



FLYING HIGH BUT FLYING LESS

An overview study of Dutch university policies to reduce carbon emissions from research related air travel

HOOGVLIEGERS VLIEGEN MINDER

Een overzichtsstudie van het beleid van Nederlandse universiteiten om CO₂-uitstoot door onderzoeksgereleerd vliegverkeer te verminderen

Nederlandse samenvatting

Het vlieggedrag van academici wordt in toenemende mate als problematisch ervaren. Terwijl wetenschappers zich steeds vaker uitspreken over het klimaat (zie bijvoorbeeld [hier](#)), vliegen academici meer dan ooit de wereld rond voor congressen, onderzoek op locatie en fellowships. Een duurzame wetenschap lijkt hierdoor ver weg. DJA onderzocht hoe groot het probleem nu werkelijk is, welke maatregelen Nederlandse universiteiten nemen om de uitstoot door vliegen te beperken en hoe effectief die zijn.

In de afgelopen jaren heeft duurzaamheid een flinke opmars gemaakt in de beleidsdocumenten van Nederlandse universiteiten. *Green offices* zijn opgericht, en beleid om de CO₂-uitstoot terug te dringen ontwikkelt zich snel. Hierbij wordt met name in verduurzamen van vastgoed flink geïnvesteerd. Aan goede bedoelingen geen gebrek, zo blijkt ook uit de [Duurzame Ontwikkelingsdoelen van de VSNU](#). Toch signaleren wij dat het niet snel genoeg gaat. Beleidsmedewerkers, blijkt uit het onderzoek, ervaren een gebrek aan middelen en mandaat. Juist op het vlak van mobiliteit zijn de maatregelen tot op heden tamelijk vrijblijvend en daarom ook weinig effectief.

Nu de coronacrisis het academische vliegverkeer zo goed als stil heeft gelegd en druk geëxperimenteerd wordt met digitale congressen, hebben de universiteiten een uitgelezen kans om het academische vlieggedrag blijvend te veranderen. Wij roepen de universiteiten op om die kans te grijpen. Als we willen voorkomen dat het na deze crisis weer *business as usual* wordt, zijn stevige maatregelen nodig, want vliegen is de afgelopen decennia diep verankerd geraakt in de academische cultuur.

Amsterdam, 11 November 2020



Bevindingen

Op basis van een inventarisatie van recente duurzaamheidsrapporten van alle Nederlandse Universiteiten en interviews met beleidsmedewerkers, komen wij tot de volgende conclusies:

1. Vliegen heeft een **grote invloed** op de totale CO₂-uitstoot van Nederlandse universiteiten.

- Schattingen van het aandeel lopen uiteen van 12% (RUG) tot meer dan 27% (EUR) van de totale uitstoot
- Precieze getallen en vergelijkingen zijn niet te geven aangezien meetmethoden sterk verschillen en gebreken vertonen.

2. Universiteiten **investeren nog te weinig** in het terugdringen van de uitstoot door vliegen.

- De helft van de geïnterviewde beleidsmedewerkers klaagt over gebrek aan middelen.
- Investerings worden vooral gedaan in het verduurzamen van vastgoed, het financieren van alternatieven voor vliegen heeft geen prioriteit

3. Het **beleid** dat universiteiten voeren om de uitstoot door vliegen terug te dringen is **versnipperd, krachteloos en ineffectief**.

- De inzet van universiteiten om het vliegprobleem aan te pakken varieert enorm. De WUR voert het beste duurzaamheidsbeleid en is ook toonaangevend op het gebied van mobiliteit.
- Verantwoordelijkheden zijn niet altijd goed belegd. Centraal gemaakt beleid strandt op facultair niveau.
- Universiteiten kiezen in hun vliegbeleid voor de weg van de minste weerstand. De academische vliegcultuur wordt op deze manier niet aangepakt.
- De meest gekozen maatregelen zijn het vergoeden van CO₂-compensatieregelingen (waarvan de effectiviteit twijfelachtig is) en het instellen van een (korte) minimumafstand. Deze maatregelen hebben een gering effect, mede omdat intercontinentale vluchten buiten schot blijven.

