



GIUZ Air Miles Monitoring & Reduction Report 2020

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Aim

This document reports on the activities of the *GIUZ Working Group on Air Miles Monitoring (AMM)* in 2021 and provides air miles statistics updated with the flights of 2020.

Who we are

The *Working Group on Air Miles Monitoring* is part of the *GIUZ Sustainability Task Force* and reports to the *GIUZ Head Infrastructure*. The working group monitors and documents business air travels at GIUZ and defines and implements reduction goals for air travel at the department. The group consist of the following members:

- Michael Zemp, Phys GG (World Glacier Monitoring Service)
- Isabelle Gärtner-Roer, Phys GG (World Glacier Monitoring Service)
- Roger Keller, HG (Space, Nature and Society)
- Peter Ranacher, GIS/RS (Geographic Information Systems)
- Isabel Hagen (Glaciology and Geomorphodynamics)
- Somara Gantenbein (guest, UZH Sustainability Team)

- Members of secretariats responsible for air miles monitoring:
 - GIScience (GeoComp, GIS, GIVA): Karin Klein
 - Human GG (PGG, WGG, SoKu, SNS): Corinne Wyss
 - GTT: Regina Kohler
 - PHYS (3G, H2K, 2B, GeoChrono, WGMS): Frank Hitzemann
 - RSL (RS, RSWS, ESS, SG): Rita Ott and Sandra Altorfer
 - Support & Management: Esther Mettler and Lukas Japp

Air Miles Monitoring

In coordination with the *GIUZ Head Infrastructure*, the AMM group has developed a concept for air miles monitoring and has put forward reduction goals. Both have been regularly updated based on discussions within the *GIUZ Sustainability Task Force* and external experts. We are currently integrating the AMM in the more extensive data campaign underway in the UZH Sustainability Team.

Air travel is collected through the department's reimbursement system by the division secretariats and evaluated by the working group. Thus far, we have collected air travel information for the years 2017 - 2020. The first three years (2017- 2019) build the reference period for monitoring and setting the reduction goals. The AMM consist of the following steps:

- **Data collection:** The secretariats of each research unit collect all business air travels paid by UZH or related third party projects (including guests) through the reimbursement system.
- **Air travel statistics:** For each air travel, we collect statistics based on a standardised template, providing information about the route (e.g. origin, destination, air miles, date), the research unit, and the purpose of travel. We compute air miles/kilometres and CO2 equivalents using www.atmosfair.de.
- **Data Analysis:** We evaluate the air travel statistics. For reasons of data protection, results are aggregated at the level of the research units.



- **Reporting:** We summarise the results in a short report for the attention of the GIUZ Direktorium. Before publication, we discuss the report with the UZH Data Protection Department (<https://www.dsd.uzh.ch/de/contact.html>).

Air Miles Reduction Goal

The GIUZ Direktorium set an air miles reduction goal of 25% by 2025. In collaboration with the secretariats, the working group defined how to implement the reduction goal in practice:

- **Target:** The target is expressed in air miles (both in total and per capita).
- **Baseline:** We compare all future air travels against the mean air travel during the reference period 2017-2019. We derive the actual reduction from the three-year-running-mean compared against the baseline.
- **Reduction goal:** Reduce air miles (both in total and per capita) at GIUZ by 25% by 2025, following a linear reduction path.

The AMM working group advises the department to implement incentives and measures to reach the reduction goals.

Air Miles at GIUZ in 2020

In 2020 we saw a massive decrease in air travel at the Department of Geography due to lockdowns and travel bans. We recorded 86 one-way air travels at the Department with a total of 466,000 kilometres leading to 122 t of emitted CO₂. These numbers amount to 20-25% of air travel during the reference period before the pandemic. The figures below illustrate the observed air miles at GIUZ (2017 - 2020), together with the reference and the target. The data include uncertainties. Some flights from 2019 were only registered in 2020. Others were scheduled and paid in 2020 but postponed indefinitely. The remaining actual air travel in 2020 was also due to events at the Department before the lockdown. For example, RSL organised a workshop with many invited guests right before the first lockdown.

