



Zurich, 12 January 2024

MNF Sustainable Travel Policy for the Reduction of Flight-based CO₂ Emissions

University-level goal

Aviation-related greenhouse gas emissions in 2022 should be no more than 60% of 2018/2019 emissions. This will be followed by an annual reduction of 3% until 2030.

MNF's 2018/2019 baseline emissions = 1787.7 tCO₂ eq (ton of CO₂ equivalent. This unit acknowledges the global warming potential of not only CO₂ but of other greenhouse gases released during air travel.)

MNF Sustainable Travel Policy 1.0

In 2022, the MNF Sustainable Travel Policy was based upon voluntary, personal reductions. With this policy in place, the faculty missed the 2022 target reductions by nearly 5% or 84.7 tons CO₂ (equivalent to 85 flights Zurich - New York).

MNF Sustainable Travel Policy 2.0

The MNF Faculty Executive approved the following policy proposal for implementation starting January 1, 2024:

1. All air travel will incur an incentive tax of 200 CHF per t CO₂ eq. emitted. The money accumulates as the incentive tax fund. There will be no exceptions to the incentive tax collected (but see point 3).
2. The MNF Dean's Office will issue two bills per year, one in January (for travel in the first half of the prior year, booked in SAP in February) and one in July (for travel in the second half of the prior year). The bill will be issued at the level of the "Profitcenter". Billing will begin in 2024 based on taxes charged for flights taken in 2023.
3. Each department will be refunded 20% of the taxes paid by the departmental "Profitcenters". This money is considered a 'Justice Fund' can be used at the discretion of the department, but must prioritize the needs of young researchers (e.g., networking, access to conferences) and must not create policies and practices which favor one kind of individual over another (e.g., gender). (Directive from the UZH President.)
4. The incentive tax fund will be used to pay train travel by members of the MNF. Expenses will only be paid for train travel, if an origin or destination outside of Switzerland is involved or cost more than 100 CHF if within Switzerland. The fund could also be used for other sustainability projects.
5. The MNF Sustainability Committee will reconvene after six months of implementation of the MNF Sustainable Travel Policy 2.0 to assess whether the impact of the policy is fair across departments and to monitor the balance of the incentive tax fund.

FAQs and Background Information

How was this policy developed and by whom?

The MNF's Sustainability Committee was tasked by the Faculty Executive with proposing a revised MNF Sustainable Travel Policy. Since May 2023, the committee collected and considered feedback from each department via:

- Ensuring each department has at least one representative on the committee (see table below).
- Direct survey of all department heads in September 2023.

The feedback was intensively discussed in the committee and after careful consideration the committee approved submission of the above policy proposal to the Faculty Executive.

Membership by MNF Department	
Astrophysics	Julian Adamek
Chemistry	David Tilley, Anton Natter Perdiguero, Isik Tuncay
Evolutionary Anthropology	Michael Krützen
Evolutionary Biology and Environmental Sciences	Marc Hall, Stefan Lüpold, Aynur Erdogan, Cornelia Krug
Geography	Maria Santos, Annina Michel
Mathematics (as of 11-2023)	Reinhard Furrer
Molecular Life Sciences	Darren Gilmour
Neuroinformatics	Valerio Mante
Paleontology	Catalina Pimiento
Physics	Johan Chang
Plant and Microbial Biology	Célia Jäger-Baroux, Fabrizio Menardo
Quantitative Biomedicine	Simon Albertini
Systematic and Evolutionary Botany	Barbara Keller

Why don't we allow for exceptions to the incentive tax at the faculty level?

