Annual Traffic Report 2023

Air Traffic Statistics

Living ideas - Connecting lives



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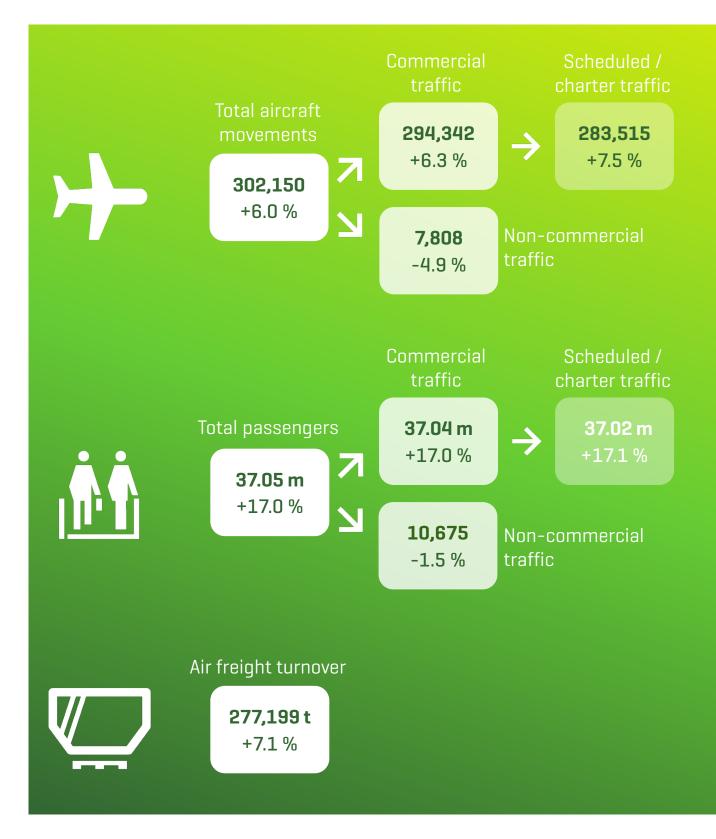
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/Traffic results 2023 at a glance



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Global air traffic is recovering, but Germany is lagging behind

Long-haul traffic is the main pillar of recovery

Long-haul traffic is the main pillar of recovery Demand for air travel remains strong: 2023 is marked – in particular – by the return of international passengers. This segment made up 51 %, which is identical to the corresponding pre-crisis level. In total, the number of international passengers stood -23 % below 2019.

Traffic to North America – the main driver of the long-haul recovery – already exceeded its pre-crisis levels. The important Asian markets also recovered quickly: Destinations such as India or Thailand also managed to grow beyond 2019 levels. China, however, is still lagging behind due to its late reopening date, but still managed to grow substantially over the course of the year.

The development in Germany remains sluggish

In total, Munich Airport handled 77 % of its pre-crisis traffic during the past year. Similar values are reported by the ADV, the council of German Airports. Hence, Germany remains markedly behind the recovery rates achieved in Europe as well as globally, as these markets achieved – according to ACI Europa and IATA, respectively – around 95 % of pre-crisis levels.

The high level of location costs in Germany – especially local taxes – are hamstringing growth. Decentralized domestic German traffic in particular is still in the doldrums. Domestic traffic is also showing the lowest recovery rates at the big hubs, coupled with high ticket prices and reduced services.

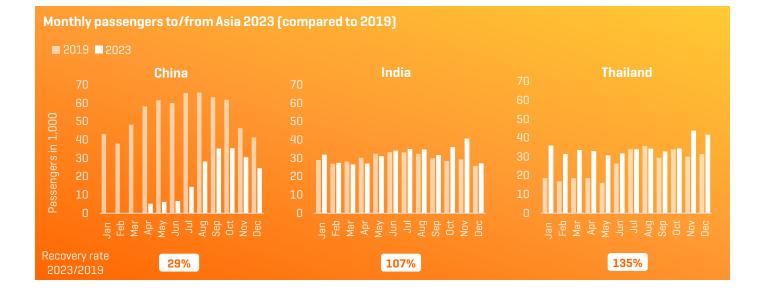




Additionally, geopolitical crises as well as the issues surrounding the provision and staffing of aircraft inhibited the development. In Munich, the result was further worsened by the extraordinarily strong winter weather in early December.

