flyingless

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Survey results on behaviour and attitudes towards business and study-related air travel within academia

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Abstract

Within academia, awareness and concern about climate change are present and often even part of research and higher education. Nevertheless, studies and climate reports of academic institutions show that greenhouse gas emissions from academic air travel make a large contribution to the carbon footprint of scientists[1,2].

The project FlyingLess therefore aims to support universities and research organisations in reducing flight emissions, which account for a significant share of their total GHG emissions[3,4]. FlyingLess is closely cooperating with four partners from university and non-university research. In its transdisciplinary character, the project pursues a participatory process to address the needs and opinions from the partner institutions members.

As part of a master thesis two methods were used for this purpose: First, interviews on the status quo of flight reduction were conducted with different status groups at the partner institutions to comprehensively analyse previous activities, obstacles and instruments of the project partners in the context of flight reduction. Second, online surveys were launched at eight academic institutions (including the FlyingLess partner institutions) to get a broader picture of different mobility behaviours before COVID-19 such as perspectives and opinions on flying at research institutions and universities. Here we present the most important findings from the surveys.

Method

- Online Surveys at eight academic institutions in Germany
- Aim: gather a broader picture on different mobility behaviours in academia before COVID-19 such as perspectives & opinions on academic flying differentiating three status groups

Topics included in the (quantitative) questionnaires:

- Mobility behaviour regarding academic long-distance travel / student air travel
- Reasons for this behaviour and other factors related to travel (mode) decision
- Evaluation of potential flight reduction measures and internal framework conditions
- The intention of the members of the institutions concerning their future academic air travel

Sample Size
(in total N = 1182)

- 657 scientists → 218 professors & group leaders; 439 scientists without professorship / group lead
- 525 students

Results

Based on the sample size of all participating institutions combined, the per capita flight rate of professors & group leaders* is about four times that of scientists without professorship / group lead** (regarding the estimated average number of academic flights per year before COVID-19) (Fig. 1,2).

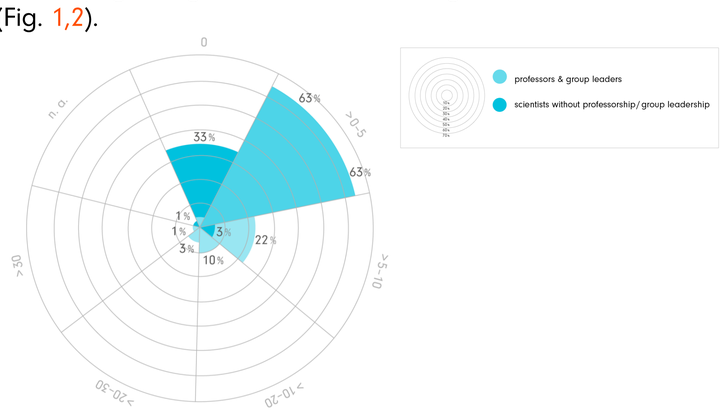

Fig. 1 Average number of flights per year before COVID-19 (respondents' estimate). Relative frequency of mentions (Y-axis) per aggregated number of air travels per year (X-axis). Status groups compared: professors & group leaders, N=218 & scientists without professorship/group lead, N=439.

Fig. 2 Average number of annual flights per capita before COVID-19 (respondents' estimate). Status groups compared: professors & group leaders*, N=218 & scientists without professorship/group lead**, N=439.

Important underlying travel reasons for business air travel were conferences including a presentation (87 %), followed by strategic collaborations (52 %) (Fig. 3).