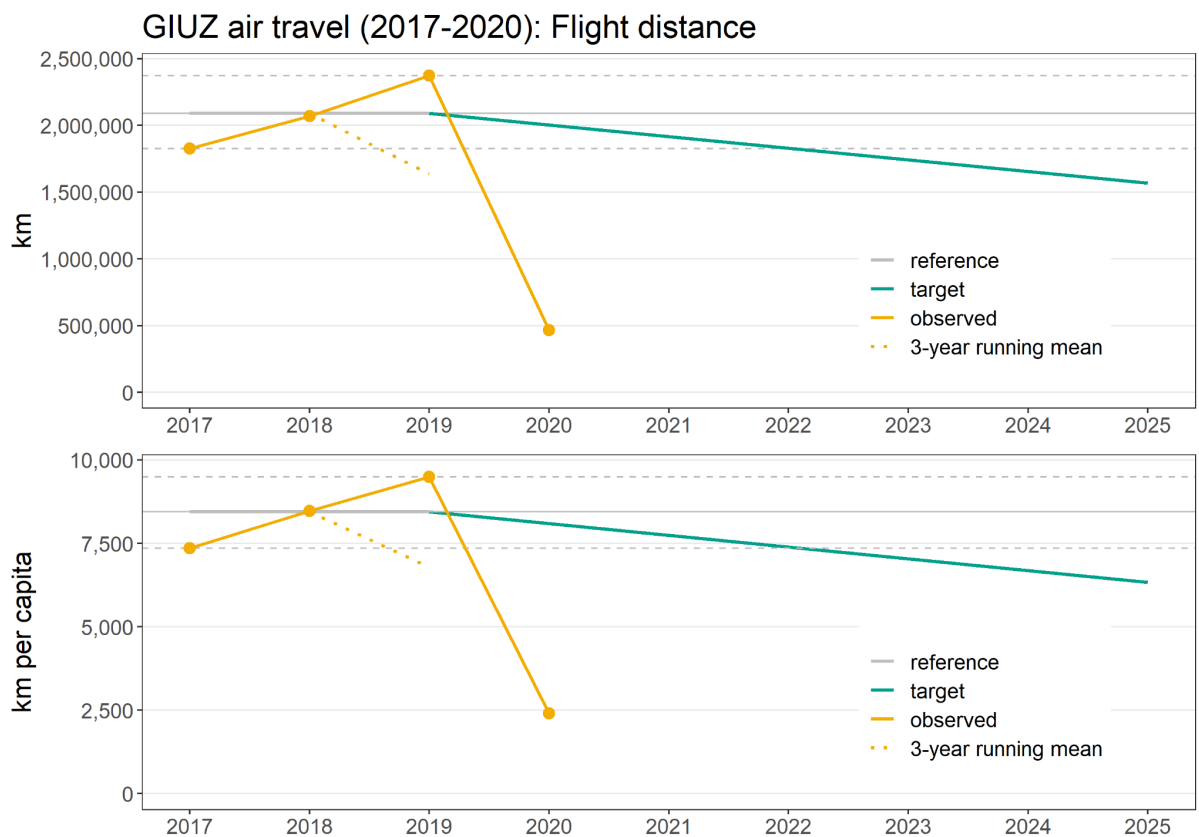


Figure 1: Observed Air travel at GIUZ between 2017 and 2020. Unsurprisingly, observed air travel (orange line) massively decreased in 2020, both in terms of total flight distance (top) and flight distance per capita (bottom). The goal is to reduce air travel by 25 % by 2025 on a linear reduction path (green line), compared to the average during the reference period from 2017-2019 (grey line).

