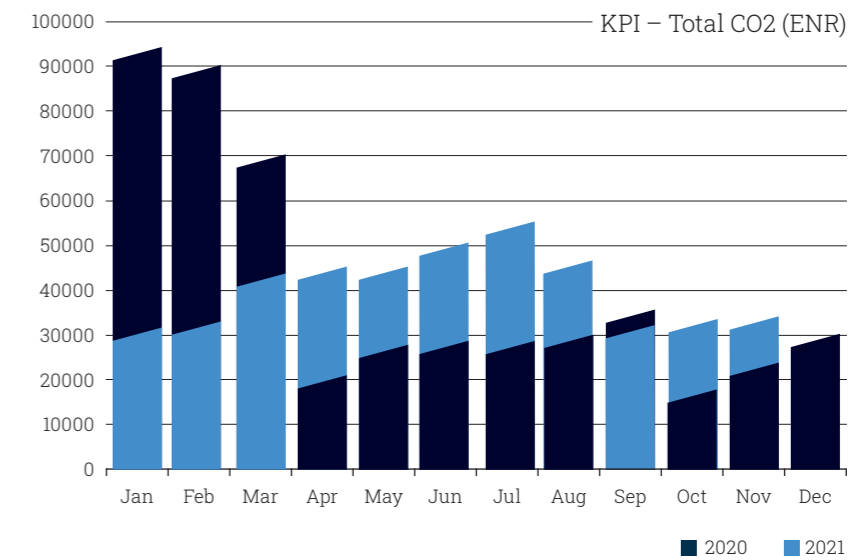


5.6.1.2 KPI – Total CO2 (En-route)

KPI - Total CO2 November 2021 (ENR) **34932 tons.**

	Jan	Feb	Mar	Apr	May	Jun
2020	94 176	90 743	69 468	20 761	27 595	27 829
2021	31 907	32 210	43 364	44859	46355	50403

	Jul	Aug	Sep	Oct	Nov	Dec
2020	28 228	29 208	34 254	16 919	24 437	30 392
2021	54360	44 188	31096	33673	34932	

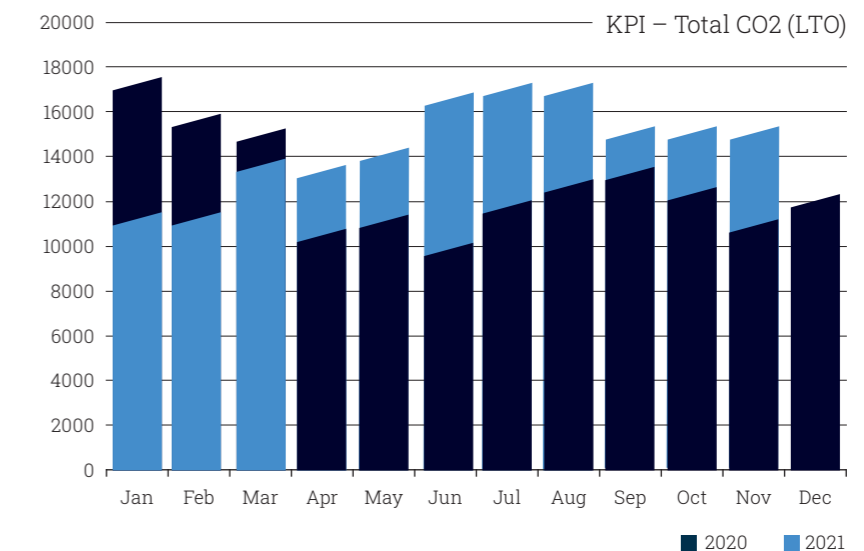


5.6.1.3 KPI – Total CO2 (Landing-Take-off Operations)

KPI - Total CO2 November 2021 (LTO) **15179 tons.**

	Jan	Feb	Mar	Apr	May	Jun
2020	17 588	15 840	15 304	10 847	11 387	10 171
2021	11670	11490	13870	13533	14231	17025