Seat load factors rise to record levels

The available flights had an average seat load factor of 81 % - a new record that highlights clearly that the sluggish recovery in spite of high ticket prices is not caused by a lack of demand. A special survey by the F.U.R. provides further evidence for the population's unbroken desire to travel by plane.



Development of air traffic at Munich Airport 1992-2023

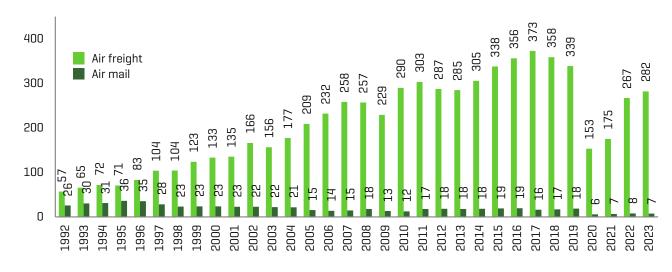


Aircraft movements - total traffic (in 1,000)

Passengers - commercial traffic (in millions)



Air freight and air mail incl. transit (in 1,000 tons



/ Aircraft movements 2023

Movements - development 2023 Aircraft movements 2023 at German airports

9V-SMC

HS-THK

/Aircraft movements 2023

Growth in flights is driven by strong demand for air travel

302.150 aircraft movements - growth of +6 %

The main driver of the positive development were the regular passenger flights, which grew disproportionately by +7.7 %. At the same time, pure freighter flights decreased by -7.1 % and non-commercial flights by -4.1 %. The commercial part of General Aviation even shrunk by -16.8 %.

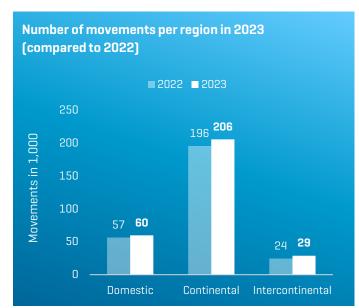
Munich ranks 11th in Europe

Amongst the busiest airports in Europe, Munich Airport managed to claim the 11th rank. Owed to the geopolitical distortions caused by the Russian attack on Ukraine, this comparison is, however, tainted by several exceptional effects.

Hub traffic remains the driver of recovery

Long-haul flights – which are directly tied to the airports' hub functions – grew the fastest, reaching a total of 28,813 commercial aircraft movements (+17.7 %). Continental traffic – which, to a large share, works as a feed to the hub – could grow substantially, too, and reached a total of 205.735 movements (+5.1 %). While domestic traffic finally gained some traction particularly towards the end of the year and recorded a growth of +5.6 % (59,794 movements), its recovery remains behind the other traffic segments.

Since the COVID pandemic, domestic traffic is dominated by a monopoly, subsequentially leading to a reduced offer with inflated prices. Since local costs remain high, no alternative provider for price sensitive point-to-point traffic has entered the market to date.

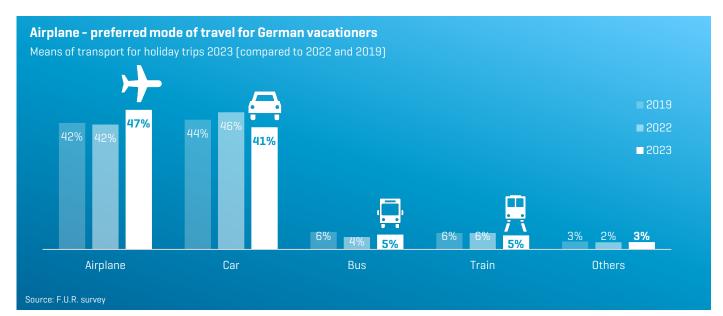


Munich and London-Heathrow are Europe's only A380 hubs

The high demand in Munich allowed Lufthansa – in defiance of earlier plans – to reintroduce regular services with Airbus A380 aircraft. So far, the flights have proven highly successful, leading to an expected total of six A380 that will be based in Munich during summer 2024.

Not a hint of "flight shame"

The F.U.R. survey shows that the airplane is now the preferred mode of travel for German vacationers.