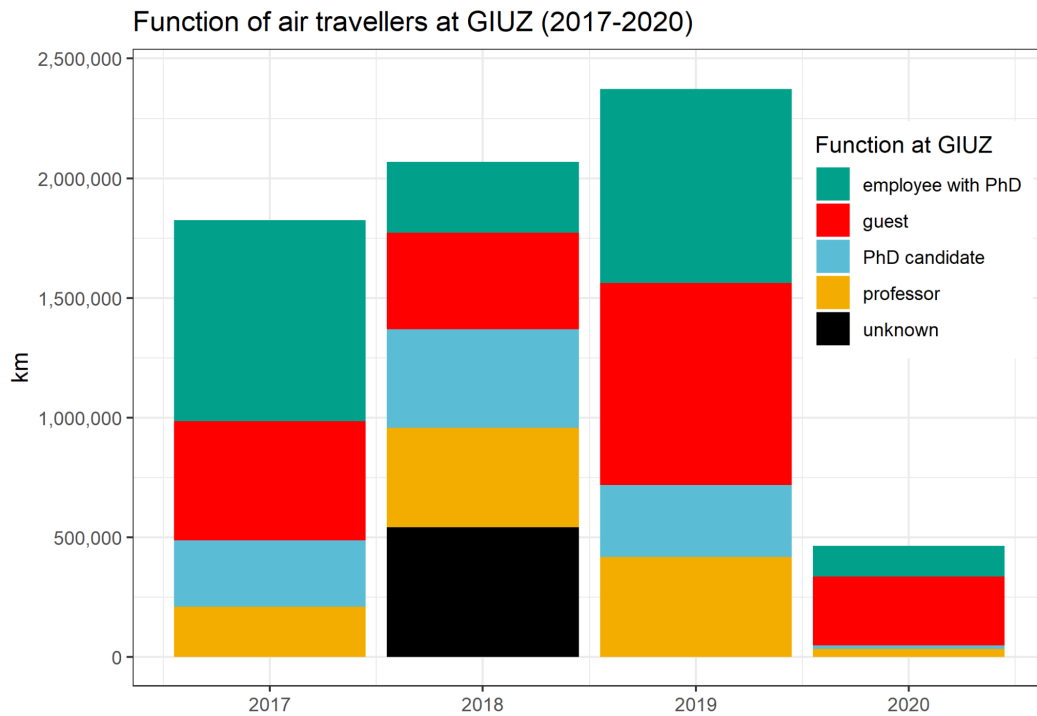


Figure 2: Functions of air travellers at the Department of Geography

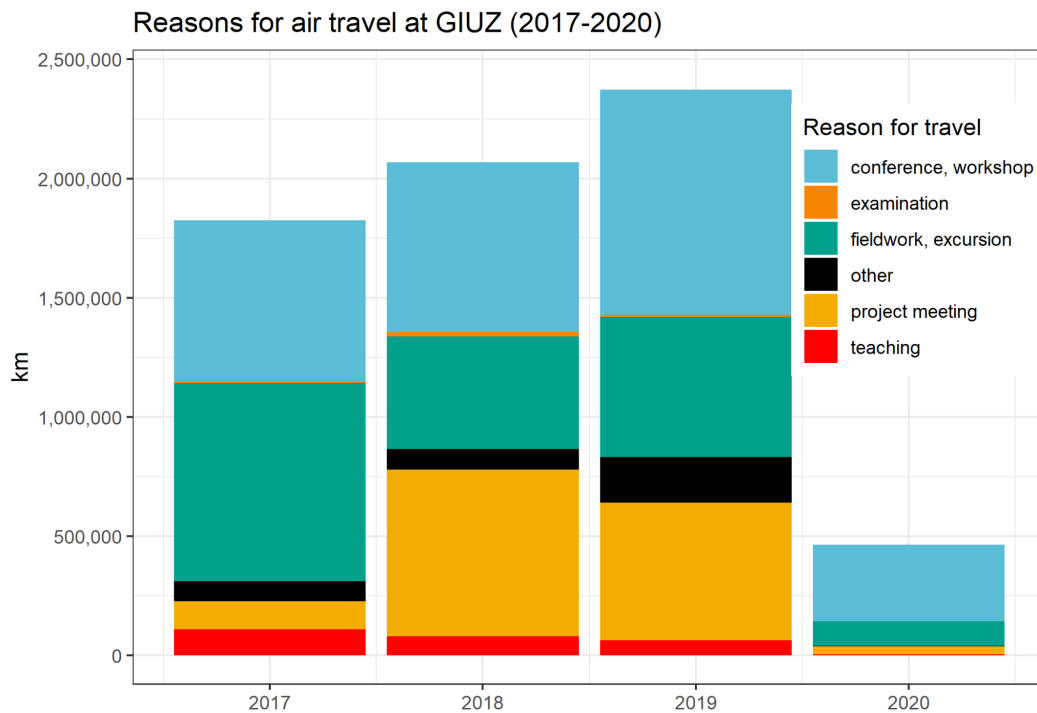


Figure 3: Reasons for air travel

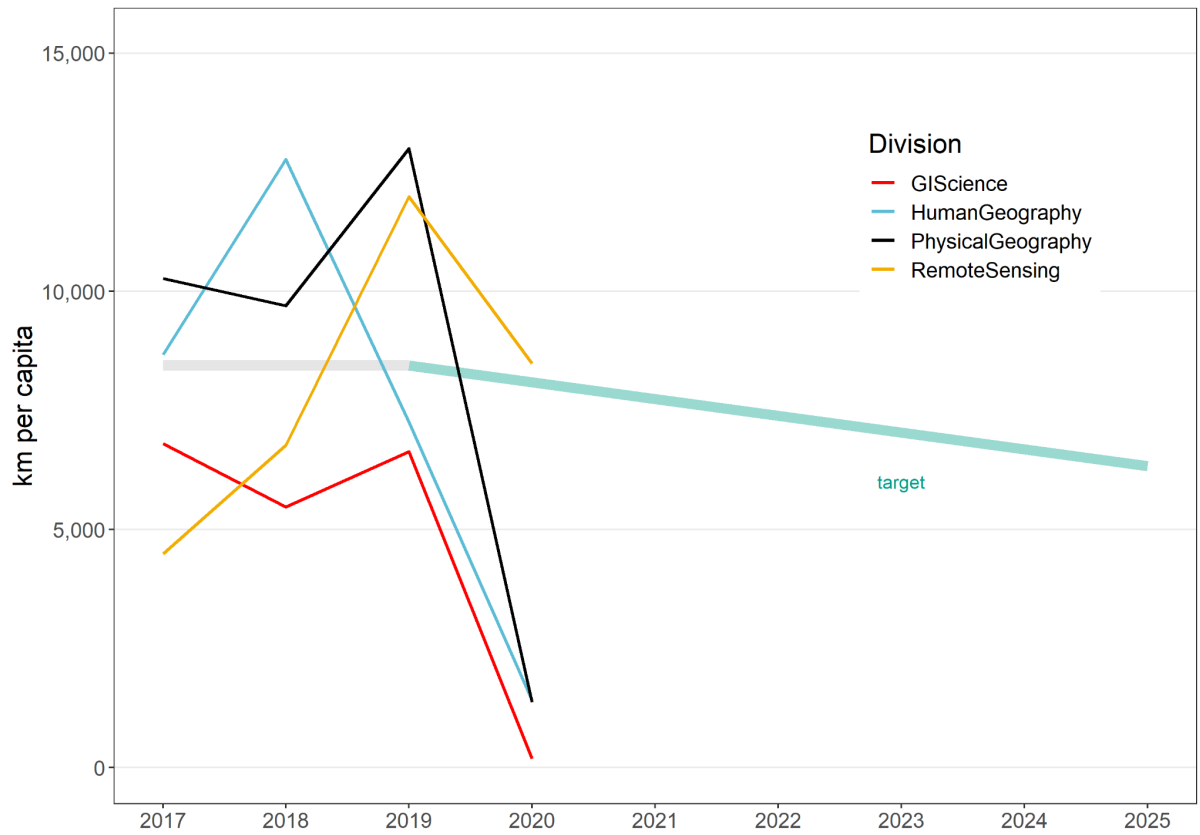


Figure 3: The annual flight distance per research unit (2017-2020). While per capita air travel decreased across all divisions due to lockdowns and travel bans, Remote Sensing is still above the linear reduction target because of an international workshop held in the first months of 2020.



Raising awareness

We reach out to our colleagues at the department, the UZH and the public to raise awareness of air travel in academia and air miles monitoring at GIUZ in particular. Our communication strategy involves the following actions:

- **Inform:** We actively communicate our goals and results. To date, we presented the reduction goals on the GIUZ info screen at the MAV and the department's blog (<https://www.geo.uzh.ch/en/department/125/blog/air-miles.html>, <https://blog.geo.uzh.ch/air-travel-at-giuz/>). Our initiative appeared outside the department in the *3sat nano* (<https://www.3sat.de/wissen/nano/191128-wissenschaft-nano-104.html>) and the UZH Journal Rampenlicht (<https://www.journal.uzh.ch/de/issues/journal-20-2/Im-Rampenlicht.html>).
