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Aviation Emissions Report

April 2025

Emissions analysis for largest markets - April 25 vs prior years

25 largest markets by total emissions

Date / Origin Country	April 2019 Total CO2 (Tonnes)	April 2024 Total CO2 (Tonnes)	April 2025 Total CO2 (Tonnes)
United States	15,086,792	14,469,891	15,017,817
China	7,618,942	7,716,521	7,795,107
United Kingdom, UK	2,807,966	2,599,647	2,707,982
Japan	2,310,589	2,037,312	2,181,452
United Arab Emirates	1,788,841	1,924,891	2,067,625
India	1,696,639	1,808,606	1,939,938
Spain and Canary Islands	1,647,592	1,734,811	1,848,330
Germany	2,003,657	1,702,750	1,776,886
Australia	1,686,112	1,564,102	1,618,048
France	1,626,645	1,470,168	1,530,132
Canada	1,462,699	1,342,556	1,426,011
Turkey	1,034,372	1,304,432	1,389,567
Brazil	1,221,238	1,179,553	1,269,455
Russian Federation	1,434,655	1,173,400	1,227,794
Italy	1,089,023	1,131,667	1,219,998
Mexico	1,015,411	1,013,254	1,107,605
Thailand	1,199,110	962,266	1,052,602
Republic of Korea	1,129,055	1,001,157	1,010,821
Indonesia	1,068,879	994,254	969,165
Singapore	985,795	920,176	967,992
Qatar	772,469	882,582	879,628
Saudi Arabia	714,222	809,413	864,542
Hong Kong	1,057,942	635,589	729,586
Netherlands	797,211	701,575	726,830
Malaysia	671,014	572,864	623,568

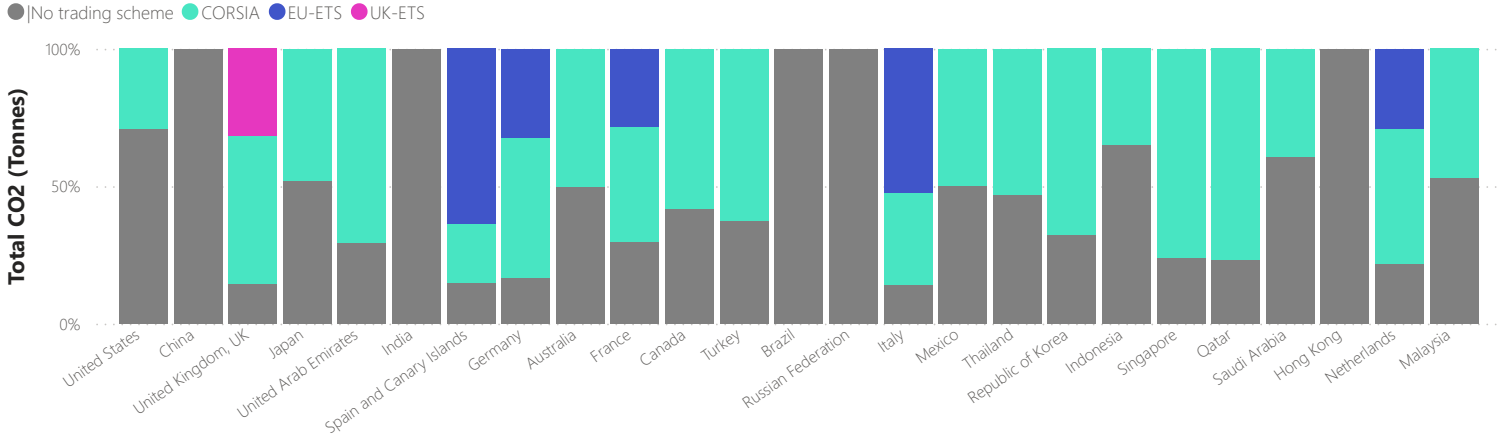
Change in Emissions - Current month vs prior years