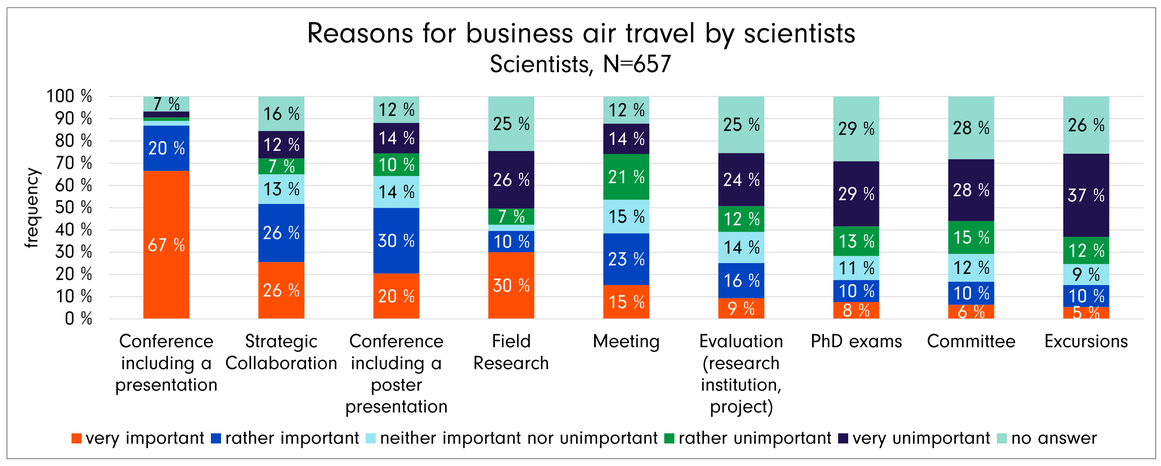

Fig. 3 Reasons for business air travel by scientists. Aggregated status group, N=657 (professors & group leaders, N=218 & scientists without professorship/group lead, N=439). Relative frequency of mentions (Y-axis) per answer (reason for a business trip in academia; X-axis).

Above all more than 80 % of all scientists surveyed rated conference attendance as well as networking and collaboration for their career development as very or rather important factors when deciding for a long-distance trip. Nevertheless about 70 % (of all status groups, N = 1182) considered climate protection measures for the reduction of flight emissions at their institution as important.

More than half of the scientists surveyed (N=657) stated their willingness to change behaviour to avoid air travel (Fig. 4).

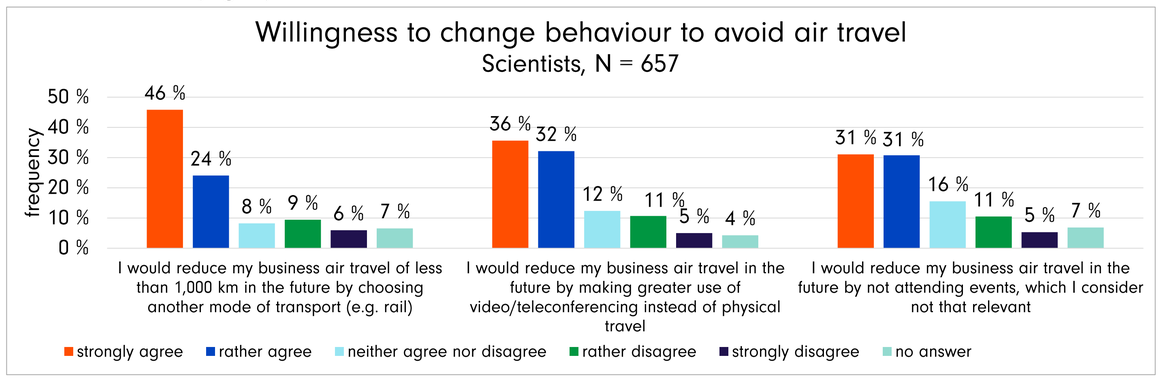

Fig. 4 Willingness to change behaviour to avoid air travel. Aggregated status group, N=657 (professors & group leaders, N=218 & scientists without professorship/group lead, N=439). Relative frequency of mentions (Y-axis) per answer (future mobility behaviour to avoid air travel; X-axis).

The respondents also agreed to varying degrees with different flight reduction measures (Fig. 5):