Aircraft movements 2023 at major German airports





/Passenger development 2023

Backed by double-digit growth rates, the recovery of passenger traffic is gaining pace

Growth of 5.4 m passengers

With a total of 37.0 m passengers, Munich Airport again noted strong growth. Private travelers (+18 %) as well as business travelers (+15 %) traveled more; however, since the number of private travelers grew disproportionately, the share of business traffic softened to 27 %. Particularly pleasing is the high share of business travelers amongst inbound travelers to Munich – highlighting the ongoing importance of the city as a center of commerce and industry.

The share of transferring passengers remained high at 41 % but shrank by 1 PP. because of the strong recovery of O&D traffic.

Frequent female flyers

The majority of passengers in 2023 were female [52 %]. Just ten years ago, their share stood at just 40 %. This development is mainly driven by an increasingly strong demand for private travel. However, the share of women traveling for business also increased substantially to 45 %.

Seat load factors reach record levels

Another year, another record: The average seat load factor of 81 % is proof of high demand meeting a limited offer.

Top destinations in passenger traffic
[by city]Hamburg1,180,000Hamburg1,180,000Frankfurt965,000Berlin900,000London1,367,000Paris875,000Madrid831,000Dubai633,000New York503,000Bangkok419,000

All traffic segments are growing

The strongest development was recorded in the long-haul segment which grew to more than 7 m passengers (a plus of +31 % y.o.y.). Relatively, domestic traffic showed strong growth rates as well – climbing by +19 % to a total of 6 m passengers. However, its base was weaker, meaning the recovery of this segment is still lagging. The largest segment – continental traffic – noted a growth of +17 % to a total of 24 m commercial pax.

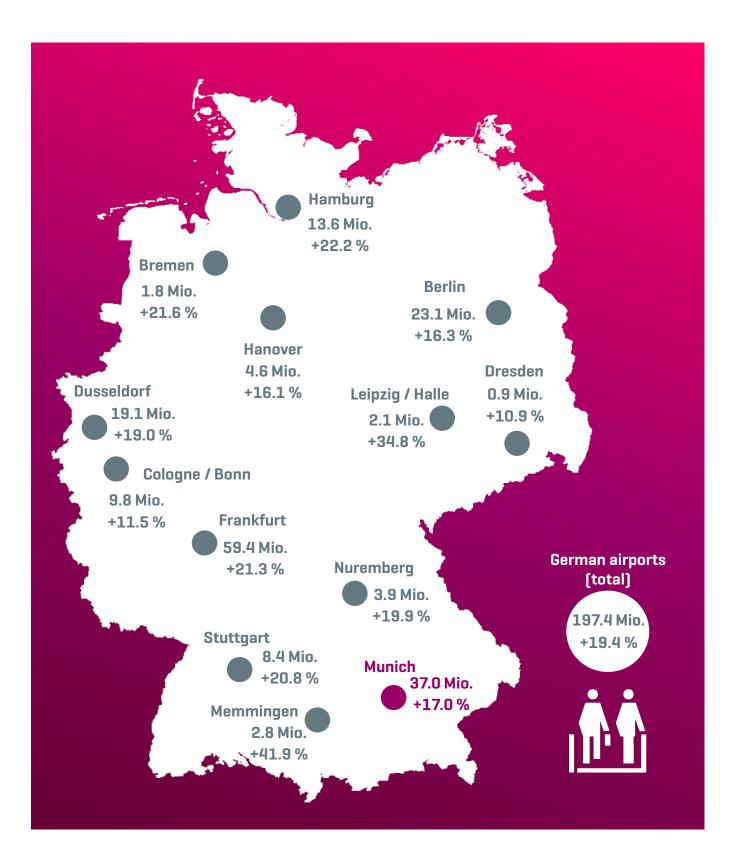
Changing passenger structure and behavior



Structure of passenger traffic 2023



Passengers 2023 at major German airports



Air freight and air mail 2023

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Air freight and air mail – development 2023

Cargo 2023 at German airports

-11

/Air freight and air mail 2023

In spite of a struggling economy, freight volumes grew in Munich

Ambivalent development

In total, the commercial freight turnover grew substantially by +7.1 % to a total of 277,199 tons. While this volume remains 16 % below pre-crisis levels, it is still a very encouraging development, particularly in light of the weakening German economy. The main driver of this development was the recovery of the belly freight, which is directly tied to the recovery of hub traffic with passenger flights. Belly freight noted a double-digit growth (+10.8 %) and reached 78.8 % of its pre-crisis volume. On the other hand, freight carried on pure freighters shrunk by -4.3 %, but remained 31.6 % above pre-crisis levels.

