Abridged

# *Environmental Statement 2020*

**Including the Environmental Program until 2023**
**For the organizations Fraport AG (Fraport parent company), NICE, FCS, GCS and FraGround at Frankfurt Airport**

Fraport

*Update of the Environmental Statement 2019*

# Contents

# *Environmental Management at Frankfurt Airport*

Since 1999, Fraport AG at Frankfurt Airport has been regularly validated by government accredited and inspected environmental auditors. The basis for this audit is the European regulation "Eco-Management and Audit Scheme" (EMAS). Since 2002, the verification has also been carried out in accordance with the international standard ISO 14001. These audits in conformity with EMAS and ISO 14001 also included Fraport Cargo Services GmbH (FCS) since 2008, NICE Aircraft Services & Support GmbH (NICE) since 2009 and Energy Air GmbH since 2014. Energy Air GmbH is also validated in accordance with the international ISO 50001 standard. New additions to the EMAS network in 2017 include the subsidiary companies FraGround Fraport Ground Services GmbH (FraGround) and GCS Gesellschaft für Cleaning Service mbH & Co. Airport Frankfurt/ Main KG (GCS). The total amount of cleaning products containing hazardous substances employed in the cleaning process amounted to 37,262 kilograms in 2020. This represented an increase of 18%, predominantly due to the increased cleaning measures in the terminal in the context of the pandemic.

## Update

In the context of the pandemic, Fraport AG undertook changes to its organizational structure, particularly affecting the designations and tasks of individual departments. Changes related to the environmental management are shown in the updated organizational chart on page 2.

## Additional Environmental Figures

The environmental figures have been presented in the Environmental Statement in accordance with the Global Reporting Initiative (GRI) Performance Indicators Series 300 "Environment", supplemented by some specific indicators for the airport. The present Environmental Statement also includes indicators in accordance with the expanded GRI performance indicators for airports, "Airport Operators Sector Supplement" (AOSS).
The current key figures can be seen from page 3 onwards.

*Fraport Organizational Chart – Tasks and Functions Relevant to the Environment*

| Chairman of the Executive Board (VV) | Member of the Executive Board and Executive Director Labor Relations (VA) | Member of the Executive Board and Executive Director Controlling and Finance (VF) | Member of the Executive Board and Executive Director Aviation and Infrastructure (VI) | Member of the Executive Board and Executive Director Retail and Real Estate (VO) |
|---|---|---|---|---|
| **Segment Responsibility** | **Segment Responsibility** | **Segment Responsibility** | **Segment Responsibility** | **Segment Responsibility** |
| International Activities & Services | Ground Handling | | Aviation | Retail & Real Estate |
| **Strategic Business Units** | **Strategic Business Units** | **Strategic Business Units** | **Strategic Business Units** | **Strategic Business Units** |
| Global Investments and Management (BET) | Ground Services (BVD) | | Aviation (AVN) | Retail and Properties (HVM) |
| | Loading and unloading aircraft<br>Passenger transport<br>Baggage transport<br>Cargo transport<br>Push-back<br>Water supply for aircraft<br>Toilet waste disposal from aircraft | | Terminal operations<br>Flight operation systems<br>Traffic management<br>Monitoring of aircraft noise<br>Forest and biotope<br>Environmental impacts (noise and air)<br>Community issues<br>Passive noise abatement<br>Preventive fire protection<br>Emergency management | Operation of miscellaneous buildings<br>Energy supply<br>Energy and meter management |
| **Service Units** | **Service Units** | **Service Units** | **Service Units** | **Service Units** |
| Airport Expansion South (PAS) | | Integrated Facility Management (IFM) | Corporate Infrastructure Management (ZIM) | Information and Telecommunication (IUK) |
| Construction planning<br>Terminal 3 | | Technical building management<br>Operation of service workshops<br>Operation of filling stations<br>Operations management PTS<br>Operational winter service<br>Management of landscaped areas<br>Vehicle engineering<br>Geoinformation<br>Water supply<br>Waste management, remediation<br>Operation of drainage systems<br>Operation of sewage treatment plants<br>Operation of the nitrate removal plant | Construction planning<br>Energetic standards<br>Office for water protection<br>Waste management for construction<br>Compensation area management and floor waste | Environmental databases |
| **Central Units** | **Central Units** | **Central Units** | **Central Units** | **Central Units** |
| Corporate Development, Environment and Sustainability (UEW) | Occupational Health and Safety (VA4) | Finance and Investor Relations (FIR) | | Legal Affairs and Compliance (RAC) |
| Coordinator for the Environmental Management System<br>Officer for waste<br><br>Environmental policy and strategy<br><br>Coordination of environmental management<br><br>Environmental indicators<br>Environmental reporting<br>Environmental fund | Officer for dangerous goods and radiation protection | Sustainability reporting | | Environmental law |
| | Human Resources (PSL) | Investment and Project Controlling (IPC) | | |
| | Environmental training | Cost and Profitability Management (KEC) | | |
| | | Accounting (REW) | | |
| Corporate Communications (UKM) | Internal Auditing (REV) | Central Purchasing, Construction Contracts (ZEB) | | |
| Environmental communications | | Environmental procurement | | |

# Environmental Figures

**Frankfurt Airport, Fraport parent company, FCS, NICE, GCS, FraGround**

Aspects in accordance with the Global Reporting Initiative (GRI) performance indicators "Environment" and "Airport Operators Sector Supplement (AOSS)", subset "environment". As a result of the pandemic, the numbers in 2020 are not comparable with previous developments.

Values partially rounded; minor deviations may occur.

| *Employees* | *Unit* | *Comment* | *2017* | *2018* | *2019* | *2020* |
|---|---|---|---|---|---|---|
| *Fraport parent company* | *Number* | *1* | *10,747* | *10,595* | *10,480* | *10,018* |
| *FCS* | *Number* | *1* | *503* | *515* | *535* | *538* |
| *NICE* | *Number* | *1* | *43* | *44* | *45* | *43* |
| *FraGround* | *Number* | *1* | *3,331* | *3,744* | *3,963* | *2,618* |
| *GCS* | *Number* | *1* | *689* | *729* | *714* | *636* |

*[1] Employees = Permanent employees + temporary staff (school children, students, interns, marginally employed and trainees) + apprentices, exempted employees, status December of every year.*

| *AO1 – Passengers* | | | | | | |
|---|---|---|---|---|---|---|
| *Traffic volume* | *Unit* | *Comment* | *2017* | *2018* | *2019* | *2020* |
| *Passengers* | *Number of passengers* | | *64,505,151* | *69,510,269* | *70,556,072* | *18,770,998* |

| *AO2 – Aircraft movements* | | | | | | |
|---|---|---|---|---|---|---|
| *Traffic volume* | *Unit* | *Comment* | *2017* | *2018* | *2019* | *2020* |
| *Frankfurt Airport (FRA)* | | | | | | |
| *Traffic unit (without transit)* | *TU* | *1, 2* | *86,354,959* | *91,179,071* | *91,372,384* | *37,862,509* |
| *Aircraft movements (landing + take-off)* | *Number of movements* | | *475,537* | *512,115* | *513,912* | *212,235* |
| *Therein at night* | *Number of movements* | *3* | *34,192* | *37,284* | *35,814* | *12,925* |

*[1] = A traffic unit is equivalent to one passenger with baggage or 100 kg of airfreight or airmail.*

*[2] Commercial and non-commercial traffic.*

*[3] Nighttime: 22:00 to 06:00*

| *AO3 – Cargovolume* | | | | | | |
|---|---|---|---|---|---|---|
| *Traffic volume* | *Unit* | *Comment* | *2017* | *2018* | *2019* | *2020* |
| *Airfreight* | *T* | | *2,143,622* | *2,176,387* | *2,041,775* | *1,895,074* |
| *Airmail* | *T* | | *85,348* | *89,795* | *86,701* | *57,554* |
| *Therein FCS* | | | | | | |
| *Cargo-Volume* | | | | | | |
| *Airfreight* | *T* | | *735,524* | *678,094* | *633,599* | *665,813* |
| *Traffic units* | *TU* | *1* | *7,355,240* | *6,780,940* | *6,335,990* | *6,658,130* |