	Jul	Aug	Sep	Oct	Nov	Dec
2020	11 951	13 063	13 522	12 593	11 284	12 297
2021	17573	17 681	15318	15405	15179	

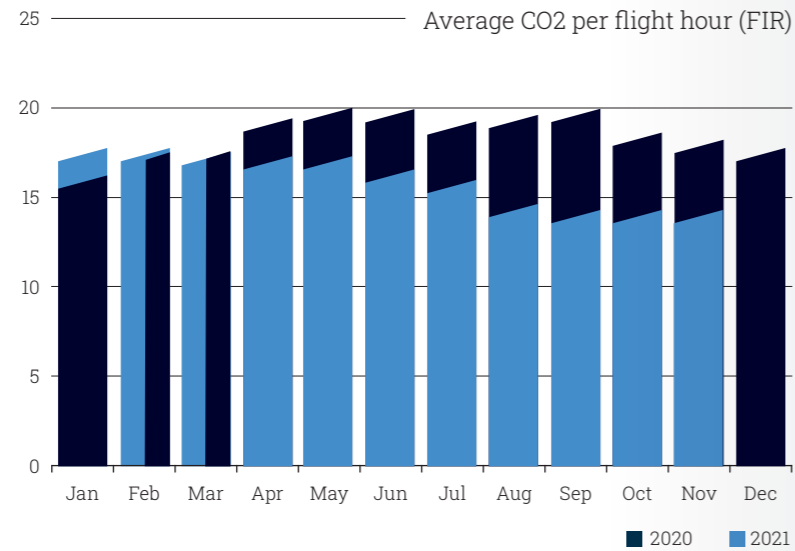


5.6.2 Average CO2 per flight hour

5.6.2.1 KPI - Average CO2 per flight hour (FIR)

KPI - Average CO2 per flight hour November 2021 (FIR) **14.1 ton/hour**

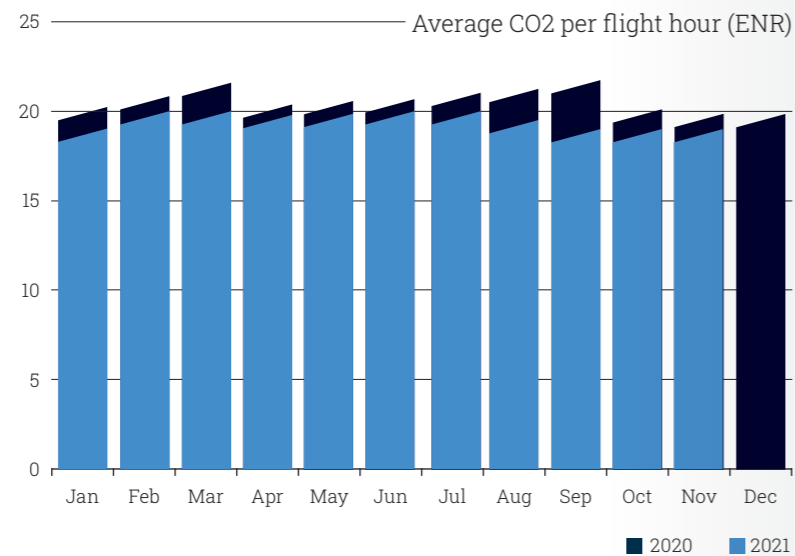
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	16,6	17,3	18,1	19,6	20	20	19,3	19,7	19,9	18,2	18	17,9
2021	17,6	18	17,7	17,3	17,2	16,5	15,9	14,5	14,2	14,2	14,1	



