



## GIUZ Air Miles Monitoring & Reduction Report 2017-2019

*First version 29 July 2019, last update 19 November 2020*

### Aim

This document reports on the activities of the *Working Group on Air Miles Monitoring (AMM)* from 2017 to 2019.

### 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)
- Sarah Morard Phys GG (Glaciology and Geomorphodynamics Group, World Glacier Monitoring Service)
  
- Members of secretariats responsible for air miles monitoring:
  - GeoComp, GIS, GIVA: Karin Klein
  - HGG, WGG: Corinne Wyss
  - PGG, GTT: Regina Kohler
  - PHYS (3G, H2K, 2B, WGMS): Frank Hitzemann
  - RSL (RS, RSWS, ESS, SG): Rita Ott and Sandra Altorfer
  - Support & Management: Esther Mettler and Lukas Japp

Former members:

- Muriel Côte, Political Geography
- Elisa Häuptli, secretariat GeoComp, GIS, GIVA

### Air Miles Monitoring

Air miles monitoring at GIUZ builds on a UZH pilot project carried out in 2018. Following the GIUZ group leader retreat on sustainability in June 2019, the working group developed a concept for AMM and corresponding reduction goals in coordination with the *GIUZ head infrastructure*. Both concept and goals have been regularly updated based on discussions within the *GIUZ Sustainability Task Force* and with external experts (e.g. the UZH Sustainability Team, ETH Mobilitätsplattform). In the long run we plan to pool resources, phase out data collection at GIUZ and integrate it in the larger data campaign currently underway in the UZH Sustainability Team.

For practical reasons, we started by monitoring air travels that are paid through UZH funds (including third party projects). Air travels are collected through the department's reimbursement system by the division secretariats and evaluated by the working group. In 2020, the secretariats at GIUZ compiled air travel information for the years 2017, 2018, and 2019. These three years build the reference period for monitoring and setting the reduction goals. The AMM consist of the following steps:



- **Data collection:** All business air travels paid by UZH or related third party projects (including invited guests) are collected by the secretariats of each research unit through the reimbursement system.
- **Air travel statistics:** For each air travel, statistics are collected based on a standardized template. Statistics provide information about the route (e.g. origin, destination, air miles, date), the research unit, and the purpose of travel. Air miles/kilometers and CO2 equivalents are calculated using [www.atmosfair.de](http://www.atmosfair.de).
- **Data Analysis:** In this step, the air travel statistics are evaluated. For reasons of data protection, all results are aggregated at the level of the research units.
- **Reporting:** The results are summarized in a short report for the attention of the GIUZ Direktorium. Prior to any publication, all results are discussed with the UZH Data Protection Department (<https://www.dsd.uzh.ch/de/contact.html>).

### Air Miles Reduction Goal

Following the recommendations of the group leader retreat on sustainability in June 2019, the GIUZ Direktorium set an air miles reduction goal of 25% by 2025. In collaboration with the secretariats, the working group defined how this reduction goal is implemented in practice:

- **Target:** The target is expressed in terms of air miles (both in total and per capita). While CO2 emissions can be approximated with the available data, exact estimates require additional information from the air carrier (airplane type, degree of capacity usage), which are labour-intensive to come by.
- **Baseline:** Future air travels are compared against the mean air travel during the reference period 2017-2019. The actual reduction is derived from the three-year-running-mean compared against the baseline.
- **Reduction goal:** The goal is to reduce air miles (both in total and per capita) at GIUZ by 25% by 2025 following a linear reduction path.
- **Reporting:** Annual reports are prepared for the department.

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

### Air Miles at GIUZ 2017 – 2025

The figures below illustrate the first findings of the working group. During the reference period (2017 – 2019) air travel at GIUZ increased, both in terms of total flight distance and flight distance per capita. The goal is to reduce air travel by 25 % by 2025 on a linear reduction path (Figure 1). Invited guests, employees with a PhD, professors and PhD candidates accounted for most air travel (Figure 2a). The main reasons for travelling were conferences and workshops, followed by field work and project meetings (Figure 2b). For two of the five units at GIUZ the annual flight distance increased during the reference period (Figure 3a). Reducing long flights is imperative for reducing the environmental impact of the department: the forty longest flights alone (5%) accounted for 50% of the total flight distance, while the 400 shortest flights (50%) only accounted for less than 15% of the total flight distance (Figure 3b).