*[1] TU = A traffic unit is equivalent to one passenger with baggage or 100 kg of airfreight or airmail.*

| GRI 302: Energy | | | | | | |
|---|---|---|---|---|---|---|
| **GRI 302-1** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| **Direct energy consumption** | | | | | | |
| Frankfurt Airport | | 1, 2, 3 | | | | |
| Purchased direct non-renewable energy sources | TJ | | 826.76 | 816.02 | 812.85 | 499.27 |
| Natural gas | TJ | | 95.07 | 81.09 | 85.75 | 80.12 |
| Natural gas | million kWh | 3 | 26.410 | 22.525 | 23.820 | 22.255 |
| Liquefied petroleum gas (LPG) | TJ | | 8.44 | 7.17 | 8.75 | 7.07 |
| Liquefied petroleum gas (LPG) | m³ | 3 | 355 | 301 | 368 | 297 |
| Heating oil | TJ | | 98.9 | 93.7 | 96.1 | 80.7 |
| Heating oil | million liters | 3 | 2.738 | 2.595 | 2.662 | 2.236 |
| Diesel | TJ | | 562.6 | 569.6 | 558.9 | 297.4 |
| Diesel | million liters | | 15.804 | 16.001 | 15.701 | 8.353 |
| Gasoline | TJ | | 57.1 | 59.4 | 60.1 | 32.6 |
| Gasoline | million liters | | 1.76 | 1.83 | 1.85 | 1.01 |
| Kerosene (Jet A1) | TJ | 6 | 4.65 | 5.07 | 3.23 | 1.36 |
| Kerosene (Jet A1) | million liters | 6 | 0.134 | 0.146 | 0.093 | 0.039 |
| Therein Fraport parent company | | | | | | |
| Purchased direct non-renewable energy sources | TJ | 2 | 494.96 | 505.62 | 504.59 | 297.87 |
| Natural gas | TJ | | 5.6 | 4.5 | 4.7 | 4.38 |
| Natural gas | million kWh | | 1.554 | 1.255 | 1.305 | 1.218 |
| Liquefied petroleum gas (LPG) | TJ | | 8.4 | 7.2 | 8.8 | 7.07 |
| Liquefied petroleum gas (LPG) | m³ | | 355 | 301 | 368 | 297 |
| Heating oil | TJ | | 93.3 | 87.7 | 90.9 | 76.2 |
| Heating oil | million liters | | 2.585 | 2.430 | 2.518 | 2.111 |
| Diesel | TJ | | 345.2 | 361.6 | 356.9 | 187.9 |
| Diesel | million liters | 4 | 9.696 | 10.157 | 10.026 | 5.278 |
| Gasoline | TJ | | 40.1 | 42.1 | 41.8 | 21.8 |
| Gasoline | million liters | 4 | 1.239 | 1.299 | 1.292 | 0.67 |
| Kerosene (Jet A1) | TJ | 6 | 2.3 | 2.5 | 1.4 | 0.52 |
| Kerosene (Jet A1) | million liters | 6 | 0.066 | 0.072 | 0.041 | 0.015 |
| Total energy consumption | | | | | | |
| Renewable energy sources | % | | <1 | <1 | <1 | <1 |
| Non-renewable energy sources | % | | 100 | 100 | 100 | 100 |
| Therein FCS | | | | | | |
| Purchased direct non-renewable energy sources | TJ | | 6.52 | 5.00 | 4.95 | 5.79 |
| Diesel | TJ | | 6.07 | 4.60 | 4.59 | 5.41 |
| Diesel | million liters | | 0.170 | 0.129 | 0.129 | 0.152 |
| Gasoline | TJ | | 0.45 | 0.40 | 0.37 | 0.38 |
| Gasoline | million liters | | 0.014 | 0.012 | 0.011 | 0.011 |
| Total energy consumption | | | | | | |
| Renewable energy sources | % | | 0 | 0 | 0 | 0 |
| Non-renewable energy sources | % | | 100 | 100 | 100 | 100 |
| Therein NICE | | | | | | |
| Purchased direct non-renewable energy sources | TJ | | 16.35 | 13.82 | 14.47 | 7.86 |
| Diesel | TJ | | 16.30 | 13.74 | 14.39 | 7.82 |
| Diesel | million liters | 5 | 0.458 | 0.386 | 0.404 | 0.220 |
| Gasoline | TJ | | 0.05 | 0.07 | 0.08 | 0.04 |
| Gasoline | million liters | | 0.002 | 0.002 | 0.001 | 0.001 |
| Total energy consumption | | | | | | |
| Renewable energy sources | % | | 0 | 0 | 0 | 0 |
| Non-renewable energy sources | % | | 100 | 100 | 100 | 100 |
| Therein FraGround | | | | | | |
| Purchased direct non-renewable energy sources | TJ | | 0.40 | 0.37 | 0.36 | 0.19 |
| Diesel | TJ | | 0.27 | 0.22 | 0.23 | 0.13 |
| Diesel | million liters | 4 | 0.008 | 0.006 | 0.006 | 0.004 |
| Gasoline | TJ | | 0.12 | 0.14 | 0.13 | 0.05 |
| Gasoline | million liters | 4 | 0.004 | 0.004 | 0.004 | 0.001 |
| Total energy consumption | | | | | | |
| Renewable energy sources | % | | 0 | 0 | 0 | 0 |
| Non-renewable energy sources | % | | 100 | 100 | 100 | 100 |

| GRI 302: Energy | | | | | | |
|---|---|---|---|---|---|---|
| **GRI 302-1** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| **Direct energy consumption** | | | | | | |
| Therein GCS | | | | | | |
| Purchased direct non-renewable energy sources | TJ | | 2.08 | 2.05 | 1.79 | 1.19 |
| Diesel | TJ | | 1.62 | 1.52 | 1.28 | 1.19 |
| Diesel | million liters | 4 | 0.046 | 0.043 | 0.036 | 0.033 |
| Gasoline | TJ | | 0.46 | 0.53 | 0.51 | 0.54 |
| Gasoline | million liters | 4 | 0.014 | 0.016 | 0.016 | 0.015 |
| Total energy consumption | | | | | | |
| Renewable energy sources | % | | 0 | 0 | 0 | 0 |
| Non-renewable energy sources | % | | 100 | 100 | 100 | 100 |

[1] All companies on the composite owned land of Frankfurt Airport (Fraport parent company, subsidiaries of Fraport AG, more than 500 third parties) to the extent data are available.

[2] All data including technical losses, as far as known.

[3] Consumption of natural gas by third parties based on information that cannot be verified.

[4] The fuel consumption for private use of company cars is not taken into account.

[5] The level of consumption depends on the number of deicing operations (see indicator "Number of deiced aircraft" in the category traffic volume).

[6] Kerosene consumption of air start units.

TJ = Terajoule

| GRI 302: Energy | | | | | | |
|---|---|---|---|---|---|---|
| **GRI 302-1** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| **Indirect energy consumption** | | | | | | |
| Frankfurt Airport | | 1. 2 | | | | |
| Purchased energy | TJ | | 4,072.1 | 3,954.7 | 3,749.3 | 3,177.2 |
| Electricity | TJ | | 2,106.9 | 2,083.0 | 2,026.8 | 1,656.7 |
| Electricity | million kWh | | 585.256 | 578.603 | 563.003 | 460.201 |
| District heating | TJ | | 1,464.6 | 1,329.7 | 1,246.8 | 1,149.8 |
| District heating | million kWh | | 406.834 | 369.358 | 346.345 | 319.397 |
| District cooling | TJ | | 500.6 | 542.0 | 475.6 | 370.6 |
| District cooling | million kWh | | 139.060 | 150.565 | 132.123 | 102.946 |
| Indirect energy consumption | | | | | | |
| Renewable energy sources | % | | 47.4 | 47.9 | 55.4 | 57.2 |
| Non-renewable energy sources | % | | 52.6 | 52.1 | 44.6 | 42.8 |
| Therein Fraport parent company | | | | | | |
| Purchased energy | TJ | | 2,236.6 | 2,180.8 | 2,128.0 | 1,728.5 |
| Electricity | TJ | 3 | 1,151.7 | 1,129.3 | 1,106.8 | 900.4 |
| Electricity | million kWh | 3 | 319.923 | 313.695 | 307.438 | 250.118 |
| District heating | TJ | | 670.2 | 596.2 | 608.2 | 507.1 |
| District heating | million kWh | | 186.155 | 165.604 | 168.945 | 140.863 |
| District cooling | TJ | | 414.8 | 455.3 | 413.0 | 320.9 |
| District cooling | million kWh | | 115.209 | 126.465 | 114.716 | 89.146 |
| Indirect energy consumption | | | | | | |
| Renewable energy sources | % | | 45.7 | 45.9 | 55.2 | 57.3 |
| Non-renewable energy sources | % | | 54.3 | 54.1 | 44.8 | 42.7 |
| Therein FCS | | | | | | |
| Purchased energy | TJ | | 36.09 | 40.81 | 30.98 | 45.12 |
| Electricity | TJ | | 18.87 | 19.93 | 17.62 | 17.83 |
| Electricity | million kWh | | 5.242 | 5.535 | 4.895 | 4.952 |
| District heating | TJ | 4 | 17.22 | 20.89 | 13.36 | 27.29 |
| District heating | million kWh | 4 | 4.783 | 5.802 | 3.711 | 7.582 |
| Indirect energy consumption | | | | | | |
| Renewable energy sources | % | | 45.7 | 45.9 | 55.2 | 57.3 |
| Non-renewable energy sources | % | | 54.3 | 54.1 | 44.8 | 42.7 |