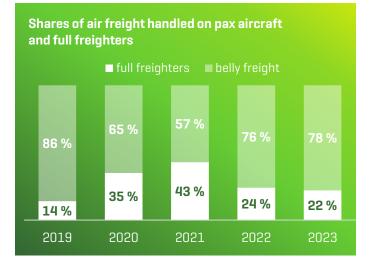
Air freight in Munich is growing – against the trend

Except for Munich Airport, none of the major air freight hubs noted a positive development. Munich is still benefiting from the extraordinary effect of recovering hub traffic, as most of the freight is carried in the belly of regular long-haul passenger flights. 2019, the last year before the pandemic, the share of belly freight stood at 86 %; in the past year, said share stood at 78 %, meaning the regular structure of freight handled at Munich Airport is slowly being reestablished.

Air mail is shrinking

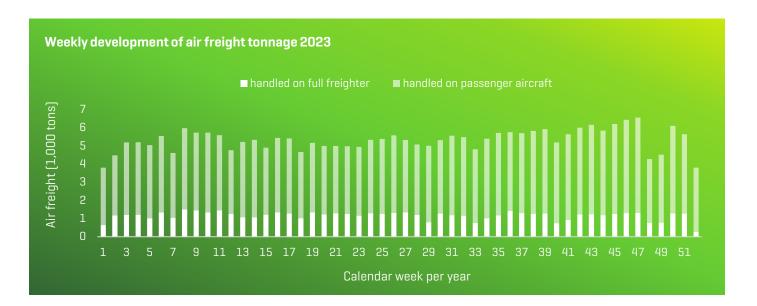
During the past year, a total of 7,147 tons of air mail were turned over. This corresponds to a growth of -9.8 % y.o.y. and

a loss of -61.2 % against pre-crisis levels. Air mail is less susceptible to economic cycles, but more driven by strategic ambitions by the Deutsche Post (German Mail) and political decisions.

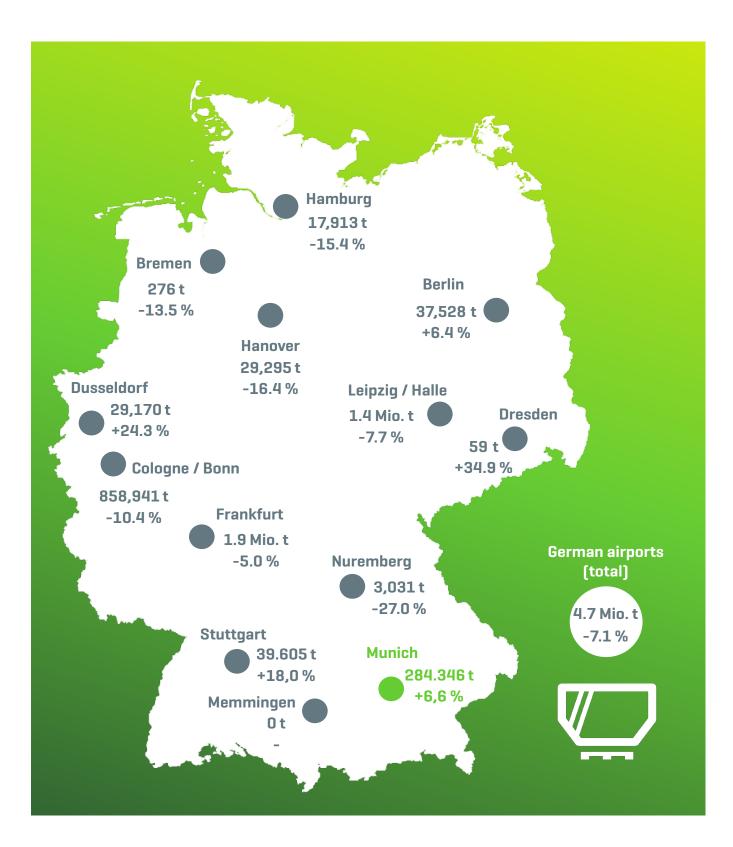


Cargo turnover is growing, too

Summarily, the volume of cargo – comprising air mail and air freight turnover – has grown by +6.6 % to 284,346 tons. It remains just –18.8 % below 2019 levels.