Origin Country	This year vs last year	This year vs 2019
United States	4%	-0%
China	1%	2%
United Kingdom, UK	4%	-4%
Japan	7%	-6%
United Arab Emirates	7%	16%
India	7%	14%
Spain and Canary Islands	7%	12%
Germany	4%	-11%
Australia	3%	-4%
France	4%	-6%
Canada	6%	-3%
Turkey	7%	34%
Brazil	8%	4%
Russian Federation	5%	-14%
Italy	8%	12%
Mexico	9%	9%
Thailand	9%	-12%
Republic of Korea	1%	-10%
Indonesia	-3%	-9%
Singapore	5%	-2%
Qatar	-0%	14%
Saudi Arabia	7%	21%
Hong Kong	15%	-31%
Netherlands	4%	-9%
Malaysia	9%	-7%

Percent of Emissions covered by Compliance Programmes

Origin Country	April 2019 % covered	April 2024 % covered	April 2025 % covered
United States	-	29.15%	29.12%
China	-	-	-
United Kingdom, UK	31.78%	86.25%	85.34%
Japan	-	47.71%	47.86%
United Arab Emirates	-	69.83%	70.72%
India	-	-	-
Spain and Canary Islands	64.10%	86.31%	85.19%
Germany	33.64%	82.20%	83.22%
Australia	-	48.25%	50.10%
France	29.33%	71.00%	70.27%
Canada	-	60.07%	58.17%
Turkey	-	61.78%	62.39%
Brazil	-	-	-
Russian Federation	-	-	-
Italy	52.44%	87.34%	85.95%
Mexico	-	52.08%	49.83%
Thailand	-	52.21%	53.09%
Republic of Korea	-	67.77%	67.70%
Indonesia	-	32.22%	34.98%
Singapore	-	76.28%	76.01%
Qatar	-	76.64%	76.83%
Saudi Arabia	-	40.24%	39.28%
Hong Kong	-	-	-
Netherlands	25.04%	78.64%	78.19%
Malaysia	-	49.05%	46.97%

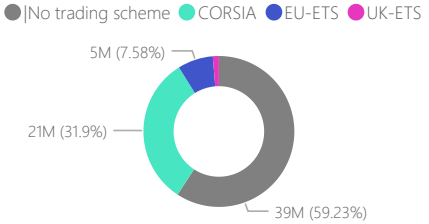
25 largest markets - emissions by Compliance Programme (current month)



Global emissions (tonnes)

67M

Emissions by compliance programme



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Emissions analysis for largest markets - YTD to Apr 25 vs prior years

25 largest markets by total emissions

YTD Period Origin Country	YTD 2019 Total CO2 (Tonnes)	YTD Last Year Total CO2 (Tonnes)	YTD This Year Total CO2 (Tonnes)
United States	57,762,933	55,736,702	56,909,617
China	30,418,990	31,666,221	31,849,068
United Kingdom, UK	10,414,618	9,505,786	9,767,586
Japan	9,021,152	8,098,565	8,568,146
United Arab Emirates	7,670,630	7,756,947	8,297,380
India	7,285,452	7,266,873	7,805,075
Australia	6,946,796	6,498,394	6,633,953
Spain and Canary Islands	5,776,134	6,115,806	6,537,529
Germany	7,464,387	6,115,794	6,217,984
Canada	5,832,744	5,283,568	5,587,079
France	5,996,581	5,298,072	5,509,539
Brazil	5,325,476	4,873,335	5,281,221
Turkey	3,828,121	4,721,095	4,935,336
Russian Federation	5,551,692	4,418,941	4,641,623
Thailand	5,270,876	4,040,630	4,556,733
Mexico	4,002,373	4,179,767	4,404,783
Republic of Korea	4,473,871	4,068,173	4,185,770
Italy	3,756,462	3,649,885	3,922,660
Singapore	4,009,065	3,711,362	3,921,953
Indonesia	4,314,846	3,851,129	3,811,502
Qatar	3,110,934	3,553,783	3,524,119
Saudi Arabia	2,841,872	3,262,035	3,457,385
Hong Kong	4,245,456	2,564,044	2,915,221
Netherlands	2,939,276	2,659,742	2,720,628
Vietnam	2,234,483	2,255,613	2,512,422