| GRI 302: Energy | | | | | | |
|---|---|---|---|---|---|---|
| **GRI 302-1** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| **Indirect energy consumption** | | | | | | |
| Therein NICE | | | | | | |
| Purchased energy | TJ | | 4,23 | 4,52 | 4,51 | 2,57 |
| Electricity | TJ | | 3,81 | 3,72 | 3,54 | 1,98 |
| Electricity | million kWh | | 1,057 | 1,032 | 0,984 | 0,549 |
| District heating | TJ | | 0,43 | 0,80 | 0,97 | 0,60 |
| District heating | million kWh | | 0,118 | 0,222 | 0,268 | 0,166 |
| Indirect energy consumption | | | | | | |
| Renewable energy sources | % | | 45,7 | 45,9 | 55,2 | 57,3 |
| Non-renewable energy sources | % | | 54,3 | 54,1 | 44,8 | 42,7 |
| Therein FraGround | | | | | | |
| Purchased energy | TJ | | 2,16 | 2,07 | 2,69 | 2,34 |
| Electricity | TJ | | 1,35 | 1,24 | 1,54 | 1,40 |
| Electricity | million kWh | | 0,376 | 0,346 | 0,428 | 0,389 |
| District heating | TJ | | 0,77 | 0,78 | 1,05 | 0,87 |
| District heating | million kWh | | 0,213 | 0,217 | 0,293 | 0,241 |
| District cooling | TJ | | 0,04 | 0,05 | 0,10 | 0,07 |
| District cooling | million kWh | | 0,010 | 0,013 | 0,026 | 0,020 |
| Indirect energy consumption | | | | | | |
| Renewable energy sources | % | | 45,7 | 100 | 100 | 100 |
| Non-renewable energy sources | % | | 54,3 | 0 | 0 | 0 |
| Therein GCS | | | | | | |
| Purchased energy | TJ | | 2,20 | 2,19 | 1,08 | 0,67 |
| Electricity | TJ | | 2,10 | 2,09 | 0,93 | 0,56 |
| Electricity | million kWh | | 0,582 | 0,581 | 0,259 | 0,155 |
| District heating | TJ | | 0,11 | 0,10 | 0,15 | 0,11 |
| District heating | million kWh | | 0,030 | 0,027 | 0,041 | 0,032 |
| Indirect energy consumption | | | | | | |
| Renewable energy sources | % | | 45.7 | 100 | 100 | 100 |
| Non-renewable energy sources | % | | 54.3 | 0 | 0 | 0 |

[1] All companies on the contiguous property area of Frankfurt Airport: Fraport parent company, subsidiaries of Fraport AG, more than 500 third parties.

[2] All data including technical losses, as far as known.

[3] Value at the time of the review. As a result of the continuous checks customary in the energy industry, the value may still change after printing.

[4] Several pharma charter flights in January and February 2020, during which the hall had to be heated up to a constant temperature of 15 degrees Celsius.

TJ = Terajoule

| GRI 302: Energy | | | | | | |
|---|---|---|---|---|---|---|
| **GRI 302-3 Energy intensity** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| Frankfurt Airport | | 1, 2, 3 | | | | |
| Specific total consumption | TJ per million TU | | 56.73 | 52.32 | 49.93 | 97.10 |
| Purchased direct non-renewable energy sources | TJ per million TU | 4 | 9.57 | 8.95 | 8.90 | 13.19 |
| Purchased energy | TJ per million TU | 4 | 47.16 | 43.37 | 41.03 | 83.91 |
| Therein Fraport parent company | | | | | | |
| Specific total consumption | TJ per million TU | | 31.63 | 29.46 | 28.81 | 53.52 |
| Purchased direct non-renewable energy sources | TJ per million TU | 4 | 5.73 | 5.55 | 5.52 | 7.87 |
| Purchased energy | TJ per million TU | 4 | 25.90 | 23.92 | 23.29 | 45.65 |

[1] All companies on the contiguous property area of Frankfurt Airport: Fraport parent company, subsidiaries of Fraport AG, more than 500 third parties.

[2] All data including technical losses, as far as known.

[3] Consumption of third parties partly due to information that cannot be verified.

[4] TU = A traffic unit is equivalent to one passenger with baggage or 100 kg of airfreight or airmail.

TJ = Terajoule

| GRI 302: Energy | | | | | | |
|---|---|---|---|---|---|---|
| **GRI 302-4** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| **Reduction of energy consumption** | | | | | | |
| Fraport parent company | | | | | | |
| Reduction of energy consumption | million kWh | 1, 2, 3 | 69.91 | 94.92 | 111.45 | 130.08 |

[1] Based on the year 2008, accumulated effects from the year 2008, to the extent effective in subsequent years.

[2] Calculation of energy which has been saved for reasons of improved procedures, replacement and upgrading of systems and equipment, and modified employee behavior.

[3] Includes calculated savings from completed projects.

| GRI 303: Water | | | | | | |
|---|---|---|---|---|---|---|
| **GRI 303-1** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| **Total water consumption** | | | | | | |
| Frankfurt Airport | | 1 | | | | |
| Total water consumption | million m³ | | 1.764 | 2.164 | 2.209 | 1.417 |
| Total water consumption | liters per TU | 2 | 20.43 | 23.73 | 24.17 | 37.44 |
| Drinking water | million m³ | 4 | 1.274 | 1.346 | 1.448 | 0.996 |
| Service water | million m³ | 3, 5 | 0.490 | 0.818 | 0.760 | 0.421 |
| Therein Fraport parent company | | | | | | |
| Total water consumption | million m³ | 7, 8 | 1.023 | 1.416 | 1.436 | 0.905 |
| Total water consumption | liters per TU | 2, 8 | 11.8 | 15.5 | 15.7 | 23.9 |
| Drinking water | million m³ | 4 | 0.615 | 0.689 | 0.760 | 0.546 |
| Service water | million m³ | 5, 8 | 0.408 | 0.727 | 0.675 | 0.359 |
| Therein FCS | | | | | | |
| Total water consumption | million m³ | | 0.009 | 0.008 | 0.007 | 0.007 |
| Drinking water | million m³ | 4 | 0.009 | 0.008 | 0.007 | 0.007 |
| Service water | m³ | | – | – | – | – |
| Therein NICE | | | | | | |
| Total water consumption | million m³ | 6 | 0.010 | 0.011 | 0.010 | 0.007 |
| Drinking water | million m³ | 4, 6 | 0.007 | 0.008 | 0.009 | 0.005 |
| Service water | million m³ | 5 | 0.003 | 0.003 | 0.002 | 0.002 |
| Therein GCS | | | | | | |
| Total water consumption | million m³ | | 0.005 | 0.005 | 0.005 | 0.006 |
| Drinking water | million m³ | 4 | 0.005 | 0.005 | 0.005 | 0.006 |
| Service water | m³ | | – | – | – | – |

[1] All companies on the contiguous property area of Frankfurt Airport: Fraport parent company, subsidiaries of Fraport AG, more than 500 third parties.

[2] TU = A traffic unit is equivalent to one passenger with baggage or 100 kg of airfreight or airmail.

[3] Less share of drinking water at service water treatment in Terminal 2.

[4] From the local authority water supply.

[5] The service water is treated from surface water, rainwater and ground water. Contains subsets, which are estimated.

[6] Water is used to dilute the aircraft deicing agents. In cold and snowy winters larger amounts are needed for de-icing. The water consumption therefore rises accordingly.

[7] Total consumption for the airport minus consumption by third parties at the Frankfurt Airport site.