Aanbevelingen

1. **Investeer** in beleid en alternatieven voor vliegen.

- Verstrek voldoende middelen aan *sustainability officers*
- Stel duidelijke langetermijndoelen en zorg dat de verantwoordelijkheid hiervoor op facultair niveau is belegd
- Zorg voor materiële voorwaarden voor digitale alternatieven: goede digitale *conference rooms*, webcams op alle kantoren, etc.
- Verzorg workshops in digitaal congresseren en ontwikkel nieuwe tools als hieraan behoefte is.



2. **Stimuleer cultuurverandering**

- Minimaliseer de voordelen van vliegen voor academische carrières
- Houd bij sollicitaties rekening met balans internationale ervaring/verantwoord reizen
- Stel bindende voorwaarden aan vlieggedrag bij het verstrekken van onderzoeksbeurzen

3. **Werk samen**

- Deel *best practices*
- Overweeg (inter)universitaire reisbureaus op te richten om het vlieggedrag te kunnen meten en reguleren
- Hanteer gelijke meetmethoden voor CO₂-uitstoot van vliegen door universitair personeel

4. **Maak maatregelen dwingender**

- Ga voor het terugdringen van vluchten, niet voor CO₂-compensatie
- Verbied reizen met het vliegtuig voor reizen die binnen acht uur met alternatieve vervoersmiddelen kunnen worden gemaakt
- Overweeg de invoering van CO₂-quota voor onderzoeksprojecten/groepen om onderzoekers te dwingen te prioriteren



Summary in English

The flight behaviour of academics is being perceived more and more as problematic. While scientists are increasingly referring to climate change (see [here](#), for example), academics are flying around the world more than ever for conferences, on-site research and fellowships. As a result, a sustainable science seems a distant prospect. The Young Academy has investigated how big the problem really is, what measures Dutch universities are taking to reduce emissions from flying, and how effective these actually are. In recent years, sustainability has made a significant advance in the policy documents of Dutch universities. Green offices have been established and policies to reduce CO₂ emissions are developing rapidly. Substantial investments are being made, particularly in making real estate more sustainable. There is no lack of good intentions, as the [Sustainable Development Goals of the Association of Universities in the Netherlands \(VSNU\)](#) show. Nevertheless, we are indicating that progress is still too slow. According to the research, policymakers are experiencing a lack of resources and mandate. Particularly when it comes to mobility, the measures taken to date have been rather non-committal and therefore ineffective.

Now that the COVID-19 pandemic has brought academic air travel almost to a standstill and there are lots of experiments going on with holding digital conferences, universities have an excellent opportunity to change academic flight behaviour permanently. We are calling on universities to seize that opportunity. If we want to prevent things from becoming business as usual again after this pandemic, solid measures are needed, because flying has become deeply rooted in academic culture over the past decades.

Findings

Based on an inventory of recent sustainability reports from all Dutch universities and interviews with policymakers, we have arrived at the following conclusions:

2. Flying has a **major impact** on the total CO₂ emissions of Dutch universities.

- Estimates of the share range from 12% of total emissions (University of Groningen) to more than 27% (Erasmus University Rotterdam).
- Precise figures and comparisons cannot be given, as measurement methods differ greatly and have shortcomings.

2. Universities are **still investing too little** in reducing emissions from flying.

- Half of the policymakers interviewed complained of a lack of resources.
- Investments are being made mainly in making real estate more sustainable, financing alternatives to flying is not a priority

3. The **policies** of universities to reduce emissions from flying are **fragmented, powerless and ineffective**.

- The commitment of universities to tackle the flying problem varies enormously. Wageningen University & Research pursues the best sustainability policy and is also a leader in the field of mobility.
- Responsibilities are not always clearly defined. Centrally made policy becomes stranded at faculty level.
- In their flying policy, universities opt for the easiest way. As a result, the academic flying culture is not addressed effectively.