Cargo 2023 at major German airports



Traffic records since 1949



Traffic records since 1949

| Year | Aircraft movements | Change | Commercial passengers | Change | Air freight (t) | Change | Air mail [t] | Change |
|------|-----------------------|---------|--------------------------|---------|--------------------|---------|-----------------|---------|
| 1949 | 2,798 | | 28,970 | | 301 | | 62 | |
| 1950 | 5,332 | 90.6 % | 69,044 | 138.3 % | 1,273 | 322.9 % | 160 | 158.1 % |
| 1951 | 8,262 | 55.0 % | 114,574 | 65.9 % | 2,697 | 111.9 % | 395 | 146.9 % |
| 1952 | 7,098 | -14.1 % | 114,578 | 0.0 % | 1,761 | -34.7 % | 457 | 15.7 % |
| 1953 | 9,392 | 32.3 % | 140,280 | 22.4 % | 1,834 | 4.1 % | 347 | -24.1 % |
| 1954 | 13,630 | 45.1 % | 171,207 | 22.0 % | 2,302 | 25.5 % | 520 | 49.9 % |
| 1955 | 26,048 | 91.1 % | 270,906 | 58.2 % | 2,915 | 26.6 % | 695 | 33.7 % |
| 1956 | 46,052 | 76.8 % | 349,571 | 29.0 % | 3,605 | 23.7 % | 755 | 8.6 % |
| 1957 | 49,688 | 7.9 % | 417,807 | 19.5 % | 3,945 | 9.4 % | 891 | 18.0 % |
| 1958 | 46,328 | -6.8 % | 495,150 | 18.5 % | 4,272 | 8.3 % | 953 | 7.0 % |
| 1959 | 46,658 | 0.7 % | 586,921 | 18.5 % | 5,288 | 23.8 % | 1,175 | 23.3 % |
| 1960 | 50,108 | 7.4 % | 794,613 | 35.4 % | 7,506 | 41.9 % | 1,475 | 25.5 % |
| 1961 | 44,826 | -10.5 % | 838,493 | 5.5 % | 8,451 | 12.6 % | 2,289 | 55.2 % |
| 1962 | 47,206 | 5.3 % | 1,006,056 | 20.0 % | 10,140 | 20.0 % | 3,734 | 63.1 % |
| 1963 | 53,956 | 14.3 % | 1,184,362 | 17.7 % | 11,416 | 12.6 % | 4,296 | 15.1 % |
| 1964 | 56,070 | 3.9 % | 1,318,935 | 11.4 % | 12,827 | 12.4 % | 4,886 | 13.7 % |
| 1965 | 64,412 | 14.9 % | 1,647,329 | 24.9 % | 16,050 | 25.1 % | 5,391 | 10.3 % |
| 1966 | 73,836 | 14.6 % | 1,852,641 | 12.5 % | 18,446 | 14.9 % | 6,155 | 14.2 % |
| 1967 | 78,716 | 6.6 % | 2,009,951 | 8.5 % | 20,200 | 9.5 % | 6,343 | 3.1 % |
| 1968 | 80,576 | 2.4 % | 2,277,588 | 13.3 % | 26,901 | 33.2 % | 6,809 | 7.3 % |