[8] Temporarily rising usage because of the construction of Terminal 3.

| GRI 303: Water | | | | | | |
|---|---|---|---|---|---|---|
| **AO4 Quality of precipitation water** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| Frankfurt Airport | | | | | | |
| Hydrocarbons | mg/l | 1 | <0.1 | <0.1 | 0.2 | <0.1 |
| Materials capable of being deposited | ml/l | 1 | 0.23 | <0.1 | <0.1 | 0.27 |

[1] A 2 h mixed sample is collected each month from the precipitation water channel at a sampling test station located shortly before the discharge point into the River Main. The value for hydrocarbons was calculated from twelve individual samples, the value for "substances capable of being deposited" from eleven individual samples.

| GRI 304: Biodiversity | | | | | | |
|---|---|---|---|---|---|---|
| **GRI 304-1 Land use** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| Frankfurt Airport | | | | | | |
| Owned land by Fraport AG | ha | 1 | 2,284.00 | 2,284.84 | 2,287.19 | 2,286.61 |
| of which paved area | ha | | 1,092.00 | 1,103.90 | 1,103.60 | 1,116.48 |

[1] Continuous owned land.

| GRI 305: Emissions | | | | | | |
|---|---|---|---|---|---|---|
| **GRI 305-1 Direct (Scope 1) and GRI 305-2 indirect (Scope 2) Greenhouse gas emissions** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| Fraport parent company | | | | | | |
| $CO_2$-emissions | 1000 t $CO_2$ | 1 | 190.1 | 188.6 | 170.3 | 129.3 |
| Direct $CO_2$ emissions | 1000 t $CO_2$ | 1 | 36.4 | 37.2 | 37.1 | 21.9 |
| Indirect $CO_2$ emissions | 1000 t $CO_2$ | 2 | 153.7 | 151.4 | 133.2 | 107.4 |
| compensated $CO_2$ emissions (certificates) | 1000 t $CO_2$ | | 0 | 0 | 0 | 0 |
| Other relevant greenhouse gas emissions | t $CO_2$ equivalent | 3 | 1.923 | 1.61 | 1.437 | 0.801 |
| FCS | | | | | | |
| $CO_2$-emissions | 1000 t $CO_2$ | 1 | 3.15 | 3.37 | 2.54 | 3.49 |
| Direct $CO_2$ emissions | 1000 t $CO_2$ | 1 | 0.48 | 0.37 | 0.37 | 0.43 |
| Indirect $CO_2$ emissions | 1000 t $CO_2$ | 2 | 2.67 | 3.00 | 2.18 | 3.06 |
| NICE | | | | | | |
| $CO_2$-emissions | 1000 t $CO_2$ | 1 | 1.60 | 1.43 | 1.43 | 0.80 |
| Direct $CO_2$ emissions | 1000 t $CO_2$ | 1 | 1.21 | 1.02 | 1.07 | 0.58 |
| Indirect $CO_2$ emissions | 1000 t $CO_2$ | 2 | 0.39 | 0.41 | 0.35 | 0.22 |
| FraGround | | | | | | |
| $CO_2$-emissions | 1000 t $CO_2$ | 1 | 0.20 | 0.07 | 0.08 | 0.06 |
| Direct $CO_2$ emissions | 1000 t $CO_2$ | 1 | 0.03 | 0.03 | 0.03 | 0.01 |
| Indirect $CO_2$ emissions | 1000 t $CO_2$ | 2 | 0.17 | 0.04 | 0.05 | 0.04 |
| GCS | | | | | | |
| $CO_2$-emissions | 1000 t $CO_2$ | 1 | 0.36 | 0.16 | 0.14 | 0.13 |
| Direct $CO_2$ emissions | 1000 t $CO_2$ | 1 | 0.15 | 0.15 | 0.13 | 0.12 |
| Indirect $CO_2$ emissions | 1000 t $CO_2$ | 2 | 0.21 | 0.00 | 0.01 | 0.01 |

[1] Direct emission in conformity with Scope 1 GHG Protocol Standard: fuels, fuels for combustion plants, here heating oil, natural gas, propane gas.

[2] Indirect emissions in conformity with Scope 2 GHG Protocol Standard: purchasing of electricity (Fraport Group), district heating, district cooling (Fraport at the Frankfurt site).

[3] Only negligible amounts of additional greenhouse gases (such as $CH_4$, $N_2O$) are under the influence of the Fraport parent company.

| GRI 305: Emissions | | | | | | |
|---|---|---|---|---|---|---|
| **GRI 305-3 Other indirect (Scope 3) GHG emissions** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| Fraport parent company | | | | | | |
| Air traffic | 1000 t $CO_2$ | 1 | 937.8 | 1009.7 | 1007.5 | 420.1 |
| Employee traffic at Fraport parent company and third parties at Frankfurt Airport | 1000 t $CO_2$ | 2 | 112.0 | 106.6 | 127.8 | 93.9 |
| Passenger traffic (passengers originated here) | 1000 t $CO_2$ | 3, 7 | 185.0 | 198.9 | 273.9 | 96.9 |
| Business trips of employees at Fraport parent company | 1000 t $CO_2$ | 4 | 0.90 | 0.80 | 0.75 | 0.00 |
| Energy consumption of third parties (infrastructure and vehicles) | 1000 t $CO_2$ | 5 | 189.7 | 183.5 | 164.7 | 133.9 |
| Other relevant greenhouse gas emissions | t $CO_2$ equivalent | 6 | <2 | <2 | <2 | <2 |

[1] Air traffic up to 914 m (LTO cycle) of all aircraft landing and taking off at Frankfurt Airport, use of APU.

[2] Travel by employees to and from the workplace.

[3] Travel to and from the airport by passengers, travel in private vehicles and public transport.

[4] Includes car, rail, and air travel.

[5] Electricity, heat, cooling, fuels.

[6] According to investigations carried out in 2005, the emissions of other greenhouse gases at the airport were negligible.

[7] Increase of aircraft movements and passengers in 2019.

| GRI 305: Emissions | | | | | | |
|---|---|---|---|---|---|---|
| **GRI 305-4 Climate intensity according to GHG** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| *Fraport parent company* | | | | | | |
| Climate intensity of traffic performance | kg $CO_2$ per TU | 3 | 2.20 | 2.07 | 1.86 | 3.41 |
| Direct $CO_2$ emissions | kg $CO_2$ per TU | 1, 3 | 0.42 | 0.41 | 0.41 | 0.58 |
| Indirect $CO_2$ emissions | kg $CO_2$ per TU | 2, 3 | 1.78 | 1.66 | 1.46 | 2.84 |

[1] Direct emission in conformity with Scope 1 GHG Protocol Standard: fuels, fuels for combustion plants, here heating oil, natural gas, propane gas.

[2] Indirect emissions in conformity with Scope 2 GHG Protocol Standard: purchasing of electricity, district heating, district cooling.

[3] TU = A traffic unit is equivalent to one passenger with baggage or 100 kg of airfreight or airmail.

| GRI 305: Emissions | | | | | | |
|---|---|---|---|---|---|---|
| **GRI 305-7 Air polluting emissions** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| *Air traffic at Frankfurt Airport* | | 1 | | | | |
| NOx | t | 2 | 2,517 | 2,711 | | |
| NOx | t | 2, 5 | 2,537 | 2,733 | 2,694 | 1,197 |
| HC | t | 2 | 389 | 417 | | |
| HC | t | 2, 5 | 393 | 421 | 415 | 177 |
| PM10 | t | 2 | 23 | 25 | | |
| PM10 | t | 2, 5 | 24 | 26 | 25 | 10 |
| $SO_2$ | t | 2 | 164 | 177 | | |
| $SO_2$ | t | 2, 5 | 166 | 180 | 177 | 73 |
| NOx | g per TU | 2, 3, 6 | 29.38 | 29.97 | 29.49 | 31.61 |
| HC | g per TU | 2, 3, 6 | 4.55 | 4.61 | 4.54 | 4.67 |
| PM10 | g per TU | 2, 3, 6 | 0.28 | 0.29 | 0.27 | 0.26 |
| $SO_2$ | g per TU | 2, 3, 6 | 1.92 | 1.97 | 1.94 | 1.93 |
| *Fraport parent company* | | | | | | |
| NOx | t | 4 | – | – | – | – |
| Benzene | t | 4 | – | – | – | – |
| PM10 (Fine dust <10 µm) | t | 4 | – | – | – | – |

[1] Caused by 110 to 114 different airlines depending on timetable (summer, winter), only indirectly influenced by Fraport.

[2] Air traffic: emissions in tons per calendar year up to an altitude of 300 meter (taxiing, starting, climb, descent incl. rollout, engine ignition, APU). Up to an altitude of 300 meters the emissions have a regional effect.

[3] TU = A traffic unit is equivalent to a passenger with baggage or 100 kg of airfreight or airmail.

[4] Fraport parent company emits per year approximately 264 t NOx, 0.4 t benzene and 9.3 t PM10. These data are derived from the zoning plan documents. An annual update is not yet possible because determining the data is very complex. In future, the data are to be calculated on a continuous basis, the necessary processes are currently being prepared.

[5] The movement logs were recreated with current aircraft information so that individual engine information was available for many more aircraft. The calculation procedure for APU emissions was fundamentally revised. It now takes each aircraft into account instead of making a generalized approach, as was the case previously.