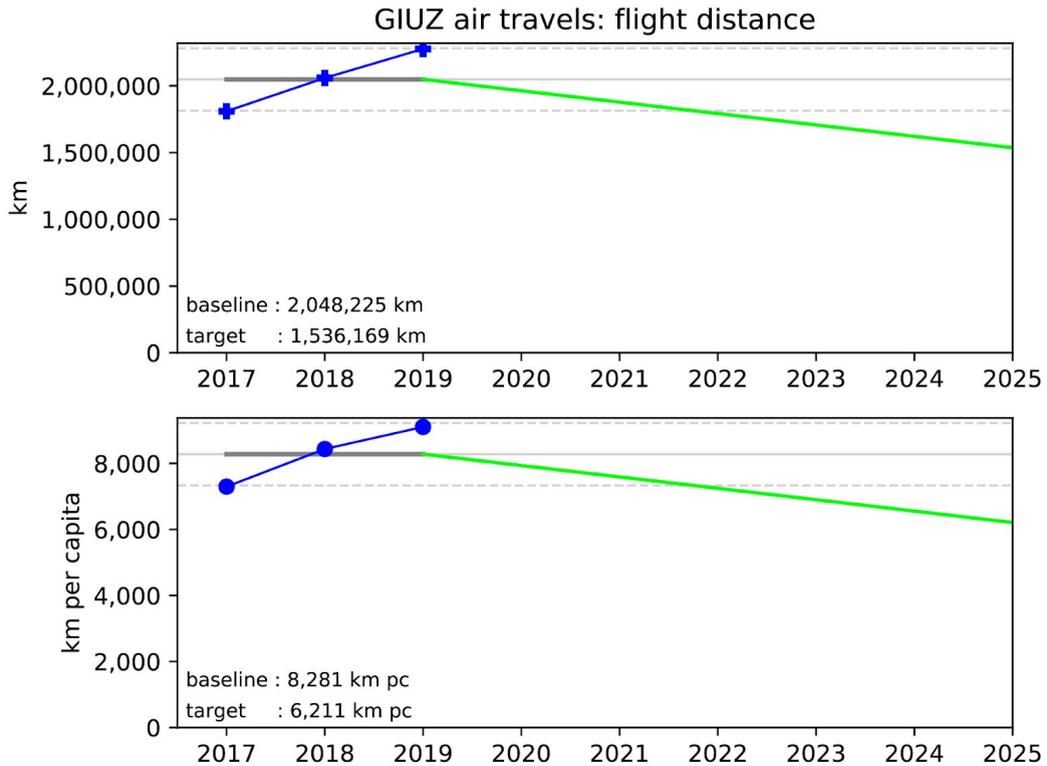
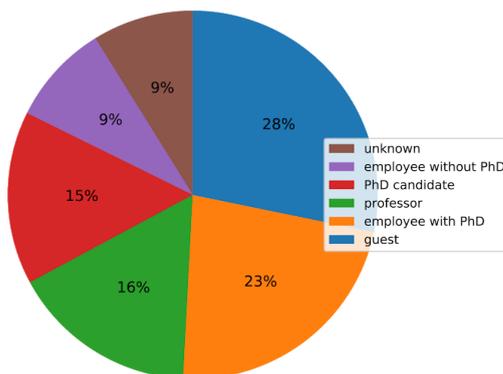


Figure 1: Air travel at GIUZ between 2017 and 2025. During the reference period (2017 – 2019) air travel at GIUZ increased (blue line), both in terms of total flight distance (top) and flight distance per capita (bottom). The goal is to reduce air travel by 25 % by 2025 on a linear reduction path (green line), compared to the average during the reference period (grey line).