- The most frequently chosen measures are funding carbon offsetting projects (the effectiveness of which is doubtful) and imposing a short minimum distance. These measures have a limited impact, partly because intercontinental flights are not affected.

Recommendations

1. Invest in policy and alternatives to flying.

- Provide sufficient resources to sustainability officers
- Set clear long-term goals and ensure that responsibility for this is anchored at faculty level
- Provide material conditions for digital alternatives: good digital conference rooms, webcams in all offices, etc.
- Organise workshops for digital conferences and develop new tools if needed.

2. Encourage cultural change

- Minimise the benefits of flying for academic careers
- In the case of job applications, take account of the balance between international experience and responsible travel
- Impose binding conditions on flying behaviour when awarding research grants

3. Work together

- Share best practices.
- Consider setting up inter-university travel agencies to measure and regulate flying behaviour
- Use similar measurement methods for CO₂ emissions resulting from flying by university staff

4. Make measures more enforceable

- Opt for reducing flights, not carbon offsetting
- Ban air travel for journeys that can be made within eight hours by alternative means of transport
- Consider introducing CO₂ quotas for research projects/groups to force researchers to prioritise



Colofon

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1. Introduction

Carbon emissions from the aviation sector are expected to count for almost a quarter of the global carbon budget by 2050 (Nurse-Bray et al 2019). In Europe, total greenhouse gas emissions from aviation are likely to increase, as the number of flights is predicted to rise by 42% until 2040 (EASA 2020). Despite this scenario, flying is considered a normal and even necessary part of academic practice (Grant 2018; Schrems 2020; Nurse-Bray et al 2019). Some would even consider it a necessary part of promoting and undertaking research and networking (Nurse-Bray et al 2019). Although flying has become a social norm in academia in the past decades, the legitimacy and value of flying are increasingly being debated (Gössling et al. 2019; Grant 2018), as reflected in the emergence of the term 'flight shame'. As a result, academic mobility has become a more and more pressing issue in the sustainability policies of Dutch universities.

This report investigates how Dutch universities seek to reduce carbon emissions resulting from academic air travel. It aims to present the academic community with a better understanding of the approach of Dutch universities to academic air travel, and to enhance the debate within academic institutions. In the first part, this report presents an overview of universities' carbon emissions reduction policies, focusing on policy goals and impact, as well as their governance and operational practices. In the second part, the report delves into the issue of academic air travel by giving an overview of the Dutch universities' approaches and measures to reduce carbon emissions from air travel, including actors involved and barriers encountered.

2. Methodology

The first step in this research project was to map the current state of affairs regarding 13 Dutch universities' policies and operational practices, based on publicly available information from the universities' websites. In general, sustainability policies, sustainability reports and carbon footprint reports were the main documents retrieved. In the second stage of data collection, the researchers contacted the universities requesting additional documents and information that was not yet publicly available. A full list of the documentation consulted can be found in Appendix A.

Subsequently, we conducted interviews with university policy officers, to supplement the information in policy documents and to collect detailed information regarding universities' measures and discussions on academic flying. Due to restrictions in time and means, we conducted in-depth interviews with officers from nine universities: University of Amsterdam, VU Amsterdam, Leiden University, Wageningen University & Research, University of Twente, Tilburg University, Erasmus University, Maastricht University and Eindhoven University of Technology. We selected these nine universities through purposive sampling, aiming for a diverse group that could reflect different approaches to sustainability, different geographical locations and different university profiles. A representative from the working group on academic air travel was also interviewed. This group (*Werkgroep Vliegen*) gathers representatives from Dutch universities and aims to exchange ideas about measures and best practices. In-depth interviews were held digitally from the end of April to early July 2020. The results of the initial phase of the research and the interviews were organised in four themes: sustainability policy, sustainability governance, operations, mobility and academic travelling. These themes laid the foundation for the structure of this report. The full list of interviewees can be found in Appendix B.