[6] Consideration per TU only related to the new calculation method (for old consideration see abridged environmental statement 2019).

| GRI 306: Wastewater and waste | | | | | | |
|---|---|---|---|---|---|---|
| **GRI 306-1 Discharge of wastewater** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| *Frankfurt Airport* | | | | | | |
| Sewage water | million m³ | 1, 2 | 1.966 | 2.156 | 2.142 | 1.496 |
| Sewage water | Liters per TU | 3 | 22.8 | 23.6 | 23.4 | 39.5 |

[1] Wastewater from Fraport parent company and more than 500 other companies at Frankfurt Airport. The disposal of sewage water from Frankfurt Airport is carried out by Fraport AG, allocation to individual companies is not possible.

[2] Wastewater is treated in the fully biological water-treatment plant at the Fraport parent company, as well as at fully biological water-treatment plants in Frankfurt Niederrad and Frankfurt Sindlingen. Since 2013, the separation of the precipitation water contaminated with deicing agents has brought about an increased dependence of the amount of sewage water on the nature of the weather conditions in the relevant winter.

[3] TU = A traffic unit is equivalent to one passenger with baggage or 100 kg of airfreight or airmail.

| GRI 306: Wastewater and waste | | | | | | |
|---|---|---|---|---|---|---|
| **GRI 306-2** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| **Waste by type and disposal method** | | | | | | |
| Fraport parent company | | | | | | |
| Amount of waste | 1000 t | 1, 2 | 20.36 | 20.94 | 20.31 | 9.45 |
| Amount of waste | kg per TU | 3 | 0.24 | 0.23 | 0.22 | 0.25 |
| Hazardous waste | 1000 t | 1, 2 | 2.19 | 1.77 | 1.80 | 1.34 |
| Non-hazardous waste | 1000 t | 1, 2 | 18.17 | 19.17 | 18.51 | 8.13 |
| Total recoverability | 1000 t | 1, 2 | 18.39 | 18.94 | 18.04 | 7.99 |
| Total disposal | 1000 t | 1, 2 | 1.97 | 2.00 | 2.28 | 1.47 |
| Total recoverability rate | % | 1, 2 | 90.3 | 90.5 | 88.8 | 84.5 |
| Waste from international flights | 1000 t | | 4.62 | 4.65 | 4.81 | 2.09 |
| FCS | | | | | | |
| Amount of waste | 1000 t | 1 | 1.668 | 1.667 | 1.525 | 1.603 |
| Hazardous waste | t | 1 | 0 | 0 | 0 | 0 |
| Non-hazardous waste | 1000 t | 1 | 1.67 | 1.67 | 1.53 | 1.60 |
| Total recoverability | 1000 t | 1 | 1.61 | 1.61 | 1.53 | 1.60 |
| Total disposal | t | 1 | 58.0 | 58.0 | 0.0 | 0.0 |
| Total recoverability rate | % | 1 | 96.5 | 96.5 | 100.0 | 100.0 |
| NICE | | | | | | |
| Amount of waste | 1000 t | 1, 5 | 0.13 | 0.10 | 0.11 | 0.08 |
| Hazardous waste | 1000 t | 1 | 0 | 0 | 0 | 0 |
| Non-hazardous waste | 1000 t | 1, 5 | 0.13 | 0.10 | 0.11 | 0.08 |
| Total recoverability | 1000 t | 1, 4 | 0.13 | 0.10 | 0.11 | 0.08 |
| Total disposal | 1000 t | 1 | 0 | 0 | 0 | 0 |
| Total recoverability rate | % | 1 | 100 | 100 | 100 | 100 |
| FraGround | | | | | | |
| Amount of waste | 1000 t | 7 | 4.84 | | | |
| Hazardous waste | 1000 t | 7 | 0 | | | |
| Non-hazardous waste | 1000 t | 7 | 4.84 | | | |
| Total recoverability | 1000 t | 7 | 4.84 | | | |
| Total disposal | 1000 t | 7 | 0 | | | |
| Total recoverability rate | % | 7 | 100 | | | |
| GCS | | | | | | |
| Amount of waste | 1000 t | 6 | | | | 0.0004 |
| Hazardous waste | 1000 t | 6 | | | | 0 |
| Non-hazardous waste | 1000 t | 6 | | | | 0.0004 |
| Total recoverability | 1000 t | 6 | | | | 0.0004 |
| Total disposal | 1000 t | 6 | | | | |
| Total recoverability rate | % | 6 | | | | 100 |

[1] Without soil and building rubble.

[2] Including waste from third parties, primarily residual waste out of aircraft (no catering waste) and without soil and building rubble.

[3] TU = A traffic unit is equivalent to a passenger with baggage or 100 kg of airfreight or airmail.

[4] Aircraft deicing agents.

[5] The total amount is a mixture of water and Type I/Type IV fluids.

[6] Since 2020, waste has been generated that is not disposed of and accounted for by Fraport parent company.

[7] Starting in 2018, waste will be disposed of via Fraport and will therefore be included in Fraport's statistical balance sheet.

| GRI 306: Wastewater and waste | | | | | | |
|---|---|---|---|---|---|---|
| **GRI 306-3 Significant spills** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| Fraport parent company | | 1 | | | | |
| Total number and volume of significant spills | | | | | | |
| Number of spills | Number | | 762 | 532 | 430 | 225 |
| Volume of spills | $m^3$ | | 10.37 | 9.00 | 5.04 | 3.38 |
| Frequency of spills | Number per 1000 aircraft movements | | 1.60 | 1.04 | 0.84 | 1.06 |
| Effects | | 2 | none | none | none | none |

[1] Spills primarily by third parties.

[2] No environmental hazard because releases are generally on surfaced areas with comprehensive safety installations implemented downstream. Spills on not surfaced areas are very rare exceptions and are cleared up immediately.

| GRI 306: Wastewater and waste | | | | | | |
|---|---|---|---|---|---|---|
| **Groundwater improvement** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| Frankfurt Airport | | | | | | |
| Nitrate content at reference measuring station well FB5 | mg/l | 1 | 28 | 27 | 24 | 22 |

[1] Yearly average value.

| AO5 – Air quality | | | | | | |
|---|---|---|---|---|---|---|
| | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| Frankfurt Airport | | 1, 2 | | | | |
| $NO_2$ | µg/m³ | 3 | 42 | 43 | 40 | 31 |
| $SO_2$ | µg/m³ | 4 | 2 | 2 | 1 | 1 |
| PM10 (fine dust < 10 µm ) | µg/m³ | 5 | 17 | 18 | 16 | 15 |
| Benzene | µg/m³ | 6 | 0.5 | 0.6 | 0.7 | 0.6 |

[1] Annual average of the measured values at the SOMMI1 Station. These values presented the aggregated result of all emissions from different source groups, i.e. apart from pollutants contributed by the airport they also include emissions from third parties (road traffic, trade and industry, house fires, large-scale background pollution). The proportion of the airport depends on the location, and model calculations indicate that the proportion here is between approx. 10% and 30%.

[2] Limit values/annual average (not applicable at the airport, since no whole-year exposure).

[3] $NO_2$ assessment value according to EU Directive 2008/50/EC, 39. Federal Emission Control Act (BImSchV): 40 µg/m³.

[4] $SO_2$ assessment according to Technical Instructions on Air Quality Control (TA Luft) 2002 (otherwise no annual average defined): 50 µg/m³.

[5] Fine dust, PM10 in accordance with EU Directive 2008/50/EC, 39. Federal Emission Control Act (BImSchV): 40 µg/m³.

6 Benzene assessment value in accordance with EU Directive 2008/50/EC, 39. Federal Emission Control Act (BImSchV): 5 mg/m³.

| AO6 – Airfield surfaces and aircraft deicing agents | | | | | | |
|---|---|---|---|---|---|---|
| | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| Fraport parent company | | | | | | |
| Airfield surfaces deicing agent: potassium format (fluid – approx. 50% agent), applied on the aircraft movement areas | m³ | 1 | 2,394 | 1,324 | 1,500 | 867 |
| Airfield surfaces deicing agent: sodium formate (granulate – approx. 100% agent) | m³ | 1 | 457 | 250 | 182 | 12 |
| Road salt (NaCl) | m³ | 1, 2 | 988 | 1,291 | 464 | 283 |
| NICE | | | | | | |
| Deiced aircraft | Number | 1 | 6,480 | 5,517 | 6,348 | 2,487 |
| Aircraft deicing agent: propylene glycol (NICE) | m³ active ingredient | | 1,835 | 1,318 | 1,473 | 679 |
| Aircraft deicing agents: propylene glycol; per de-iced aircraft (NICE) | m³ substance per aircraft | | 0.283 | 0.239 | 0.232 | 0.273 |

[1] Values fluctuate strongly depending on the characteristics of the winter months.