a

GIUZ air travels, 2017-2019: flight distance (km) by function



b

GIUZ air travels, 2017-2019: flight distance (km) by travel reason

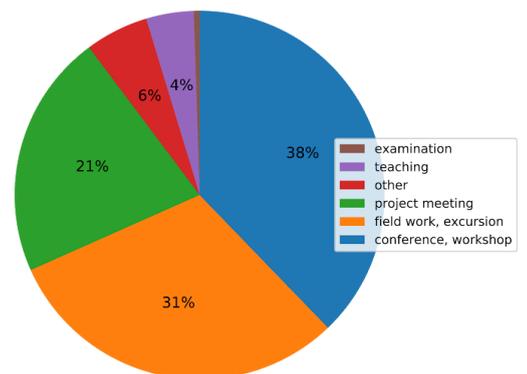


Figure 2: Function of air travelers at the department (a) and reasons for travelling (b).

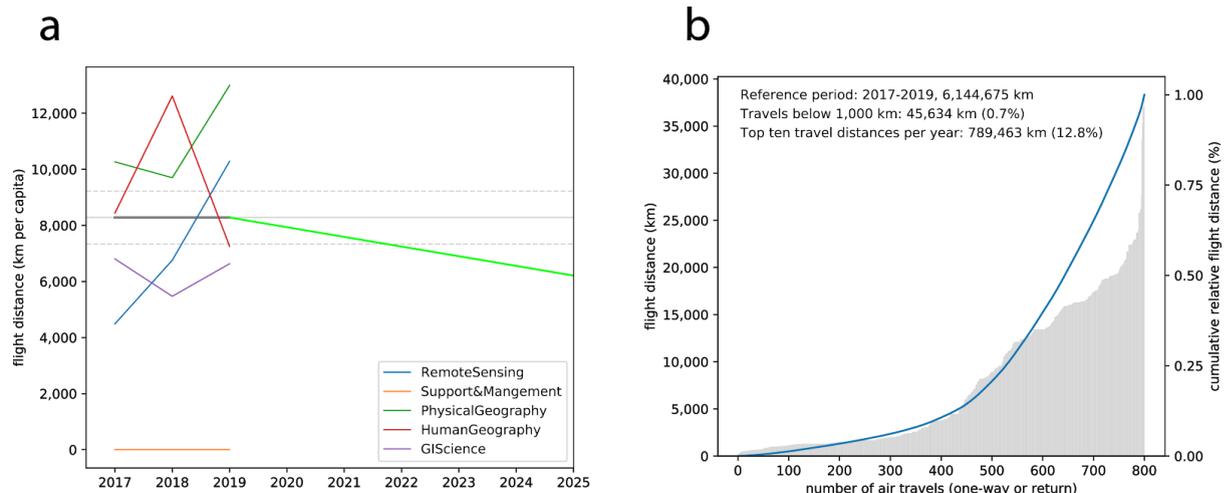


Figure 3: (a) The annual flight distance per research unit between 2017 and 2025 (projected). The goal is to reduce air travel by 25 % by 2025 on a linear reduction path (green line), compared to the average during the reference period (grey line). (b) The cumulative relative frequency of flight distance (per air travel).

### Raising awareness

We aim to 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 2019 and the department's blog (<https://www.geo.uzh.ch/en/department/125/blog/air-miles.html>). Outside the department, our initiative appeared in the television programme *3sat nano* (<https://www.3sat.de/wissen/nano/191128-wissenschaft-nano-104.html>) and will soon appear in the UZH Journal Rampenlicht (2020: in prep).
- **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.
- **Give support:** We support the GIUZ and its activities to reduce air travel. For example, we helped the WGMS to 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](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. Initially it was planned to give an annual *Air Miles Reduction Award* to the research unit with the highest annual reduction in air travel. Given the large and unpredictable influence of external factors on air travel (a global health crisis comes to mind), we decided to broaden the scope of the award: The *GIUZ Sustainability Award* recognises achievements to improve the environmental impact of the department. We decided for the following procedure to give out



the award: The *Sustainability Task Force* nominates candidates and a price. The GIUZ management board decides for the winner. For 2020, we nominate the secretariats at GIUZ for their pivotal role in implementing AMM at the department. We suggest that the members of the secretariat are awarded a voucher (CHF 500) for a joint dinner in a sustainable restaurant in Zurich.

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