The policy is designed to minimize additional administrative load, which would have to be funded by the incentive tax, as this would involve a reallocation of funding from research to administration. For this reason, we choose to use the flight and emissions data provided by the university-level Sustainability Team (t CO₂ eq. by "Profitcenter") rather than making a policy that would require departments and the Dean's Office to collect, curate, analyze, and use additional data. University-level data has no information about the purpose of travel (field work, conference, etc.) or role of the traveler (professor, student, post doc, etc.). Additionally, offering exceptions was one of the points of greatest disagreement among departments. The MNF Sustainable Travel Policy therefore includes the 'Justice Fund' (tax refund) such that departments can determine if/which exceptions to the incentive tax work for their context.

Why is the incentive tax 200 CHF per t CO₂ eq.?

- Though an exact calculation is difficult, an estimation of train travel funding per person if we have a 200 CHF per t CO₂ eq. tax is around 300 CHF per year. We feel this is an amount which will motivate the MNF community to reduce flying by using trains.
- Many other UZH faculties charge a similar tax per t CO₂ eq. with a range from 100 to 130 per ton. With this tax in place, all other faculties met their reduction targets in 2022.
- Leonard Creutzburg from the UZH Sustainability Team informed the committee that there is evidence supporting 237 EUR per t CO₂ eq. as the tipping point to achieve behavior change (German Umweltbundesamt, 2023)¹.

¹ <https://www.umweltbundesamt.de/daten/umwelt-wirtschaft/gesellschaftliche-kosten-von-umweltbelastungen#klimakosten-von-treibhausgas-emissionen>

Incentive tax examples (at 200 CHF per t CO₂ eq.): You will pay in addition

- ZRH-Copenhagen - ZRH: 89 CHF
- ZRH-Keflavik (IS) - ZRH: 235 CHF
- ZRH-New York - ZRH: 605 CHF
- ZRH-San Francisco - ZRH: 1'141 CHF
- ZRH-Wellington (NZ) - ZRH: 2'578 CHF

Hypothetical example incentive tax and justice fund

GIUZ 2024, no. employees: 300

- Total emissions 2024 = 550 t CO₂ eq.
- Total incentive tax = 550 x 200 CHF per t CO₂ eq. = 110'000 CHF, billed individually at the “Profitcenter” level
- Total 'Justice Fund' (20% of the taxes paid by the departmental Profitcenters) = 22'000 CHF, returned to the department as a whole
- Use of 'Justice Fund' in GIUZ would be negotiated at the departmental level and would take into account the different needs and priorities of department research groups (e.g., field work, support of the Global South). Attention would also be paid to groups with less funding and to ensure those in critical career phases are not negatively impacted.
- Individuals within GIUZ would benefit from the policy when they travel by train and use the incentive tax fund for reimbursement. $(110'000 \text{ CHF tax} - 22'000 \text{ CHF justice fund}) / 300 \text{ GIUZ members} = 293 \text{ CHF}$ generally available train travel fare per GIUZ employee

Sample workflow

Incentive tax: CHF 200 per t CO₂:

- 1 (as before) Employee books flight, reimburses flight through expenses system
- 2 (as before) Flight information is collected by UZH Sustainability Team (start and end airport, distance, t CO₂ eq. – calculated by AtmosFair) for each Profitcenter/research group
- 3 MNF Dean's Office calculates the incentive tax at a “Profitcenter” level and sends a tax bill two times per year (January and July). 20% of the incoming funds from the incentive tax will be returned as the 'Justice Fund' to the department level, also two times per year (January and July).
- 4 Departments decide how to use their 'Justice Fund' (e.g., to reimburse the incentive tax for certain kinds of travel or travel by people in certain career stages)
- 5 Incentive tax money gets used for MNF train travel (CH <-> “Ausland”) and MNF sustainability projects

Why is the incentive tax money earmarked primarily for train travel?

As the incentive tax is charged only two times per year, the policy is theoretically weaker at discouraging air travel by making it feel immediately more expensive. We therefore created a strong, positive incentive by basically making many forms of train travel free. By limiting eligible train travel to trips in which an origin or destination is outside of Switzerland or trips which cost more than 100 CHF if within Switzerland, we incentive people take the train when they normally would have flown.