5.6.2.2 KPI - Average CO2 per flight hour (ENR)

KPI - Average CO2 per flight hour November 2021 (ENR) **17.4 ton/hour**

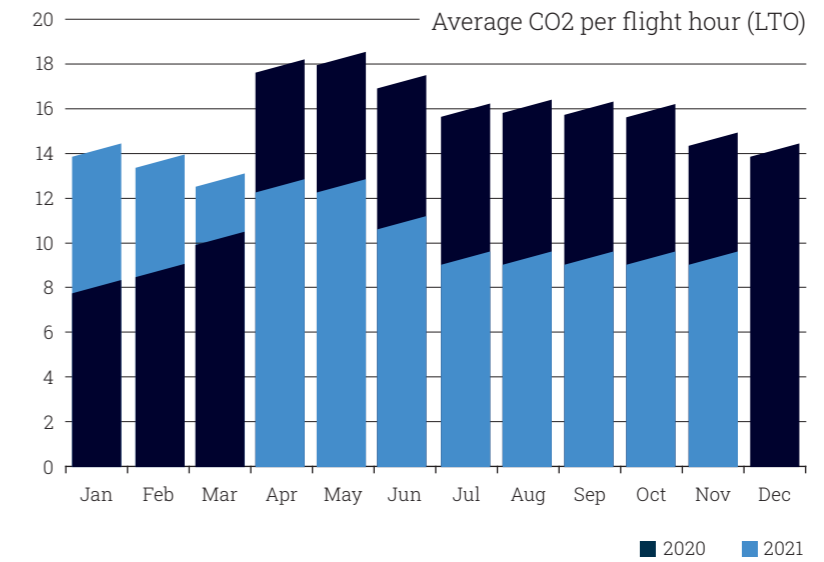
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	20,1	20,7	21,2	20,4	20,7	20,9	21,1	21,4	21,8	20,1	19,8	19,8
2021	19	20,1	19,8	19,5	19,5	19,9	20	18,7	18,3	18	17,4	



5.6.2.3 KPI - Average CO2 per flight hour (LTO)

KPI - Average CO2 per flight hour November 2021 (LTO) **9.9 ton/hour**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	8,6	9	10,8	18,2	18,4	17,3	16,2	16,4	16,4	16,3	15	14,5
2021	14,6	14	13,2	12,6	12,4	11	9,7	9,4	9,7	9,8	9,9	