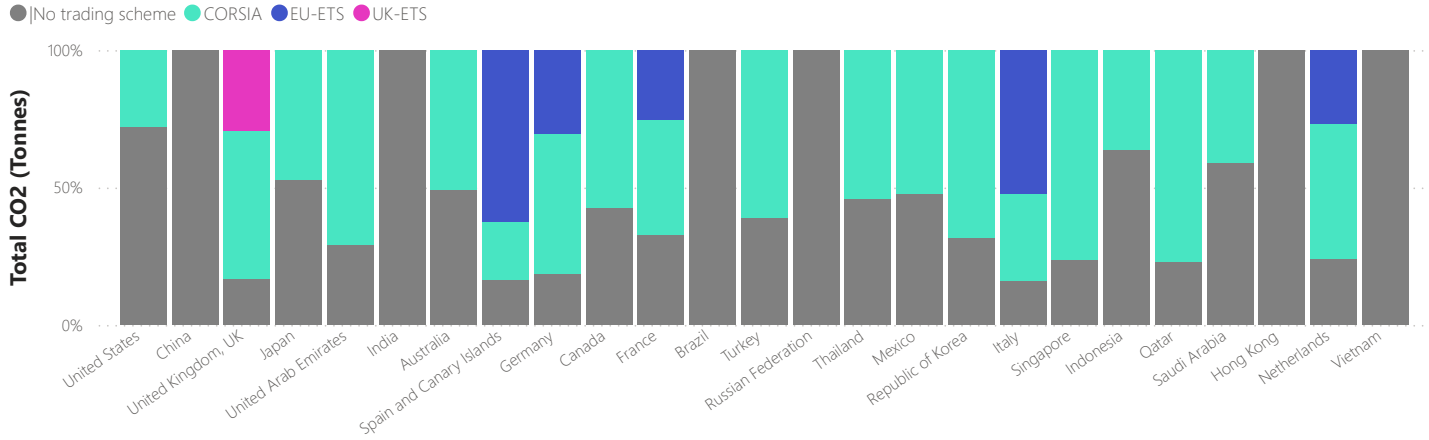
Change in Emissions - Current month vs prior years

This YTD vs Last YTD	This YTD vs YTD 2019
2%	-1%
1%	5%
3%	-6%
6%	-5%
7%	8%
7%	7%
2%	-5%
7%	13%
2%	-17%
6%	-4%
4%	-8%
8%	-1%
5%	29%
5%	-16%
13%	-14%
5%	10%
3%	-6%
7%	4%
6%	-2%
-1%	-12%
-1%	13%
6%	22%
14%	-31%
2%	-7%
11%	12%

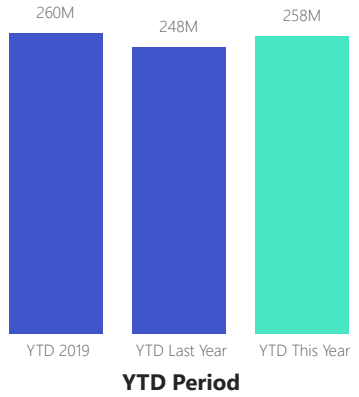
Percent of Emissions covered by Compliance Programmes

YTD 2019 Trading scheme %	YTD Last Year Trading scheme %	YTD This Year Trading scheme %
-	28.45%	28.01%
-	-	-
28.74%	84.24%	83.31%
-	46.93%	47.09%
-	70.00%	70.72%
-	-	-
-	49.39%	50.90%
62.00%	84.50%	83.47%
32.68%	80.65%	81.29%
-	59.33%	57.16%
26.05%	68.07%	67.27%
-	-	-
-	60.67%	60.84%
-	-	-
-	53.59%	53.97%
-	54.93%	52.38%
-	67.10%	68.14%
51.56%	84.32%	83.74%
-	75.50%	76.35%
-	34.18%	36.13%
-	76.33%	76.96%
-	41.91%	40.83%
-	-	-
23.70%	76.57%	76.07%
-	-	-