[2] Starting in 2019, values refer for the first time to the calendar year 2019 and not to the winter season 2018/2019.

| Intermodality | | | | | | |
|---|---|---|---|---|---|---|
| | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| Fraport parent company | | | | | | |
| Employee traffic | | | | | | |
| Travel to and from work by public transport | Share of employees in % | 1 | 31.2 | 30.3 | 28.6 | 18.0 |
| Travel to and from work by carpooling | Share of employees in % | 1 | 13.6 | 12.8 | 13.2 | 5.0 |
| Passenger traffic at Frankfurt Airport (FRA) | | | | | | |
| Travel of originating passengers to and from the airport by public transport | Share of passengers in % | 1 | 34.1 | 34.5 | 33.5 | 30.0 |
| therein arrival/departure by ICE (Intercity Express) | Share of passengers in % | 1 | 11.6 | 12.1 | 11.0 | 10.5 |

[1] The values are based on a survey.

| AO7 – Aircraft noise | | | | | | |
|---|---|---|---|---|---|---|
| **AO7 Number and percentage of people* residing in areas affected by noise** | **Unit** | **Comment** | **2017** | **2018** | **2019** | **2020** |
| Flughafen Frankfurt | | | | | | |
| Number of people residing in the contour Leq, day = 60 dB(A) (criterion provided for in the Act for Protection against Aircraft Noise) | Number | 1, 2 | 2,929 | | | |
| Relative change compared with the previous year | Percent | | 5 | | | |
| Number of people residing in the contour Leq, day = 60 dB(A) (criterion provided for in the Act for Protection against Aircraft Noise)** | Number | 1, 2 | 1,601 | 1,989 | 2,379 | 606 |
| Relative change compared with the previous year | Percent | | –42 | 24 | 20 | –75 |
| Number of people residing in the contour Leq, day = 55 dB(A) (Criterion similar Act for Protection against Aircraft Noise) | Number | 1, 3, 4 | 96,774 | | | |
| Relative change compared with the previous year | Percent | | –2 | | | |
| Number of people residing in the contour Leq, day = 55 dB(A) (Criterion similar Act for Protection against Aircraft Noise)** | Number | 1, 3, 4 | 73,377 | 82,374 | 81,435 | 27,857 |
| Relative change compared with the previous year | Percent | | –26 | 12 | –1 | -66 |
| Number of people residing in the contour of the envelope from NAT, night = 6 x 68 dB(A) and Leq, night = 50 dB(A) (Criterion similar Act for Protection against Aircraft Noise) | Number | 1, 5 | 78,819 | | | |
| Relative change compared with the previous year | Percent | | 15 | | | |
| Number of people residing in the contour of the envelope from NAT, night = 6 x 68 dB(A) and Leq, night = 50 dB(A) (Criterion similar Act for Protection against Aircraft Noise)** | Number | 1, 5 | 73,901 | 75,036 | 64,860 | 15,380 |
| Relative change compared with the previous year | Percent | | 8 | 2 | –14 | –76 |

* Figures based on DDS population database. The data reference year for all evaluations is 2010. Updating the data reference year to 2010 results in a slightly changed number of residents in the relevant contours in the years up to 2014 compared to previous publications.

** The values were calculated by applying modified approaches for calculating aircraft noise (with resulting reductions) as described under 1.

[1] The aircraft noise contours were calculated on the basis of two national regulations: "Introduction to Calculation of Noise Abatement Areas (AzB)" and "Introduction to data collection on Flight Operations (AzD, 2008)". All scenarios were standardized on the basis of the long-term average operating direction distribution for the ten years 2000 to 2009. The Sigma supplement developed for the projected protection zone calculation in accordance with the Noise Abatement Act and described in AzB and AzD was not applied. From the year 2017, aircraft noise calculation takes account of the fact that new aircraft types – particularly on takeoff – generate significantly lower noise emissions than older aircraft types with similar capacities. The first of these new aircraft types was the Airbus A380, followed by the Boeing B787, A320neo, A350 and other aircraft. From 2017, these new, quieter aircraft types will be removed from the relevant AzB aircraft groups in the data recording system and provided with modified approaches for calculating noise emission during takeoff and landing compared with the "classic" AzB aircraft groups. These changes correspond to those that have been agreed for the relevant aircraft types in the context of the agreements on the "noise upper limit" between the players involved. Starting with the A380 in 2010, the new aircraft types are increasingly being used in Frankfurt. This means that the aircraft noise contours calculated between 2010 and 2016 and the relevant resident numbers determined in this regard were increasingly overestimated.

[2] The criterion Leq, day = 60 dB(A) is based on the definition of day protection zone 1 in accordance with the Aircraft Noise Abatement Act.

[3] The criterion Leq, day = 55 dB(A) is based on the definition of day protection zone 2 in accordance with the Aircraft Noise Abatement Act.

[4] The data on Leq, day = 55 dB(A) is the total number within this contour, the number specified under Leq, day = 60 dB(A) is therefore a sub-quantity.

[5] The criterion envelope from NAT, night = 6 x 68 dB(A) and Leq, night = 50 dB(A) is based on the definition of night protection zone according to the Aircraft Noise Abatement Act.

| AO7 – Aircraft noise | | | | | | |
|---|---|---|---|---|---|---|
| | Unit | Comment | 2017 | 2018 | 2019 | 2020 |
| Surrounding area of Frankfurt Airport | | | | | | |
| Approach | | 1 | | | | |
| Monitoring station 01 Offenbach Lauterborn, day | Leq(3) in dB(A) | 2, 3 | 58 | 56 | | |
| Monitoring station 01 Offenbach Lauterborn, day* | Leq(3) in dB(A) | 2, 3 | 56.0 | 53.9 | 55.7 | 55.2 |
| Monitoring station 01 Offenbach Lauterborn, night | Leq(3) in dB(A) | 2, 4 | 52 | 51 | | |
| Monitoring station 01 Offenbach Lauterborn, night* | Leq(3) in dB(A) | 2, 4 | 51.2 | 49.1 | 50.3 | 49.3 |
| Monitoring station 06 Raunheim, day | Leq(3) in dB(A) | 2, 3 | 59 | 62 | | |
| Monitoring station 06 Raunheim, day* | Leq(3) in dB(A) | 2, 3 | 58.8 | 61.6 | 60.3 | 56.8 |
| Monitoring station 06 Raunheim, night | Leq(3) in dB(A) | 2, 4 | 53 | 54 | | |
| Monitoring station 06 Raunheim, night* | Leq(3) in dB(A) | 2, 4 | 52.7 | 54.2 | 53.6 | 49.1 |
| Monitoring station 14 Hochheim, day | Leq(3) in dB(A) | 2, 3 | 54 | 57 | | |
| Monitoring station 14 Hochheim, day* | Leq(3) in dB(A) | 2, 3 | 53.9 | 56.9 | 55.4 | 49.1 |
| Monitoring station 14 Hochheim, night | Leq(3) in dB(A) | 2, 4 | 46 | 50 | | |
| Monitoring station 14 Hochheim, night* | Leq(3) in dB(A) | 2, 4 | 45.6 | 49.5 | 48.1 | 38.9 |
| Monitoring station 44 F-Lerchesberg, day | Leq(3) in dB(A) | 2, 3 | 58 | 58 | | |
| Monitoring station 44 F-Lerchesberg, day* | Leq(3) in dB(A) | 2, 3 | 57.5 | 56.6 | 57.3 | 53.9 |
| Monitoring station 44 F-Lerchesberg, night | Leq(3) in dB(A) | 2, 4 | 50 | 51 | | |
| Monitoring station 44 F-Lerchesberg, night* | Leq(3) in dB(A) | 2, 4 | 48.8 | 49.6 | 48.8 | 46.8 |
| Take off | | 1 | | | | |
| Monitoring station 12 Bad Weilbach, day | Leq(3) in dB(A) | 2, 3 | 56 | 53 | | |
| Monitoring station 12 Bad Weilbach, day* | Leq(3) in dB(A) | 2, 3 | 55.1 | 52.2 | 54.1 | 51.7 |
| Monitoring station 12 Bad Weilbach, night | Leq(3) in dB(A) | 2, 4 | 48 | 47 | | |
| Monitoring station 12 Bad Weilbach, night* | Leq(3) in dB(A) | 2, 4 | 47.1 | 46.1 | 46.6 | 39.7 |
| Monitoring station 32 Nauheim, day | Leq(3) in dB(A) | 2, 3 | 56 | 54 | | |
| Monitoring station 32 Nauheim, day* | Leq(3) in dB(A) | 2, 3 | 54.9 | 52.7 | 53.9 | 52.2 |
| Monitoring station 32 Nauheim, night | Leq(3) in dB(A) | 2, 4 | 46 | 43 | | |
| Monitoring station 32 Nauheim, night* | Leq(3) in dB(A) | 2, 4 | 45.5 | 42.7 | 43.9 | 41.6 |
| Monitoring station F-Süd, day | Leq(3) in dB(A) | 2, 3 | 56 | 58 | | |
| Monitoring station F-Süd, day* | Leq(3) in dB(A) | 2, 3 | 54.4 | 56.1 | 55.3 | 53.5 |
| Monitoring station F-Süd, night | Leq(3) in dB(A) | 2, 4 | 52 | 52 | | |
| Monitoring station F-Süd, night* | Leq(3) in dB(A) | 2, 4 | 50.6 | 51.5 | 50.0 | 48.9 |
| Monitoring station 51 Worfelden, day | Leq(3) in dB(A) | 2, 3 | 57 | 58 | | |
| Monitoring station 51 Worfelden, day* | Leq(3) in dB(A) | 2, 3 | 56.3 | 56.6 | 56.0 | 51.8 |
| Monitoring station 51 Worfelden, night | Leq(3) in dB(A) | 2, 4 | 53 | 52 | | |
| Monitoring station 51 Worfelden, night* | Leq(3) in dB(A) | 2, 4 | 52.2 | 52.0 | 52.4 | 48.1 |
| Monitoring station Forsthaus, day | Leq(3) in dB(A) | 2, 3 | 58 | 56 | | |
| Monitoring station Forsthaus, day* | Leq(3) in dB(A) | 2, 3 | 57.0 | 55.6 | 56.5 | 52.9 |
| Monitoring station Forsthaus, night | Leq(3) in dB(A) | 2, 4 | 52 | 50 | | |
| Monitoring station Forsthaus, night* | Leq(3) in dB(A) | 2, 4 | 51.7 | 49.9 | 50.7 | 46.7 |

