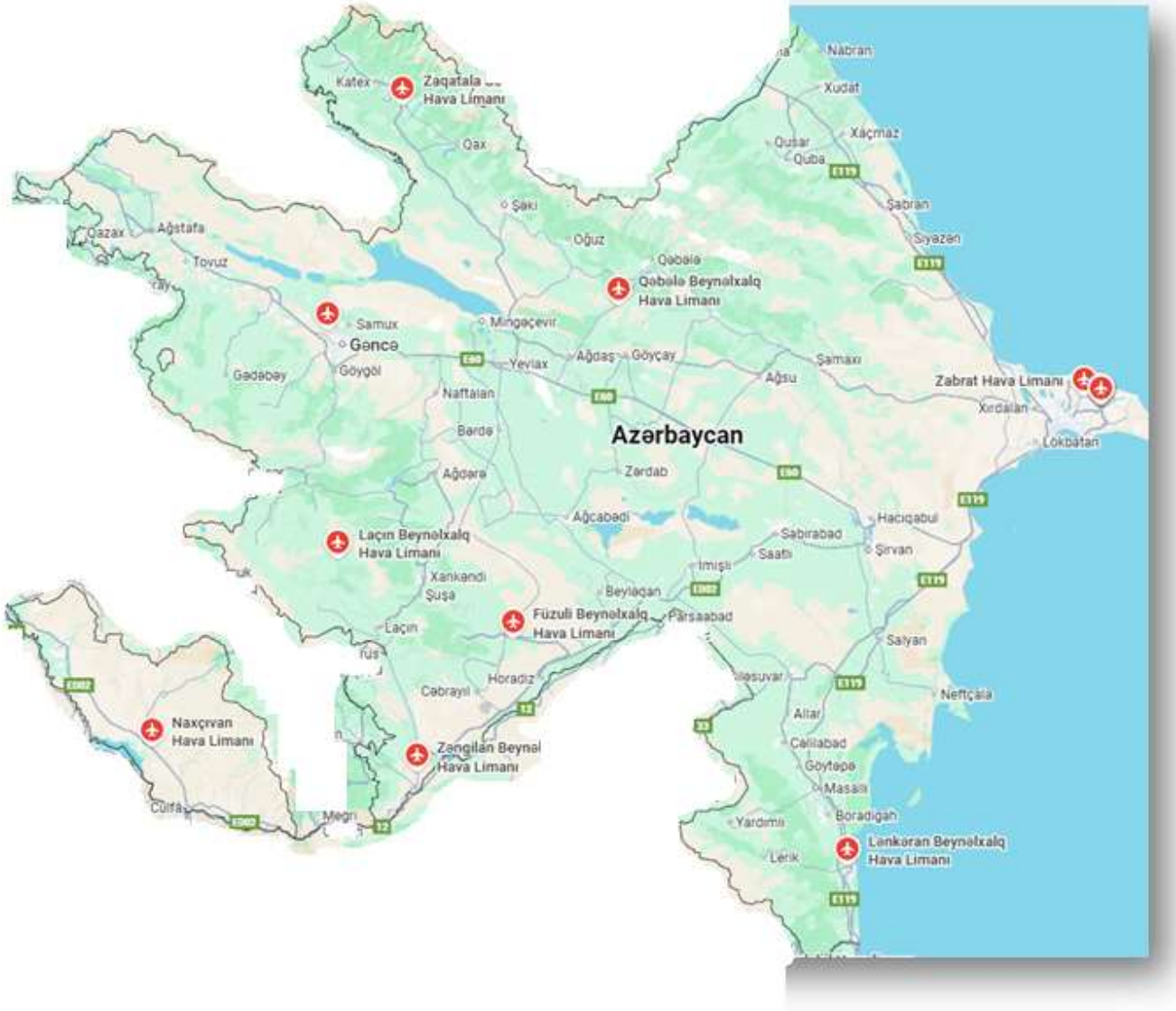
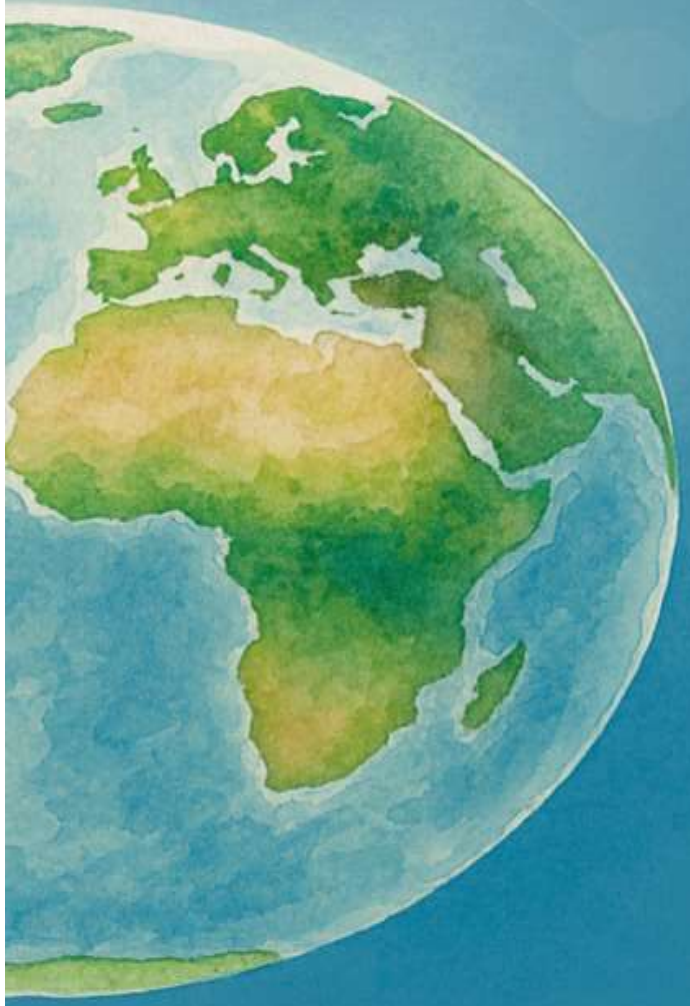
9 - international Airports