25 largest markets - emissions by Compliance Programme (current YTD)



Global emissions (tonnes)



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RDC CARE Index by carrier and home continent - April 25

Top 25 European Carriers

Carrier Name	CARE Index
Wizz Air UK	7.8
PLAY	7.5
TUIfly Nordic	7.5
Marabu Airlines	7.4
Smartwings Slovakia	7.4
World2Fly	7.3
Iberojet	7.3
French Bee	7.3
Sunclass Airlines	7.2
TUI Airways	7.1
Wizz Air	7.1
Norse Atlantic Airways UK	7.0
Jet2	7.0
Norse Atlantic Airways	7.0
La Compagnie	7.0
Hello Jets	6.9
Wizz Air Malta	6.8
Buzz	6.8
Transavia	6.8
SunExpress	6.7
Malta Air	6.7
World2Fly Portugal	6.7
Freebird Airlines	6.7
Titan Airways	6.6
SmartWings	6.6
Ryanair	6.6

Top 25 North American Carriers

Carrier Name	CARE Index
Flair Airlines	7.0
Frontier Airlines	6.8
Sunwing Airlines	6.8
Air Transat	6.8
Porter Airlines Canada	6.5
Spirit Airlines	6.5
Volaris	6.4
Air Canada	6.1
Allegiant Air	6.1
WestJet	5.9
Sun Country	5.9
Breeze Airways	5.8
Delta Air Lines	5.7
Alaska Airlines	5.7
JetBlue	5.6
Mexicana	5.6
Aeromexico	5.6
Air Canada Rouge	5.6
VivaAerobus	5.6
American Airlines	5.5
United Airlines	5.5
Avelo Air	5.5
Air Saint-Pierre	5.3
Southwest Airlines	5.2
ConocoPhillips Alaska Inc	5.0
Airbahn	4.8

Top 25 Asian Carriers

Carrier Name	CARE Index
Akasa Air	6.7
ZIPAIR Tokyo	6.7
My Freighter	6.6
Thai AirAsia X	6.5
Hong Kong Express	6.5
Scoot	6.4
AirAsia X	6.4
Air Premia	6.2
STARLUX Airlines	6.2
IndiGo	6.2
Spring Airlines Japan	6.2
Nordwind Airlines	6.2
Qanot Sharq Airlines	6.1
Tigerair Taiwan	6.1
airblue	6.1
Ural Airlines	6.1
NordStar Airlines	6.0
Greater Bay Airlines	6.0
Fuzhou Airlines	6.0
Philippine Airlines	6.0
Aero Nomad Airlines	6.0
China United Airlines	6.0
Fly Jinnah	5.9
Suparna Airlines	5.9
Spring Airlines	5.9
Jetstar Asia	5.9

Top 25 RoW Carriers

Carrier Name	CARE Index
Arajet	7.1
Wizz Air Abu Dhabi	7.0
Sky Airline	6.6
Flynas	6.6
flydubai	6.5
Red Sea Airlines	6.5
Air Tahiti Nui	6.4
Aircalin	6.3
Sky Airline Peru	6.3
SalamAir	6.3
UR Airlines	6.3
El Al	6.2
Fiji Airways	6.2
Syrian Air	6.1
Jetstar Airways	6.0
Jazeera Airways	6.0
Arkia Israel Airlines	6.0
Nouvelair Tunisie	5.9
Copa Airlines	5.9
Nile Air	5.8
OYA International Airline	5.8
Air Arabia	5.8
Flybondi	5.8
flyadeal	5.7
LATAM Paraquay	5.7
Tunisair	5.7

The CARE Index is a measure of airline route sustainability, based around our emissions methodology and various other factors, that has been developed to give business and consumers the best information on which to make their purchasing decisions - particularly when it comes to making more environmentally friendly choices. Most 'efficiency measures' use CO2 per passenger, per seat or per available seat kilometre (ASK), which can be hard to understand for consumers. The CARE Index creates a score between 0 (worst) to 10 (best) for any air route, airline and aircraft combination, taking into account:

- fuel burn and efficiency of the aircraft type
- efficiency of the airline – using specific seat capacity, configuration and overall occupancy rates (load factor)
- use of Sustainable Alternative Fuels (SAF)
- if the route is part of a compliance or regulatory emissions programme such as EU ETS etc
- whether the operator offsets any emissions over and above that which is legally required

The CARE index has been designed to be a force for change, giving consumers better insight into the environmental impact of their chosen airline that will also help to shape airline sustainability strategies.

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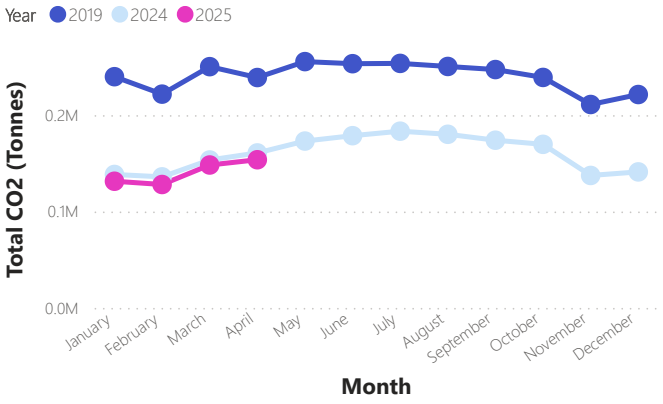
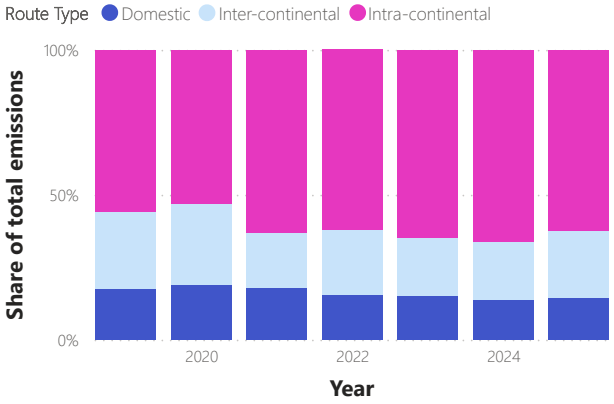
This month's focus country: Sweden