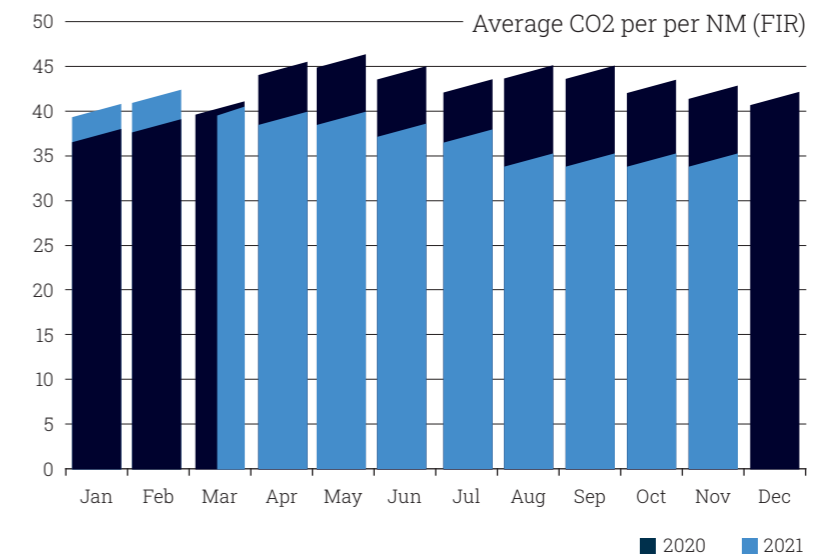


5.6.3 Average CO2 per a nautical mile flight distance

5.6.3.1 KPI - Average CO2 per NM (FIR)

KPI - Average CO2 per NM November 2021 (FIR) **34 kg/NM**

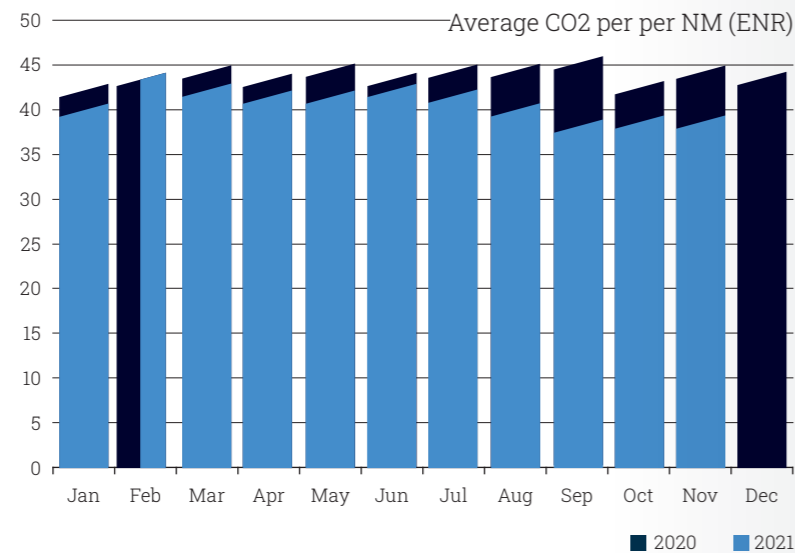
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	38	39	41	46	46	45	44	45	45	43	43	42
2021	41	43	41	40	40	39	37	34	34	34	34	



5.6.3.2 KPI - Average CO2 per NM (ENR)

KPI - Average CO2 per NM November 2021 (ENR) **38 kg/NM**

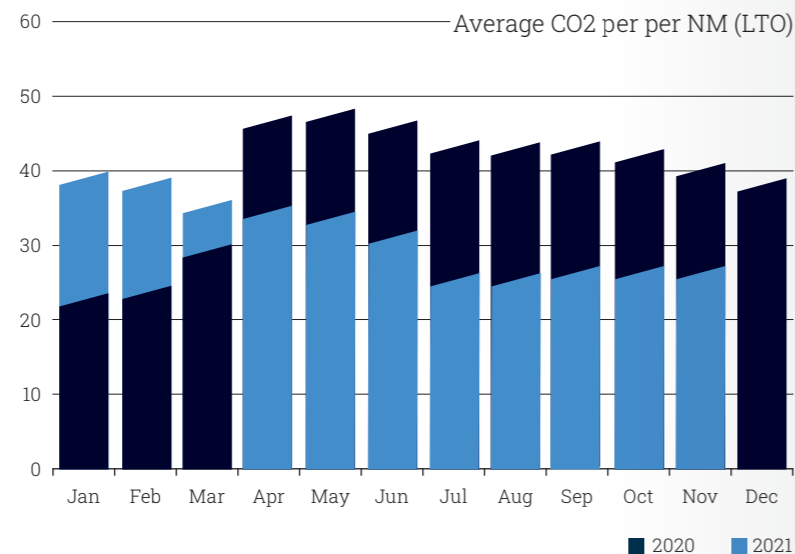
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	43	44	45	44	45	44	45	45	46	43	45	44
2021	41	44	43	42	42	43	42	40	39	39	38	



5.6.3.3 KPI - Average CO2 per NM (LTO)

KPI - Average CO2 per NM November 2021 (LTO) **27kg/NM**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	23	24	30	47	48	45	43	44	44	43	41	39
2021	40	39	36	35	34	31	26	26	27	27	27	