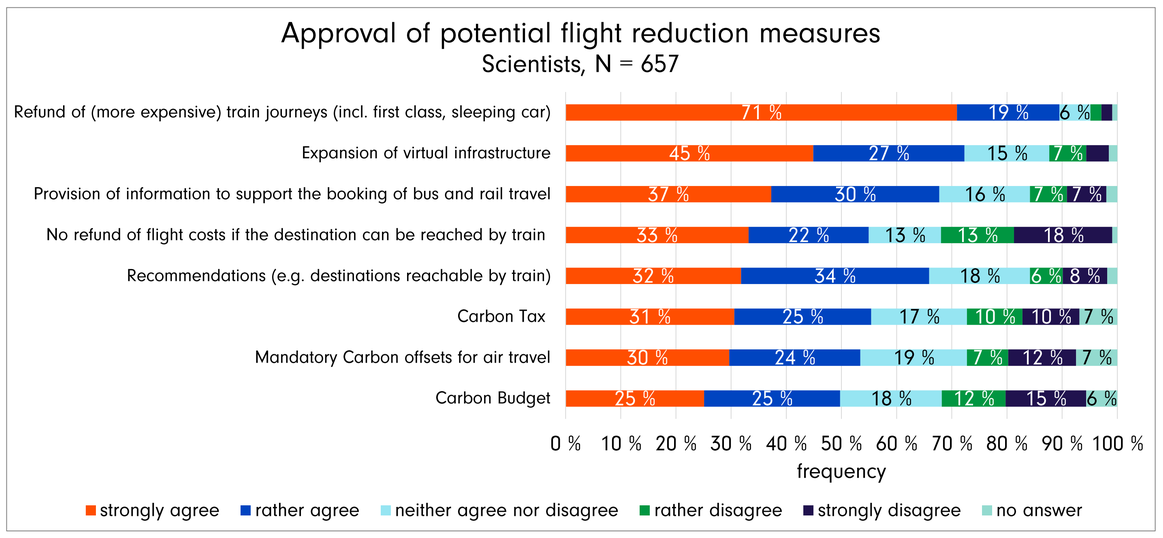

Fig. 5 Approval of potential flight reduction measures. Aggregated status group, N=657 (professors & group leaders, N=218 & scientists without professorship/group lead, N=439). Relative frequency of mentions (X-axis) per answer (flight reduction measures; Y-axis).

Among 525 students, 77 % had never taken a flight as part of their studies. The most recent flight of 15 % of the students surveyed was continental and of 8 % intercontinental. The results of the student survey show high endorsement for different measures to reduce study related air travel.

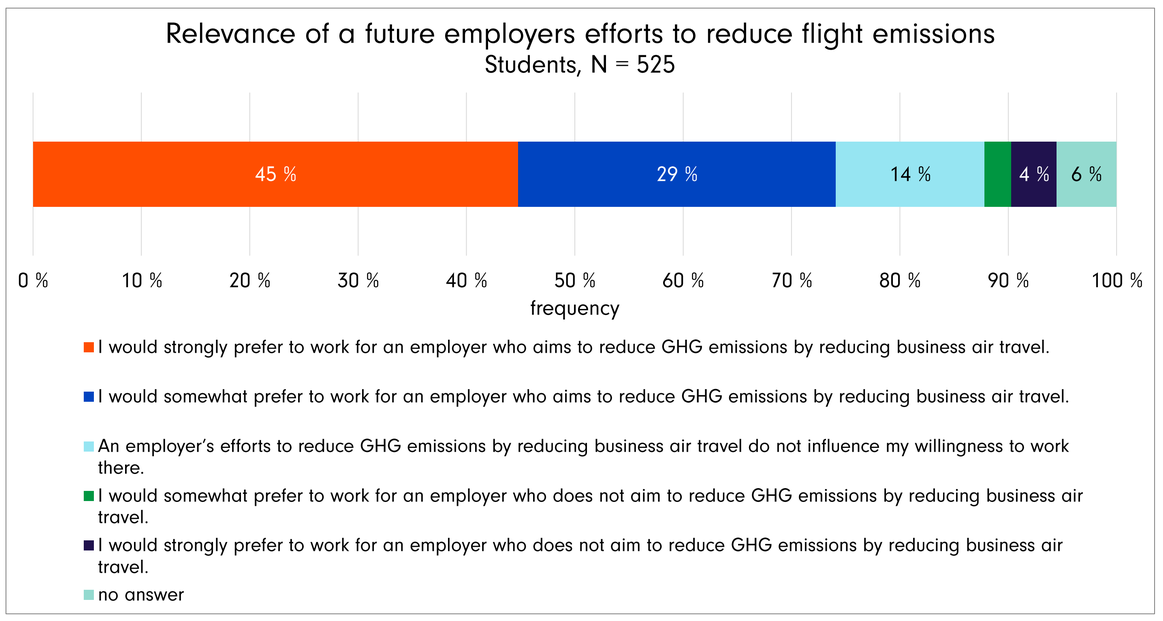

Fig. 6 Relevance of a future employers efforts to reduce flight emissions. Status group: students, N=525. Relative frequency of the stated preferences regarding the employer.

Key Messages

- The distribution of flight emissions between junior and senior scientists is highly unequal and implies that those who rely least on career progression fly most[5,6], which question the current scientific culture of mobility (Fig. 1,2)
- The (high) willingness to change mobility behaviour facilitates the process of flight reduction (Fig. 4,5)
- The transformation process needs to accelerate to meet the expectations of the next generation entering the labour market – including jobs within academia (Fig. 6)

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