1 - domestic Airport

1 - under construction





- Azerbaijan ratified the UN Framework Convention on Climate Change in 1995.
- Azerbaijan joined the Kyoto Protocol on July 18, 2000.
- Azerbaijan signed the Paris agreement in April 2016.
- Azerbaijan hosted the UN Climate Change Conference (COP29) in November 2024.

COP29

IN SOLIDARITY FOR A GREEN WORLD

"Being elected by unanimous decision as the host country for COP29 is really a big honour for us. We consider it as a sign of respect from the international community to Azerbaijan and what we are doing, in particular, in the area of green energy."

Ilham Aliyev
President of the Republic of Azerbaijan

AZERBAIJAN'S GREEN ENERGY TRANSITION INITIATIVES

Azerbaijan is committed to developing its renewable energy potential, which is an important part of the country's plan to reduce greenhouse gas emissions by 40% by 2050. The country intends to increase renewable power capacity to 30% by 2030 and diversify its existing energy system to become a leader in green energy. Azerbaijan is committed to leading by example and will update its national targets in its next 1.5-aligned Nationally Determined Contribution.

+40%

BY 2050

important part of the country's plan to reduce greenhouse gas emissions

+30%

BY 2030

The country intends to increase renewable power capacity

At the COP29 State Civil Aviation Agency and ICAO signed the ACT-SAF partnership document on support, capacity building and training in the field of sustainable aviation fuels.

The ACT-SAF partnership will be an important support in achieving our country's greenhouse gas emission reduction goals and will play a positive role in enhancing environmental development capacity, learning and applying best practices.

ACT SAF
Assistance, Capacity-building and Training for SAF

Law on Aviation

Article 12. Environmental protection and impact management

REGULATION
for reducing the environmental impact of aviation

Approved by Resolution No. 123 of the Cabinet of Ministers of the Republic of Azerbaijan dated April 22, 2025.

This Regulation has been developed in accordance with the requirements of ICAO Annex 16, Volumes 1–4, and the ICAO Doc 9184 Airport Planning Manual Part 2 – Land Use and Environmental Management " documents, and defines the relations related to reducing the impact of aviation on the environment.

THE STATE CIVIL AVIATION AGENCY

MINISTRY OF DIGITAL DEVELOPMENT AND TRANSPORT OF THE REPUBLIC OF AZERBAIJAN

ICAO State Action Plan on the Reduction of CO_2 Emissions from Aviation for Azerbaijan

Latest update date: April 2025

Methodology for CO_2 Emissions Calculation

CO_2 emissions from aviation are typically calculated using the following formula:

$$CO_2 \text{ Emissions} = \text{Activity Data} \times \text{Emission Factor}$$

where:

- Activity Data: Passenger turnover (million passenger-km) and freight turnover (million ton-km)
- Emission Factors:
  - 0.09 kg CO_2 per passenger-km (for commercial flights, ICAO standards)
  - 0.6 kg CO_2 per ton-km (for cargo transport, ICAO standards)