In drawing conclusions from this empirical research, two qualifications are in order. First, many of the sustainability or mobility policies were being renewed during the research period. Some universities' policy plans were waiting for final approval or implementation. The majority of these (draft) documents



were shared with the researchers. Many of these future policy plans tend towards a more ambitious approach regarding sustainability. Therefore, some of the universities' academic air travel policies may look significantly different in a year's time. Second, the loyalty of interviewees towards their organization may have affected their responses to some of our questions. Especially when support for, and resistance towards, sustainability policies within their organisations was concerned, their answers might have been more positive than their feelings or experience.

3. Dutch universities' approach to reducing carbon emissions

3.1. Introduction

The main sustainability goal of most Dutch universities is to reduce their overall carbon footprint in the next 5 to 10 years. Utrecht University, University of Groningen, Delft University of Technology, Erasmus University and Radboud University have defined becoming carbon neutral as their main sustainability ambition.¹ Tilburg University has set the ambition to stop using fossil fuels for energy purposes by 2025 and University of Twente has set a 15% carbon emission reduction goal from 2020 to 2023.² Some universities have already been working on reducing their carbon emissions for some years, with success. Wageningen University has reduced its emissions by 49% in the period from 2010 to 2018. Utrecht University has reduced its carbon emissions by 22% in 2019 compared with 2014. Leiden University reduced its carbon footprint by more than 50% from 2016 to 2019.³ Eleven universities keep track of their carbon footprint and publicly share their progress. Eight universities report on various sources of their carbon footprint and regularly report their progress. Three universities have old data or report their numbers in very few areas. Without a proper carbon footprint assessment, universities lack the information to monitor the results of their actions to reduce carbon emissions. This, in turn, can hinder the development of more effective measures to achieve such reductions. With regard to carbon emission assessment, document analysis showed that universities have different ways of measuring their carbon footprint, which results in large discrepancies in the relative weight of different sources of their reported footprint. In all universities however, mobility is the first or second largest source of total carbon emissions, including both direct and indirect examples. Academic air travel, in particular, represents between 12 and 27.4% of Dutch universities' carbon emission.

3.2 Sustainability policy and governance at universities

All the universities have a sustainability policy, which is laid down either in a policy document, where they define their main objectives and specific measures, in their websites and/or in their Strategic Plans. Currently, five universities where we conducted interviews are in the process of updating their sustainability policy or developing a specific mobility policy.⁴

To support the implementation of their sustainability policy, all universities have a sustainability plan or have specified goals and measures in different operational areas. However, despite these efforts to be specific about how they are aiming to reach their sustainability goals, only eight universities measure and report their sustainability performance. Of these eight, five universities present a sustainability report

1 Utrecht University. Co2 footprint. <https://www.uu.nl/en/organisation/sustainable-uu/operations/co2-footprint>, University of Groningen. Roadmap <https://www.rug.nl/about-ug/profile/facts-and-figures/duurzaamheid/roadmap>, <https://www.tudelft.nl/sustainability/campus/>, <https://www.eur.nl/en/about-eur/vision/sustainability/mission-and-vision>, Radboud (2020). Sustainability Policy 2020-2025.

2 Tilburg University (2019). Towards a Sustainable University: Tilburg University Sustainability Plan 2019-2021.

University of Twente (2020). Carbon footprint, <https://www.utwente.nl/en/cfm/discover/sustainability/carbon-footprint/>

3 WUR. CO2 footprint <https://www.wur.nl/en/show/CO2-footprint-3.htm>, Utrecht University. Co2 footprint <https://www.uu.nl/en/organisation/sustainable-uu/operations/co2-footprint>, Leiden University (2020) Leiden

Duurzaamheidsverslag 2019. <https://issuu.com/universiteit-leiden/leiden/docs/duurzaamheidsverslag-2019-universiteit-leiden>

4 VU University, Radboud University, University of Twente, University of Amsterdam, Leiden University.



updated annually or bi-annually, which presents the specific advancements towards the goals set in their sustainability plan. The other three universities report some of their sustainability results on their website. Sustainability impact assessment and reporting seems to be a challenging task, which is still in the early development stages in most universities.