| 1969 | 83,532 | 3.7 % | 2,595,412 | 14.0 % | 28,600 | 6.3 % | 7,484 | 9.9 % |
| 1970 | 102,907 | 23.2 % | 3,550,929 | 36.8 % | 31,943 | 11.7 % | 8,696 | 16.2 % |
| 1971 | 111,616 | 8.5 % | 4,011,474 | 13.0 % | 32,682 | 2.3 % | 9,087 | 4.5 % |
| 1972 | 113,174 | 1.4 % | 4,467,464 | 11.4 % | 36,638 | 12.1 % | 10,612 | 16.8 % |
| 1973 | 109,128 | -3.6 % | 4,247,764 | -4.9 % | 36,847 | 0.6 % | 11,447 | 7.9 % |
| 1974 | 113,788 | 4.3 % | 4,332,887 | 2.0 % | 37,883 | 2.8 % | 11,002 | -3.9 % |
| 1975 | 116,668 | 2.5 % | 4,543,138 | 4.9 % | 34,664 | -8.5 % | 10,866 | -1.2 % |
| 1976 | 119,332 | 2.3 % | 4,924,544 | 8.4 % | 40,854 | 17.9 % | 9,843 | -9.4 % |
| 1977 | 123,403 | 3.4 % | 5,299,122 | 7.6 % | 44,122 | 8.0 % | 10,702 | 8.7 % |
| 1978 | 130,172 | 5.5 % | 5,624,780 | 6.1 % | 47,856 | 8.5 % | 7,859 | -26.6 % |
| 1979 | 138,859 | 6.7 % | 6,084,917 | 8.2 % | 39,118 | -18.3 % | 10,073 | 28.2 % |
| 1980 | 142,032 | 2.3 % | 6,057,997 | -0.4 % | 39,091 | -0.1 % | 10,813 | 7.3 % |
| 1981 | 139,564 | -1.7 % | 5,915,167 | -2.4 % | 36,199 | -7.4 % | 11,153 | 3.1 % |
| 1982 | 133,366 | -4.4 % | 5,923,482 | 0.1 % | 37,042 | 2.3 % | 11,082 | -0.6 % |
| 1983 | 134,119 | 0.6 % | 6,356,666 | 7.3 % | 36,909 | -0.4 % | 12,346 | 11.4 % |
| 1984 | 140,664 | 4.9 % | 7,235,118 | 13.8 % | 42,141 | 14.2 % | 14,725 | 19.3 % |
| 1985 | 157,347 | 11.9 % | 8,042,579 | 11.2 % | 41,173 | -2.3 % | 15,305 | 3.9 % |
| 1986 | 166,510 | 5.8 % | 8,405,996 | 4.5 % | 49,044 | 19.1 % | 17,064 | 11.5 % |
| 1987 | 175,478 | 5.4 % | 9,575,061 | 13.9 % | 54,065 | 10.2 % | 20,295 | 18.9 % |
| 1988 | 177,817 | 1.3 % | 9,956,393 | 4.0 % | 55,879 | 3.4 % | 21,424 | 5.6 % |
| 1989 | 189,964 | 6.8 % | 10,485,182 | 5.3 % | 60,327 | 8.0 % | 20,920 | -2.4 % |
| 1990 | 191,856 | 1.0 % | 11,423,838 | 9.0 % | 61,221 | 1.5 % | 21,467 | 2.6 % |
| 1991 | 183,932 | -4.1 % | 10,797,984 | -5.5 % | 55,213 | -9.8 % | 23,219 | 8.2 % |