Year	Passenger Turnover *(M pkm)*	CO_2 from Passengers *(M tons)*	Freight Turnover *(M ton-km)*	CO_2 from Freight *(M tons)*	Total CO_2 Emissions *(M tons)*
2014	2918	262.6	481	288.6	551.2
2015	3338	300.4	582	349.2	649.6
2016	3549	319.4	683	409.8	729.2
2017	5601	504.1	738	442.8	946.9
2018	5199	467.9	919	551.4	1019.3
2019	4750	427.5	947	568.2	995.7
2020	984	88.6	2302	1381.2	1469.8
2021	2334	210.1	2802	1681.2	1891.3
2022	4797	431.7	2838	1702.8	2134.5
2023	5280	475.2	3017	1810.2	2285.4

Analysis of CO_2 Emission Trends

2014-2019: Pre-Pandemic Growth

- From 2014 to 2019, CO_2 emissions increased steadily from 551.2 million tons to 995.7 million tons.
- The primary driver was an increase in both passenger and freight activity.
- The peak emissions in 2019 were dominated by freight (57%), reflecting increasing cargo operations.

2020: COVID-19 Impact

- Massive drop in passenger CO_2 emissions from 427.5 million tons (2019) to just 88.6 million tons (2020) (a 79% decline).
- Freight emissions surged from 568.2 million tons to 1381.2 million tons (a 143% increase).
- This suggests that cargo demand increased due to global supply chain disruptions, as air freight became a critical alternative during the pandemic.

2021-2023: Recovery and New Trends

- Passenger emissions partially recovered in 2021, reaching 210.1 million tons.
- Freight emissions continued to rise, peaking at 1810.2 million tons in 2023.
- Total CO_2 emissions reached a new high of 2285.4 million tons in 2023, mainly due to the sustained growth of cargo transport.

Future Forecast (2024-2030)

To predict future emissions, we will assume:

- Passenger turnover will continue to grow at an average annual increase of 5% (post-pandemic recovery trend).
- Freight turnover will increase at an estimated 4% annually, based on recent trends.
- Sustainable aviation fuels (SAF) adoption will gradually reduce emissions, assuming a 1% reduction in CO_2 per year.

Year	Passenger CO_2 (M tons)	Freight CO_2 (M tons)	Total CO_2 (M tons)
2024	500	1882.6	2382.6
2025	525	1957.9	2482.9
2026	550	2036.2	2586.2
2027	577.5	2117.7	2695.2
2028	605	2202.4	2807.4
2029	635.2	2289.7	2924.9
2030	666	2380.3	3046.3

Key Insights and Policy Recommendations

Cargo Operations are the Biggest Emission Source

- Freight now contributes over 80% of total CO_2 emissions.
- The shift toward air cargo is a long-term trend that needs to be addressed with more fuel-efficient aircraft.

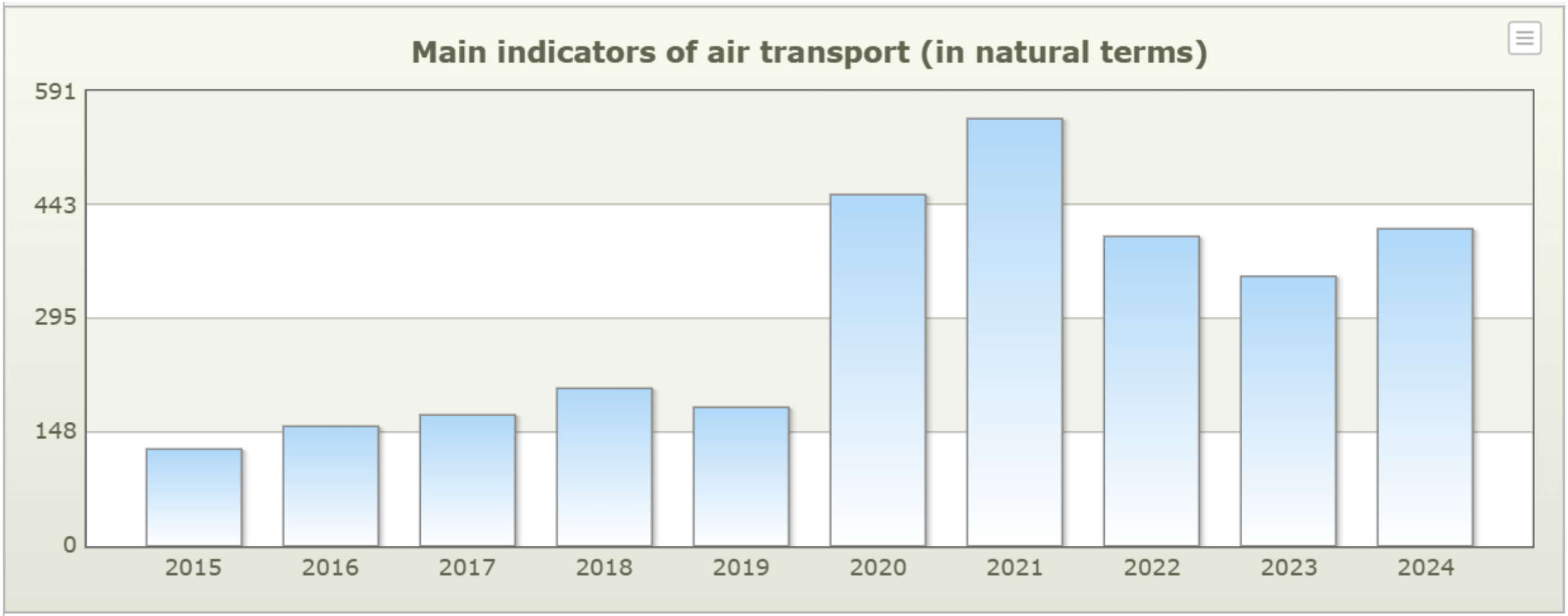
SAF and Electrification Can Reduce Future Emissions