In terms of sustainability governance, the interviews revealed that all universities have an employee designated as sustainability coordinator, manager or policy officer, who is responsible for coordinating and managing the integration of sustainability in the universities' strategy and practices. They work in close cooperation with other departments and faculties, which have an employee responsible to implement sustainability measures. In general, the administrative capacity for sustainability management is limited to 2 to 3 FTE at central level, complemented with representatives from different departments who dedicate part of their hours to sustainability matters. A multifunctional working group, with representatives from different areas, is the forum where sustainability issues are discussed and policies developed. In general, the Executive Boards (CvB) and the University Councils are the responsible actors for approving sustainability policies or initiatives.

In their efforts to develop and implement sustainability policies at the universities, sustainability managers or officials stated that they receive significant political support from different actors, notably the board of directors, students, and individual staff members. The biggest constraints mentioned were lack of financial resources, organisational structure and behaviour. Four of the interviewees mentioned that budget is a key issue when it comes to involving more researchers and other employees to support the sustainability team in developing and implementing sustainability initiatives. Furthermore, for big operational projects and changes in structure, major investments are required. The universities' administrative procedures and the autonomy of some faculties and departments to determine their own priorities were indicated as examples of barriers related to the organisational structure. To implement some sustainability initiatives, the interviewees mentioned that they need to convince people to change their individual behaviour, for instance, in taking responsibility to reduce their academic air travel.

3.3 Policy measures to reduce carbon emissions

In order to reduce carbon emissions, Dutch universities focus on four main areas: energy, real estate (buildings), procurement and mobility. The Facilities Services, Real Estate and Procurement departments are the main actors involved in implementing specific measures related to energy, real estate and procurement. Table 1 provides an overview of the main initiatives implemented by Dutch universities in these domains. A more detailed description of their approach to mobility is presented in section 4.

**Table 1: Policy measures to reduce carbon emissions**

Operational area	Measures
Energy	<ol style="list-style-type: none"> 1. Reducing energy consumption on campus: led lighting, green roofs, insulation and ventilation. 2. Making use of renewable and sustainable energy sources: geothermal system, heat and cold storage, wind turbines, solar panels, biofuels and purchase of green gas and electricity. 3. Setting an energy management system: use of a system to monitor the use of electricity, natural gas, heat, cooling and water in the university buildings. 4. Participating in a multi-annual agreement set by the Dutch government on energy efficiency (MJA3 / MEE).⁵
Real Estate (Buildings)	<ol style="list-style-type: none"> 1. Making efficient use of water, energy, heating and ventilation, and discharge of waste. 2. Integrating sustainability in the renovation of buildings and construction of new ones. 3. Using sustainability quality label and certification in their buildings, such as the BREEAM-NL. 4. Making efficient use of the buildings spaces, and using sustainable furniture and materials.
Procurement	<ol style="list-style-type: none"> 1. Integrating sustainability criteria in suppliers selections and contracts. 2. Following the national criteria for socially responsible procurement (MVI), the criteria set by the Netherlands Enterprise Agency (RVO NL) or the criteria of the Expertise Centre for Procurement of the Ministry of Economic Affairs (PIANOo). 3. Assessing and keeping track of the compliance of suppliers with the university's sustainability criteria. 4. Incorporating circular strategies in the new contracts with suppliers.

4. Mobility

Interviews showed that mobility is one of the areas where all universities are focusing their efforts to reduce their carbon footprint in the coming years. More attention to mobility issues was considered necessary given its contribution to carbon emissions. Some universities also mentioned that they were intensifying their efforts in this area as they have already reached major carbon emission reduction goals in the other operational areas, such as energy and buildings.

To guide their efforts towards CO₂ reduction from mobility, four universities (WUR, LU, RUG, TiLU) have a policy document dedicated specifically to mobility, clearly specifying the university's strategy, objectives, targets and main measures regarding limiting carbon emissions. Nine other universities either present measures on mobility within their sustainability policy document or present them on their website.