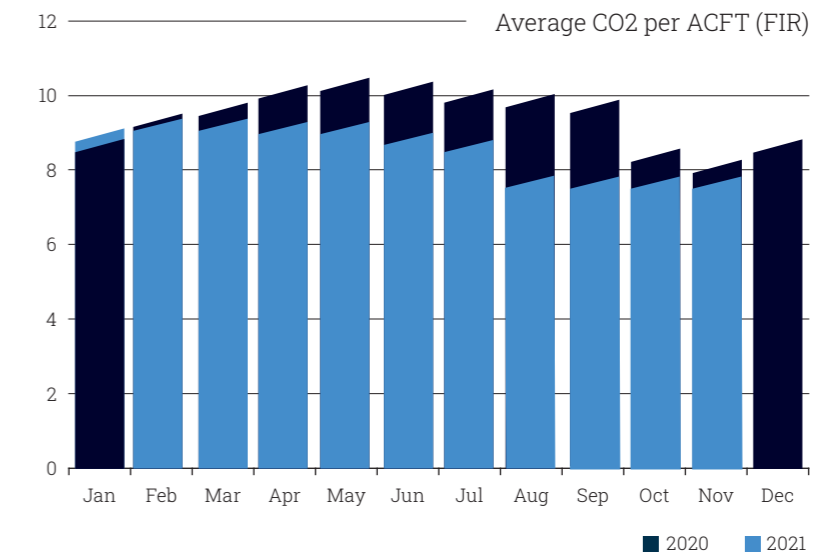


5.6.4 Average CO2 per flight

5.6.4.1 KPI - Average CO2 per ACFT (FIR)

KPI - Average CO2 per ACFT November 2021 (FIR) **7.4 ton/ACFT**

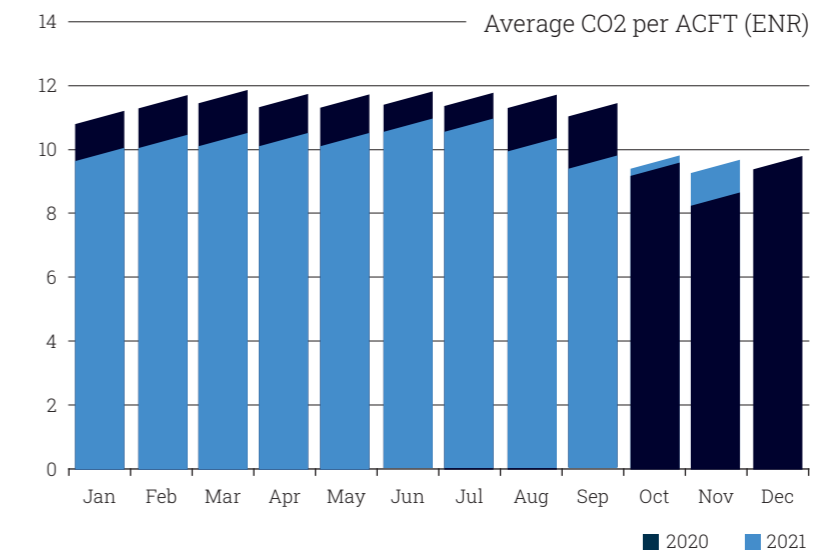
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	8,8	9,3	9,6	10,2	10,4	10,3	10,1	10	9,9	8,6	8,2	8,8
2021	8,9	9,2	9,2	9,1	9,0	8,6	8,3	7,7	7,4	7,4	7,4	