- A transition to Sustainable Aviation Fuel (SAF) can reduce CO_2 emissions by up to 80%.
- The introduction of electric aircraft for short-haul flights will also help curb emissions in the passenger sector.

Growth in Air Traffic Requires Stronger Climate Policies

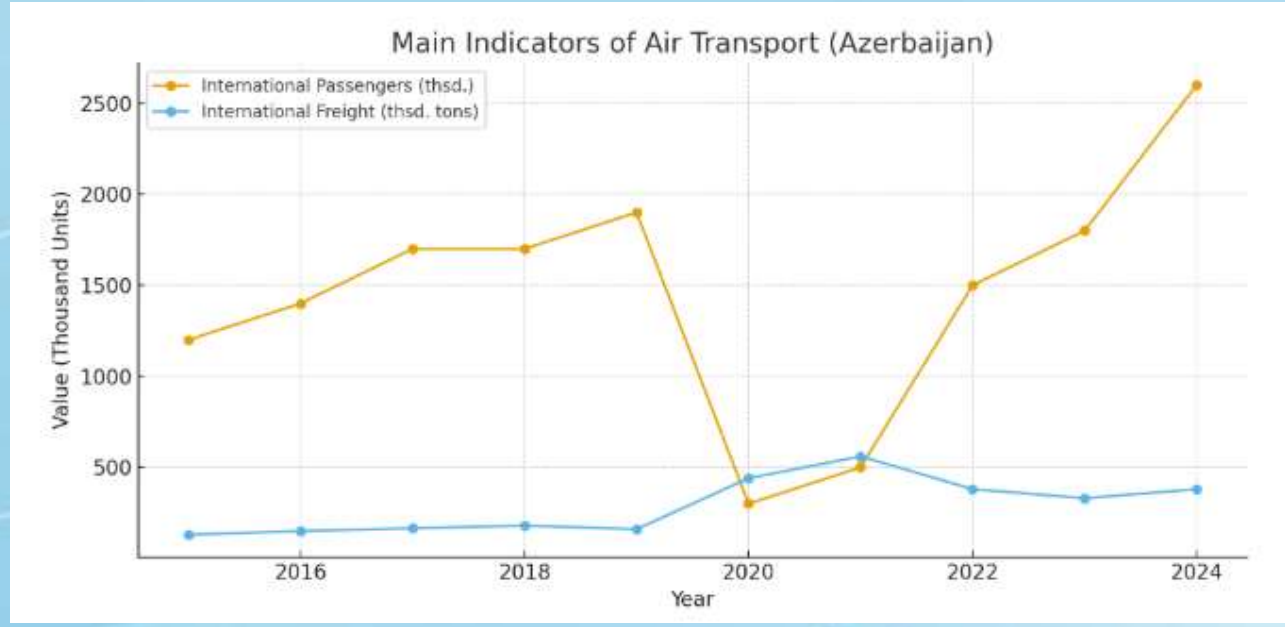
- Azerbaijan's aviation sector is recovering fast, with emissions expected to exceed pre-pandemic levels by 2024.
- Implementing carbon offset schemes or mandating higher SAF usage can prevent excessive future emissions.

	Item	Indicator
■	Air transport	international (thsd. passenger)



	Indicator
	international (thsd. ton)

Azerbaijan's aviation CO_2 emissions are on a rapidly increasing trajectory, with freight transport now dominating overall emissions. The COVID-19 pandemic caused a temporary drop in passenger emissions, but air cargo boomed, leading to a net increase in total CO_2. Future forecasts suggest continued growth, requiring urgent policy action to mitigate environmental impacts. The adoption of SAF, electrification, and carbon offset mechanisms will be critical in ensuring sustainable aviation growth.



Thank you!