The universities' sustainable mobility policies distinguish between two types of mobility: commuting to and within the university campus and academic air travel. Overall, universities' measures related to commuting to and within the university campus target two strategic goals: first, reducing the movements and second, introducing cleaner and more efficient types of transport. The table below presents the various measures taken by Dutch universities to reach these goals. Because academic air travel is this report's main focus, the next segment will elaborate on what universities have been doing in this domain.

⁵ <https://www.rvo.nl/onderwerpen/duurzaam-ondernemen/energie-besparen/mja3-mee>

**Table 2: Measures to reduce CO2 emissions from commuting mobility**

Strategy	Mobility Measures
1. Reducing movements	Car: limiting car traffic, increasing parking fee, parking limitations, and facilitating carpooling. Housing: offering financial support and incentives for staff to settle close to the university campus and supporting students in finding accommodation close to the campus. Supporting information: providing employees and students with information about traffic, travel advice, use of apps to decide on more sustainable mobility options. Logistics: optimising the delivery and pick-up of goods within the campus, introducing local suppliers and shorter supply chains, imposing logistic hubs and sustainable transport requirements on suppliers. Flexibility at work: optimising employee allocation, setting flexible working hours and introducing teleconferencing.
2. Introducing more clean and efficient modes of transport	Bikes: implementing a shared bike system, bike facilities, offering financial incentives for employees to purchase bikes and e-bikes and improving bicycle safety on campus. Public transport: offering monthly allowance for commuting, cost reimbursement, free trial passes and making public transport subscription and charging points available. Cars: increasing the number of electric cars, charging pools and implementing carpooling initiatives. Other incentives: researching innovative forms of transport and traffic flow management, improving connections with the campus, and reaching agreements with the municipality about high-quality public transport.

Overall, the universities' measures mainly target staff, students and, to a lesser degree, suppliers. To implement these measures, at least half of the universities entered into partnerships with external organisations, such as the municipality and suppliers. Within the universities, as became clear from the interviews, the Human Resources department, the Traffic or Facility department and the Sustainability Coordinator are the main stakeholders involved in mobility management. The Human Resources department is involved mainly in measures that relate to employee contracts, financial support, incentives and benefits, and travel allowance. The Traffic or Facility department is involved mainly in measures related to campus traffic and more efficient means of transport. The Sustainability Coordinator supports the other two departments.

5. Academic air travel

Over the past few years, the focus of Dutch universities' sustainability policies seems to have gradually shifted from energy and real estate to mobility. Various carbon footprint studies carried out by universities present academic air travel as an important source of carbon emissions, varying from 12% to 27% of the total universities' footprint (see table 3).⁶ These developments align with recent societal debates on the environmental impact of flying. In 2018, the term 'flight shame' emerged, which reflects increasing doubts about the moral admissibility of flying (Gössling *et al.* 2019). Simultaneously, academic air travel has become a topic of discussion at different Dutch universities. Interviews and policy documents revealed that universities increasingly consider the reduction of academic flying as a priority

⁶ For example, those of Erasmus University (2018) and Tilburg University (2019).

to reduce their carbon footprint. At the majority of Dutch universities, this is reflected in an increased number of measures related to reducing emissions from air travel in recent years. Furthermore, all interviewees stated that academic air travel is gaining ground on the universities' sustainability agenda. Specific academic air travel measures have found their way into sustainability policies. Generally, the emphasis of universities in their approaches to academic air travel is on paying fees to compensate for carbon emissions, reducing the frequency of academic travel and/or stimulating more eco-friendly methods of transportation. Two main academic air travel categories are distinguished: flights within Europe and intercontinental flights. Intercontinental flights seem to account for the majority of the universities' total number of flight kilometres. For instance, WUR reports that 59.6% of their total number of flights in 2019 (8,473) was to destinations outside Europe. The Carbon Footprint Report of RUG states that 84.1% of the total number of flight kilometres is caused by intercontinental flights (University of Groningen 2019a). Even though some Dutch universities' mobility policies do state that they aim to reduce the number of academic intercontinental flights, specific rules to reduce academic flying are mostly focused on flights within Europe.