5.6.4.2 KPI - Average CO2 per ACFT (ENR)

KPI - Average CO2 per ACFT November 2021 (ENR) **9.5 ton/ACFT**

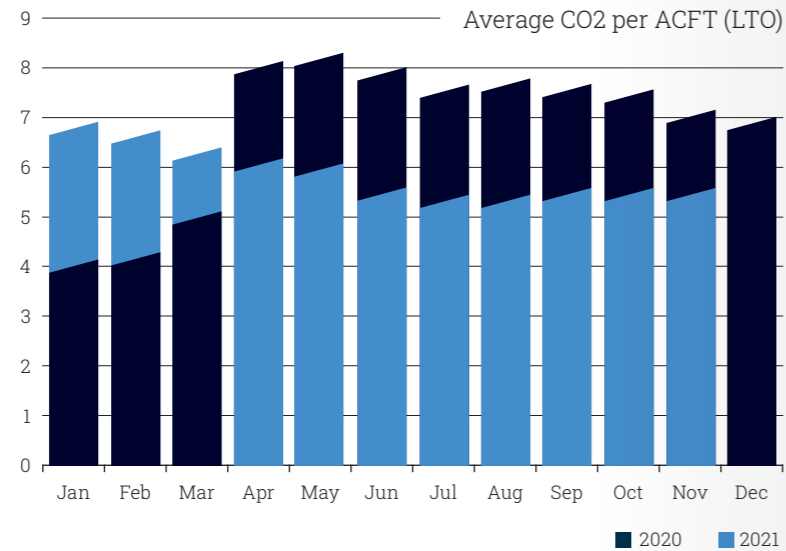
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	11,1	11,7	11,9	11,6	11,7	11,6	11,7	11,6	11,4	9,5	8,7	9,8
2021	10	10,6	10,7	10,7	10,8	11	10,9	10,3	9,8	9,7	9,5	



5.6.4.3 KPI - Average CO2 per ACFT (LTO)

KPI - Average CO2 per ACFT November 2021 (LTO) **5 ton/ACFT**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	4,1	4,3	5,1	8,2	8,3	7,9	7,6	7,7	7,6	7,6	7,2	7
2021	6,9	6,7	6.3	6.1	5.8	5.3	4.8	4.7	4.9	4.9	5	



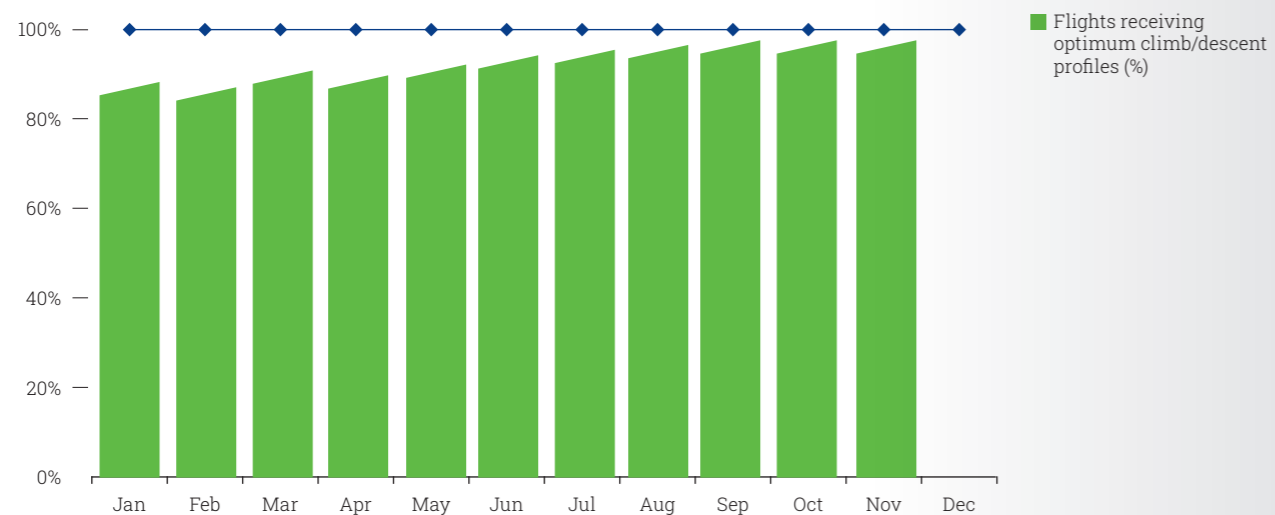
5.7 KPI – CCO/CDO operations

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 November 2021 **96%**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	96	95	92	82	83	81	84	85	87	81	85	86
2021	89	87	90	89	91	93	94	96	96	96	96	





**AIR TRAFFIC DEPARTMENT
AZERAERONAVIGATION**

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