| AO7 – Aircraft noise | | | | | | |
|---|---|---|---|---|---|---|
| | Unit | Comment | 2017 | 2018 | 2019 | 2020 |
| Frequency of the exceedance of the maximum level of 68 dB(A) per night | | 1, 4 | | | | |
| Monitoring station 01 Offenbach Lauterborn | Number of exceedance cases | 5 | 17.4 | 11.2 | 13.8 | 6.1 |
| Monitoring station 06 Raunheim | Number of exceedance cases | 5 | 8.3 | 15.4 | 10.5 | 2.0 |
| Monitoring station 14 Hochheim | Number of exceedance cases | 5 | 4.6 | 12.0 | 7.8 | 0.6 |
| Monitoring station 44 F-Lerchesberg | Number of exceedance cases | 5 | 7.4 | 10.0 | 7.5 | 3.8 |
| Monitoring station 12 Bad Weilbach | Number of exceedance cases | 5 | 8.3 | 15.4 | 10.5 | 0.2 |
| Monitoring station 32 Nauheim | Number of exceedance cases | 5 | 2.4 | 1.3 | 1.8 | 0.3 |
| Monitoring station 41 F-Süd | Number of exceedance cases | 5 | 14.6 | 16.9 | 11.2 | 5.1 |
| Monitoring station 51 Worfelden | Number of exceedance cases | 5 | 5.2 | 4.2 | 5.7 | 3.6 |
| Monitoring station 71 Forsthaus | Number of exceedance cases | 5 | 16.6 | 13.5 | 14.6 | 3.4 |
| Share of western operations day | Share in % | 3, 6, 7 | 78.7 | 49.7 | 68.8 | 72.9 |
| Share of western operations night | Share in % | 4, 6, 7 | 76.2 | 50.0 | 66.3 | 72.0 |

* new conformity with DIN 45643:2011

[1] Selected representative noise-monitoring station from a monitoring network with 28 static stations.

[2] Energy equivalent continuous sound level [Leq(3) in dB(A)] based on the German Aircraft Noise Act in conformity with DIN 45643. Leq(3) is calculated during the six busiest months from May until October in the years 2009, 2010 und 2012 based on the German Aircraft Noise Act, segmented in day and night. Exception was the year 2011, with the six busiest months of March, May, July and October. Changes to the monitoring stations on the approach and takeoff routes of the parallel runway system are mainly based on the fluctuations in the distribution of operations (easterly/westerly) from year to year caused by different weather conditions or wind directions. The website www.fraport.de provides detailed information.

[3] Daytime: 06:00 to 22:00.

[4] Nighttime: 22:00 to 06:00.

[5] During the six busiest months (2017, 2018, 2019: May until October).

[6] From the parallel runway system with takeoff toward the west, approach from the east.

[7] Share of easterly operations: difference from share of westerly operations in % to 100%.

| Health and safety of the customers | | | | | | |
|---|---|---|---|---|---|---|
| AO9 Total number of wildlife strikes per 10,000 movements | Unit | Comment | 2017 | 2018 | 2019 | 2020 |
| Frankfurt Airport (wildlife strikes) | Number per 10,000 aircraft movements | | 5.59 | 5.34 | 4.46 | 6.93 |

| Compliance with statutory regulations |
|---|
| There are no breaches of statutory regulations which have been subject to fines or non-monetary sanctions imposed by the authorities, and no proceedings in relation to such breaches are pending. |

# *Status of the Environmental Program 2020 to 2023*

The Environmental Program for 2020 describes the most important goals and measures that the Fraport parent company and the NICE, FCS, FraGround and GCS subsidiaries have defined for Frankfurt Airport up until 2023 and beyond for the issues of noise abatement, climate protection, intermodality, air quality, nature conservation and protection of resources.

The measures of the Fraport parent company are not particularly marked.

The measures of Fraport Cargo Services GmbH are marked with FCS, those of NICE Aircraft Services & Support GmbH are marked with NICE, those of FraGround Fraport Ground Services GmbH are marked with FraGround and those of GCS Gesellschaft für Cleaning Service mbH & Co. Airport Frankfurt/Main KG are marked with GCS.

The environmental program of the Fraport parent company is shown in abbreviated form in the sustainability program.

**Key for status:**

Measure fulfilled > 90% to 100% or established as a continuous process

Measure continues to apply in the Environmental Program 2020 and/or Measure partly fulfilled

Measure could not be implemented

## Noise abatement

| *Target* | *Measure* | *Deadline* | | *Status June 2021* |
|---|---|---|---|---|
| *Ensure that the area affected by aircraft noise during the day is below the noise cap target (Maximum Noise Area). Area affected by a Leq 55 dB(A) day ≤ 22,193 ha.** | *Active noise protection measures such as:*<br>*– Promotion of fleet replacement to quieter aircraft via charging regulations*<br>*– raising the approach glide angle at the Northwest Runway to 3.2 degrees*<br>*– GBAS**-based noise-reducing approach procedures, in particular increasing the approach glide angle at the South and Center Runways to 3,2 degrees*<br>*– Providing incentives for the use of GBAS** as part of application process for the charges system.* | *Unlimited* | | *– Increase in noise-related charges (noise surcharges for night-time marginal hours and core night)*<br>*– Introduction of the precision flight procedure RNP1 in conjunction with a precisely defined turn radius (RF-Leg) on selected routes for greater tracking accuracy during take-off*<br>*– Investigation of different take-off procedures with the aim of recommending the most noise-efficient procedure for all departure routes at Frankfurt Airport.*<br>*Affected area: 11,173 ha (2020).* |
| | *Continuation of the dialog with stakeholders from the region in the "Airport and Region Forum" on development of further measures.* | *Unlimited* | | *Will be continued.* |

* *In November 2017, the Hesse State Government reached an agreement on a voluntary upper limit for noise at Frankfurt Airport with Fraport, the airlines, the German Air Navigation Services (DFS) and the "Airport and Region Forum". The corresponding area-based target replaces the previous population-related target (see Environmental Statement 2017, p. 56).*