Table 3: Percentage of universities' total carbon footprint caused by academic air travel

	WUR	UT	UU	RUG	UD	UvA	TUe	TilU	EUR	UM	RU	VU
%	23	15.2	15.6	12.1	13.9	20	x	x	27.4	x	x	x

5.1 Measures to reduce academic air travel

Universities have different measures in place aiming to reduce carbon emissions caused by academic air travel (see table 4). Firstly, CO₂ compensation is a popular measure used by the majority of the Dutch universities. Carbon offsetting, which allows universities to invest in sustainable projects, is a common practice to compensate for CO₂ emissions. In recent years, at least three universities have made compensating academic air travel compulsory,⁷ while at other universities this remains a choice of individual faculties, departments or staff members.⁸ Multiple universities or faculties pay an amount equivalent to the emissions generated by flights of their staff to companies that compensate for this impact. For example, Utrecht University works together with Climate Neutral Group, a company that invests in sustainable projects in developing countries (De Haan 2019). In some cases, universities or faculties require individual staff members to buy CO₂ compensations on every flight booked. Secondly, a strategy used by universities to keep track of the frequency of academic air travel and support staff in making more sustainable travel choices is working with a specific travel agency or central system to book flights for academic staff. This allows universities to keep better track of the number of flights and the total distance travelled. Additionally, it enables universities to facilitate the booking of more eco-friendly travel options. Several universities are currently using a travel agent while a few others have expressed (either in interviews or policy documents) an intention to use this option in the near future.⁹ Thirdly, several universities employ a flying minimum that does not allow academics to travel by plane to destinations within a certain distance or to destinations that are reachable within a given amount of time.⁹ Currently, such restrictions only apply to destinations in Europe. At four universities, Tilburg University, Leiden University, Wageningen University and University of Groningen, these minimums are mandatory, while other universities only communicate it as a recommendation. At times, university staff may deviate from this rule with explicit permission from a supervisor or if certain destinations cannot be reached by alternative modes of transport.¹⁰ Finally, some universities¹¹ also offer travel advice – e.g. through a travel check scheme or a train zone map – to their employees. This should help staff to make better decisions about academic travelling as it offers sustainable alternatives for travelling by air. The responsible actors

⁷ Such as TU Delft, Leiden University, Utrecht University.

⁸ For example, at the UvA, Tilburg University, TU Eindhoven and Erasmus University.

⁹ This is, for example, the case with Tilburg and Wageningen University.

¹⁰ Given that universities only recently started to introduce flying minimums, measuring the impact of these measures is still quite challenging.

¹¹ Erasmus University, Utrecht University, Twente, WUR.



for implementing measures on air travel are mostly sustainability coordinators or staff working at the HR department (which in many universities oversees work travel by employees).

Table 4: Measures to reduce academic air travel

Measures to reduce and compensate carbon emissions from academic air travel	Practical examples	Universities
CO ₂ compensating (compulsory or choice of faculty or department) ¹²	Compensating carbon footprint caused by academic air travel by, for example, supporting sustainable energy projects	Leiden University (compulsory) Utrecht University (compulsory) University of Groningen Tilburg University Erasmus University University of Amsterdam VU Amsterdam
Minimum distance of kilometres (or time) required to fly (compulsory or recommendation)	Varying from 400 to 800 kilometres (or reachable by train within 6 hours)	Tilburg University (compulsory) Leiden University (compulsory) Wageningen University (compulsory) University of Groningen (compulsory) University of Twente Utrecht University
Internal or external travel agencies	Internal (or external) agency or agent that is responsible for booking (all the) flights of the respective university	Tilburg University University of Twente Wageningen University Utrecht University VU Amsterdam University of Groningen
Sustainable travel advice	Through a travel check scheme or train zone map that provide better insight into sustainable travel options	Wageningen University Tilburg University Utrecht University VU Amsterdam University of Groningen