- **Exchange knowledge:** We get in contact with related initiatives and exchange knowledge. Members of the working group participated at the GIUZ Group Leader Retreat 2019, the ETH Flugreise Forum (<https://ethz.ch/services/de/organisation/schulleitung/vizepraesident-infrastruktur/mobilitaetsplattform/flugreisen.html>) and the 2019 Workshop on Air Mile Reduction at UZH. In 2021, Somara Gantenbein from UZH Sustainability Group joined our group as a guest member.
- **Give support:** We support the GIUZ and its activities to reduce air travel. For example, we helped the WGMS initiate the SBB promo code for train rides to the EGU General Assembly in Vienna (https://egu2020.eu/register_and_venue/vienna_is_just_a_train_ride_away.html). In the future, we plan to provide information material on trans-European train journeys (booking platforms, travel times, destinations) and videoconferencing tools available at MNF & GIUZ. Moreover, we give best practice examples for continental business travel.
- **Provide incentives:** We provide incentives for reducing air travel at GIUZ. The *GIUZ Sustainability Award* recognises achievements to improve the environmental impact of the department. For 2020, we awarded the secretariats at GIUZ for their pivotal role in implementing AMM at the department.

In addition to the award, we also plan to continue the discussion with the GIUZ Direktorium and the UZH Sustainability Group about further incentives (e.g. first-class upgrades for train journeys, additional video conference equipment).