Traffic records since 1949

(continued)

| Year | Aircraft movements | Change | Commercial passengers | Change | Air freight (t) | Change | Air mail [t] | Change |
|------|-----------------------|---------|--------------------------|---------|--------------------|---------|-----------------|---------|
| 1992 | 192,153 | 4.5 % | 12,018,202 | 11.3 % | 56,847 | 3.0 % | 25,557 | 10.1 % |
| 1993 | 192,180 | 0.0 % | 12,731,917 | 5.9 % | 65,276 | 14.8 % | 30,083 | 17.7 % |
| 1994 | 199,845 | 4.0 % | 13,497,041 | 6.0 % | 71,807 | 10.0 % | 30,795 | 2.4 % |
| 1995 | 213,951 | 7.1 % | 14,867,922 | 10.2 % | 70,519 | -1.8 % | 35,787 | 16.2 % |
| 1996 | 233,254 | 9.0 % | 15,686,095 | 5.5 % | 82,948 | 17.6 % | 35,103 | -1.9 % |
| 1997 | 267,814 | 14.8 % | 17,894,704 | 14.1 % | 103,572 | 24.9 % | 28,073 | -20.0 % |
| 1998 | 278,392 | 3.9 % | 19,321,355 | 8.0 % | 103,850 | 0.3 % | 23,084 | -17.8 % |
| 1999 | 299,070 | 7.4 % | 21,282,906 | 10.2 % | 123,331 | 18.8 % | 23,366 | 1.2 % |
| 2000 | 319,009 | 6.7 % | 23,125,872 | 8.7 % | 133,234 | 8.0 % | 23,323 | -0.2 % |
| 2001 | 337,653 | 5.8 % | 23,646,900 | 2.3 % | 135,000 | 1.3 % | 22,668 | -2.8 % |
| 2002 | 344,405 | 2.0 % | 23,163,720 | -2.0 % | 165,902 | 22.9 % | 22,497 | -0.8 % |
| 2003 | 355,602 | 3.3 % | 24,193,304 | 4.4 % | 156,132 | -5.9 % | 22,000 | -2.2 % |
| 2004 | 383,110 | 7.7 % | 26,814,505 | 10.8 % | 177,005 | 13.4 % | 21,368 | -2.9 % |
| 2005 | 398,838 | 4.1 % | 28,619,427 | 6.7 % | 208,662 | 17.9 % | 15,215 | -28.8 % |
| 2006 | 411,335 | 3.1 % | 30,757,978 | 7.5 % | 231,736 | 11.1 % | 13,672 | -10.1 % |
| 2007 | 431,815 | 5.0 % | 33,959,422 | 10.4 % | 257,873 | 11.3 % | 14,536 | 6.3 % |
| 2008 | 432,296 | 0.1 % | 34,530,593 | 1.7 % | 256,757 | -0.4 % | 17,707 | 21.8 % |
| 2009 | 396,805 | -8.2 % | 32,681,067 | -5.4 % | 229,024 | -10.8 % | 13,126 | -25.9 % |
| 2010 | 389,939 | -1.7 % | 34,721,605 | 6.2 % | 289,535 | 26.4 % | 12,113 | -7.7 % |
| 2011 | 409,956 | 5.1 % | 37,763,701 | 8.8 % | 302,959 | 4.6 % | 17,472 | 44.2 % |
| 2012 | 398,039 | -2.9 % | 38,360,604 | 1.6 % | 287,074 | -5.2 % | 18,160 | 3.9 % |
| 2013 | 381,951 | -4.0 % | 38,672,644 | 0.8 % | 284,520 | -0.9 % | 17,888 | -1.5 % |
| 2014 | 376,678 | -1.4 % | 39,700,515 | 2.7 % | 305,347 | 7.3 % | 18,027 | 0.8 % |
| 2015 | 379,911 | 0.9 % | 40,981,522 | 3.2 % | 337,564 | 10.6 % | 18,801 | 4.3 % |
| 2016 | 394,430 | 3.8 % | 42,261,309 | 3.1 % | 355,950 | 5.4 % | 19,171 | 2.0 % |
| 2017 | 404,505 | 2.6 % | 44,577,241 | 5.5 % | 372,529 | 4.7 % | 15,988 | -16.6 % |
| 2018 | 413,469 | 2.2 % | 46,253,623 | 3.8 % | 358,411 | -3.8 % | 16,835 | 5.3 % |
| 2019 | 417,138 | 0.9 % | 47,941,348 | 3.6 % | 338,517 | -5.6 % | 18,455 | 9.6 % |
| 2020 | 146,833 | -64.8 % | 11,112,773 | -76.8 % | 152,636 | -54.9 % | 5,820 | -68.5 % |
| 2021 | 153,097 | 4.3 % | 12,496,432 | 12.5 % | 175,353 | 14.9 % | 6,599 | 13.4 % |
| 2022 | 285,028 | 86.2 % | 31,642,738 | 153.2 % | 266,862 | 52.2 % | 7,926 | 20.1 % |
| 2023 | 302,150 | 6.0 % | 37,037,070 | 17.0 % | 281,867 | 5.6 % | 7,149 | -9.8 % |

/Appendix

Europe

All European countries including Belarus, Cyprus, Moldova, Russian Federation West of Ural, Turkey and Ukraine. Denmark including Faroe Islands, Portugal including Azores and Madeira, Spain including Canary Islands, Ceuta and Melilla

Middle East

Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates, Yemen

North Africa

Algeria, Morocco, Tunisia, Egypt, Libya

Rest of Africa The African continent without North Africa

North America Canada, USA and Greenland

Latin America & the Caribbean

The Americas with the exception of North America as defined above (including Puerto Rico and Virgin Islands). Chile including Easter Islands, Ecuador including Galapagos Archipelago, Falkland Islands (British)

Asia/Pacific

Including Afghanistan, Armenia, Azerbaijan, Georgia, Kazakstan, Kyrgyzstan, Pakistan, Russian Federation East of Ural, Tajikistan, Turkmenistan and Uzbekistan, also Australia, New Zealand and Pacific Islands with the exception of Hawaii, Easter Islands and Galapagos

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