** *Ground Based Augmentation System.*

## Climate protection

| Target | Measure | Deadline | | Status June 2021 |
|---|---|---|---|---|
| *Reduction of absolute $CO_2$ emissions by 65 percent to 80,000 tons by 2030 (Fraport parent company, Scopes 1 and 2 GHG Protocol, baseline year 1990).*<br><br>*Reduction of specific $CO_2$ emissions by 84 percent, to 0.9 kg/traffic unit by 2030 (Fraport parent company, Scopes 1 and 2 GHG Protocol, baseline year 1990).* | *Energy optimization in portfolio buildings operated by the Fraport parent company*<br>*– In the terminals*<br>*– In office and service buildings.* | *2030* | | *Measures carried out at the terminal: upgrading ventilation control centers, optimizing air throughputs, switching off pumps and lighting controls. Potential achieved at the end of 2020: 30,200 t $CO_2$/year.*<br>*Measures carried out in service and administrative buildings: optimization of hydraulics and controls for controlling circuits, optimization of air-conditioning systems, regulation of air-control system based on weather forecasts, lighting retrofitted to LED. Potential achieved at the end of 2020: 4,300 t $CO_2$/year.* |
| | *Conversion of apron areas and roads to LED lighting.* | *2023* | | *Conversion of operational and apron areas to LED.*<br>*Realized potential 2020: 1,200 t $CO_2$.* |
| | *Planning and construction-integrated implementation of an energy-optimized new terminal (T3).* | *Construction integrated implementation* | | *Measures in phase of implementation:*<br>*planned technical systems have been optimized by complex building simulations and will provide sustainable operation of the new terminal building by means of a building envelope with a high level of thermal insulation, needs based sun protection, optimized daylight use, free cooling, highly efficient heat recovery, efficient energy distribution, comprehensive use of LEDs, utilization of the building's own dissipated heat, etc.* |
| | *Implementation of measures to achieve energy savings in the baggage conveyor system.* | *2023* | | *Implemented measures:*<br>*reduction of drive power in "early baggage" stores, distributors, feeders, modification of the controls for improved shutdown of the baggage conveyor system during off-peak periods, and reduction of gliding friction by replacing belts at heighteners. Potential achieved at the end of 2020: 2,000 t $CO_2$.* |
| | *Expansion of the electric vehicle fleet (focus on ground handling services).* | *2030* | | *By the end of 2020 the ground handling services operate a total of 32 electric vehicles. These vehicles include electric and hybrid equipment. Potential achieved thanks to entire e-fleet achieved by the end of 2020: 1,100 t $CO_2$.*<br>*The total number of electric vehicles in the Fraport fleet as of December 31, 2020: 553.*<br>*A funded project for two electric buses was launched in 2018. The buses were put into operation in March 2020.* |
| *Reduction of energy consumption.*<br>***(NICE)*** | *Introduction of an electric hybrid test vehicle into the fleet.* | *2022* | | *Service vehicles: Locations and feasibility for the installation of the charging infrastructure are currently being clarified.*<br>*De-icing vehicles: A first hybrid de-icing vehicle was demonstrated on site by the manufacturer.* |
| | *Switching to energy-saving light sources optimizes the energy requirement for lighting at the de-icing agent tank facilities by 5%.* | *2022* | | *An assessment has been made and successive implementation is taking place.* |
| | *Energy consumption (electricity/district heating) for the provision of hot water at the tank facilities is reduced by 5%.* | *2022* | | *Filling levels and heating cycles were adjusted. An analysis of the data from the winter season 20/21 will be conducted.* |
| *Improvement of waste processes, generation of higher yields through optimized separation.* | *A project group is formed with the task of analyzing and optimizing the processes and scouting the market for partners.* | *2021* | | *June 2021: Talks with waste disposal companies to explore offers for the establishment of a "recyclables depot".* |

## Climate protection (continuation)

| Target | Measure | Deadline | | Status June 2021 |
|---|---|---|---|---|
| Avoidance of t container transportation across the airport. **(FCS)** | Establishment of a central container storage facility. | 2020 | | February 2020: Launch of container storage. |
| Reduction of direct $CO_2$ emissions of 131,948 kg $CO_2$ by a further 10%. **(GCS)** | Training courses on resource-saving driving. | 2025 | | There were no training courses in 2020 yet. |
| | Further replacement procurement of vehicles with lower $CO_2$ emissions. | 2025 | | Furthermore, the market for electric cars and the distribution of charging stations is being observed. In cooperation with the purchasing department, alternatives are being sought and compared. By 2025, it is intended to use or test approx. two $CO_2$-neutral vehicles as pool vehicles on the airport premises. |
| | Evaluation of potential vehicles that can be purchased with alternative propulsion systems. | 2025 | | |
| * TU: one passenger with baggage or 100 kg of airfreight or air mail. | | | | |

## Intermodality

| Target | Measure | Deadline | | Status June 2021 |
|---|---|---|---|---|
| Improvement in intermodal services for passengers. | Establishment of information boards with passenger information on public passenger transport connections in Terminal 1 and 2. | 2023 | | Information boards already exist in Terminal 1.<br>Work is currently underway to install additional boards. |
| | An optimized connection between Terminal 3 and the northern area of the airport as well as the long-distance railway station via an automatic, electric rail-based people mover system and shuttle buses for passengers and employees. | 2024 until the opening of Terminal 3 | | Construction of the people mover system is currently underway. |
| Improvement in the conditions for cycling around the airport. | Installation and modernization of bicycle parking facilities near buildings in new or renovated buildings as an alternative to the construction of more space-intensive car parking areas. | 2023 ongoing | | New bicycle parking facilities:<br>Mid-2020 at building 162<br>End of 2020 at building 123. |
| | A central parking space register for bicycle parking facilities at the airport is to be compiled in order to fulfil the obligation to provide proof to the City of Frankfurt and to optimize the locations of the parking spaces in order to increase the attractiveness for bicycle commuters. | 2020 | | A bicycle parking space register is in progress. |

## Air quality

| Target | Measure | Deadline | | Status June 2021 |
|---|---|---|---|---|
| *Monitoring of air pollutant emissions from all relevant emitters of airport operations (see sustainability programme).* | *– Quality assurance of inventory and operational data (conversion of SAP data to calendar years, plausibility checks).*<br>*– Optimisation of the methodology for the use of operational data for the emission model (commissioning of external support, initial coordination of the procedure)*<br>*– Professional support for the further development of the LASPORT model (emission and dispersion model for determining airport-related emissions), testing and commissioning of LASPORT version 2.3.10*<br>*– Cooperation with the HNLUG and the UNH on research into ultrafine particles (UFP).* | *Ongoing** | | *The creation of a comprehensive emissions inventory is a continuous process.* |
| *Reduction of emissions and air pollutants from the operation of the airport.* | *Further increase in the share of electrically driven ground handling equipment (see under Climate protection: Use of alternative drive technologies).* | *2030* | | *See climate protection.* |
| ** As this is a continuous process, a deadline is no longer set in absolute terms.* | | | | |

## Nature conservation and resource protection

| Target | Measure | Deadline | | Status June 2021 |
|---|---|---|---|---|
| *Limit paper consumption per employee to 1.51 kg p.a.* ***(FraGround)*** | *Introduction of an information app for employees.* | *2020* | | *The "FRA OPS" information app for employees was launched in 2020.*<br>*The 2019 paper consumption of 1.46 kg per employee was undercut by 4% in 2020 to 1.41 kg per employee.*<br>*Passenger numbers were low until June 2021 due to the Coronavirus pandemic. Short-time work was continued, no recruitments were made. From mid July 2021, recruitment will resume. It cannot yet be estimated what effect it will have on paper consumption. The objective is to maintain the 2020 value.* |
| *Avoid plastic waste, improve recycling.*<br>***(GCS)*** | *Collection and examination: Return of plastic bottles, recycling by the manufacturer or refilling.*<br>*Establishment of a system for direct recycling. Evaluation, coordination and testing with Operations for the introduction of this system.* | *2021* | | *The collection of plastic bottles of cleaning agents was started in Terminal 1 in August 2021 (return bags were issued).* |

# *Environmental Auditor's Declaration on Verification and Validation Activities*

The Institut für Umwelttechnik Dr. Kühnemann und Partner GmbH
with registration number . . . . . DE-V-0133,

represented by Dr. Burckhard Kühnemann with registration number . . . . . DE-V-0103
and Ulrich Schmidt with registration number . . . . . DE-V-0366,

accredited or licensed for the scope . . . . . NACE 52.23,

declares to have verified whether the site or the whole organization
as indicated in the updated environmental statement of the
organization Fraport AG with registration number . . . . . DE-125-00032

meets all requirements of Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organizations in a Community eco-management and audit scheme (EMAS), modified by amendment regulation (EU) 2018/2026 dated 19 December 2018.

By signing this declaration, I declare that:

– the verification and validation have been carried out in full compliance with the requirements of Regulation (EC) No 1221/2009,

– the outcome of the verification and validation confirms that there is no evidence of non-compliance with applicable legal requirements relating to the environment,

– the data and information of the updated environmental statement of the organization reflect a reliable, credible and correct image of all the site's activities, within the scope mentioned in the environmental statement.

This document is not equivalent to EMAS registration. EMAS registration can only be granted by a Competent Body under Regulation (EC) No 1221/2009. This document shall not be used as a stand-alone piece of public communication.

Carried out at Frankfurt on September 1st, 2021

Dr. Kühnemann und Partner Institut für Umwelt

Business address: Prinzenstraße 10a, 30159 Hannover, Germany
Registration number: DE-V-0133

**Schedule**
The next Environmental Statement, scheduled for July 2022, will be subject to validation by an environmental auditor before being released for publication.

## Imprint

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As of August 2021

** 20 cents per call from a German landline, regardless of the duration of the call, max. 60 cents from mobile network*

*** for questions regarding aircraft noise and airport expansion, toll-free number within Germany*

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