Total CO2 (Tonnes) by Month and Year



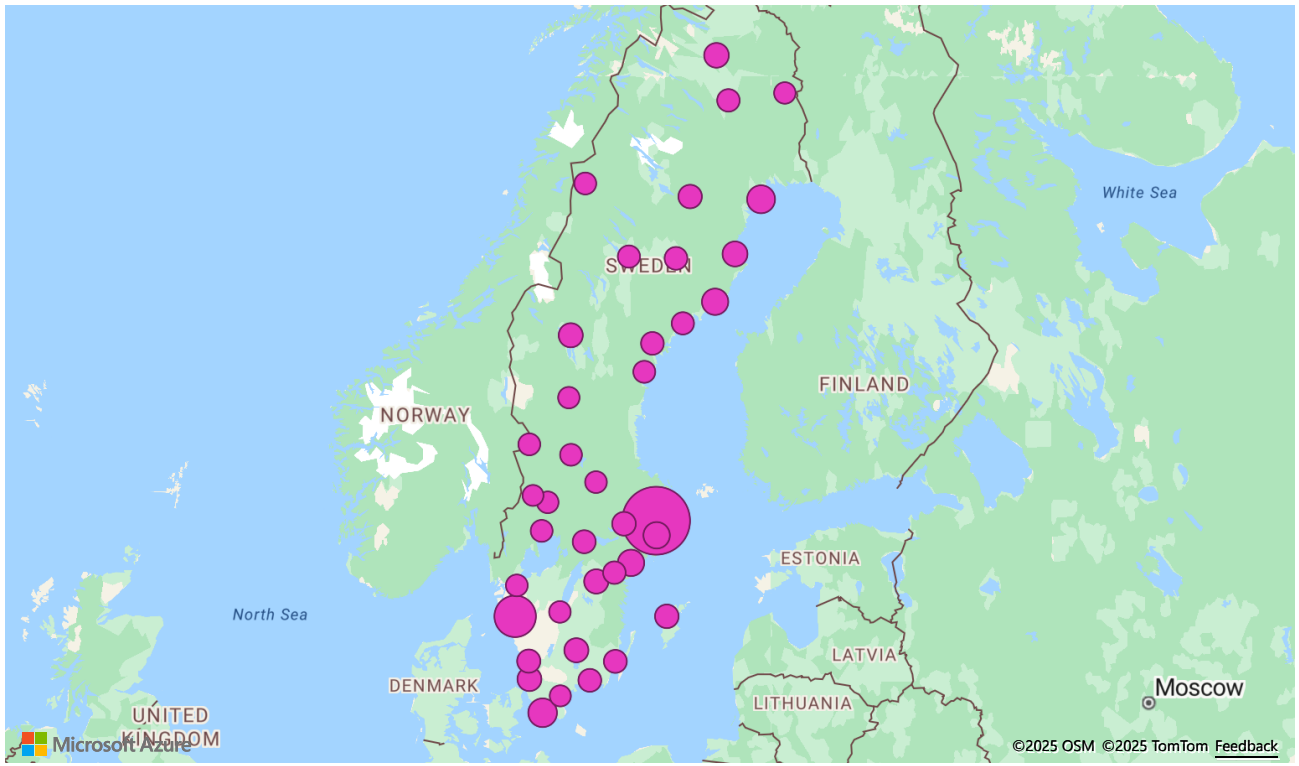
CO2 by Year and Route Type



10 largest markets by seat capacity ranked by lowest Emissions per ASK - last 12 months

Destination Country	Emissions per ASK (g)	Total CO2 (Tonnes)
Spain and Canary Islands	50.58	258,287
United Kingdom, UK	58.67	108,054
France	59.08	62,113
Germany	66.59	122,695
Netherlands	70.04	64,147
Poland	71.75	48,501
Denmark	74.71	43,603
Sweden	75.46	252,959
Norway	82.96	44,760
Finland	90.04	43,034

Largest origin airports by total emissions - last 12 months



10 largest carrier by emissions ranked by highest total emissions - last 12 months

Carrier Name	Emissions per ASK (g)	Total CO2 (Tonnes)
SAS	59.20	396,747
Norwegian Air International	58.65	188,406
Malta Air	59.58	92,928
Sunclass Airlines	52.48	77,375
Lufthansa	66.26	75,656
Ryanair	56.28	65,129
Thai	62.13	63,401
Norwegian Air Shuttle	54.58	56,819
TUIfly Nordic	48.15	53,106
Emirates	72.29	46,643

Emissions by airport - last 12 months

Origin Name	Total CO2 (Tonnes)	Emissions per ASK (g)
Stockholm - Arlanda Airport	1,409,282	61.50
Gothenburg - Landvetter Airport	270,718	62.91
Malmo - Sturup Airport	38,645	66.24
Lulea - Kallax Airport	31,356	65.19
Stockholm - Bromma Airport	19,505	82.75
Stockholm - Skavsta Airport	19,416	56.29
Umea Airport	18,900	77.34
Skelleftea Airport	10,625	69.12
Kiruna Airport	9,147	57.49
Linkoping Airport	7,216	98.61
Ostersund - Froesoe Airport	6,738	78.34

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For decades RDC have been monitoring and modelling the CO_2 emissions arising from the growing aviation industry. We have the ability to calculate and report detailed airline operating expenses - including fuel burn, which in turn gives us the CO_2 output from flying. For accuracy on CO_2 emissions data, our accredited and independent methodology can't be beaten.

To find out more about how RDC can deliver CO_2 emissions data for your business services, get in touch at rdcaviation.com/contact

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