Universities with a mandatory flying minimum (Tilburg University and Leiden University) have seen results in terms of reducing flights up to a certain number of kilometres. For example, at Tilburg University air travel to destinations within 500 kilometres has become extremely rare since introducing this measure. Similarly, Leiden University has witnessed a decline of air travel to destinations that can be reached by train within six hours, from 5.1% in 2018 to 4.5% in 2019. However, the impact of such measures on total academic air travel seems limited, as only a small part of air travel seems to be done on such short distances.

In addition, interviewees indicated that measures such as an internal travel agency or sustainable travel advice have already shown some success in terms of achieving some behaviour change.¹³ However, as this measure has only recently been implemented by various universities, data on its effects on reducing the total carbon footprint of Dutch universities are not yet available. Similarly, the impact of other flight reduction measures is not known yet, as many of these initiatives were only introduced in recent years and most universities (so far) lack monitoring capacities. The actual impact of most measures striving to reduce academic air travel on the universities' footprint will be revealed in the years ahead.¹⁴

12 Compensating CO₂ emissions, in some cases, is a choice of individual faculties or departments.

13 This was affirmed by the sustainable policy advisor of Leiden University.

14 This was affirmed by the sustainable policy advisor of Leiden University.



5.2 Arguments for flying less

Arguments presented by interviewees for implementing academic flying policies are, first and foremost, based on concerns over climate change and loss of biodiversity due to carbon emissions. Additionally, maintaining a critical attitude towards academic flying was seen as the responsibility of universities to lead by example. This also resonates with the 'public shame culture' that is increasingly associated with flying.¹⁵ Some universities underscored that reducing air travel would contribute to the overall carbon neutrality targets of the university and therefore involve an important focus point.

In various instances, initiatives have started from bottom-up and were introduced by academics themselves. For example, in 2019, 22 academics started a petition (that was signed by almost 1,200 university staff members) that demanded a more sustainable approach towards air travel by Dutch universities.¹⁶ Furthermore, various employees from different universities-- predominantly sustainability policy advisors - have initiated a working group on academic air travel to share best practices on reducing academia's carbon footprint.¹⁷ Lastly, academics of TU Eindhoven initiated a campaign and petition for low-carbon policies advocating a reduction of the number of air travel trips.¹⁸

5.3 Barriers to academic air travel policies

Universities encounter a variety of obstacles that complicate making and implementing policies to reduce carbon emissions caused by academic air travel. Various arguments are being put forward by faculties or individual researchers against stricter academic air travel policies. These arguments are predominantly based on the different purposes that air travel has in academic life: networking, disseminating research, learning about new research projects and lobbying for potential funding. In other words, attending conferences in different parts of the world is seen by many academics as 'part of their job'.¹⁹ In addition, many researchers travel by air to do fieldwork. Interviews revealed that a first argument commonly used against air travel measures is that to build and maintain an international network in academia, researchers have to regularly attend international meetings and conferences. Hence, academic air travel measures are regarded as having a potentially negative impact on the professional lives of academics, especially those in the early stages of their careers. Second, the importance of attending conferences was also underlined as a way to share research ideas and results with colleagues and find out about newly emerging research opportunities:

*'In the academic world, travelling to events and big conferences is normal practice...I think it is so rooted in this way of working...Much of the system is based on appearances in and contributions to events. This is where academics present their research and learn about new projects.'*²⁰

Third, interviewees explained the importance of informal) networking at conferences to academic life, which makes finding acceptance for more sustainable alternatives to flying more difficult:

*'Academics tell me that travelling to conferences is necessary. Not so much for the actual conference, but during breaks they talk to people and learn about new funding opportunities. So how could we forbid our staff to attend conferences?'*²¹

Furthermore, interviewees acknowledged that researchers are worried that stricter policies against academic air travel, which in most cases would result in longer travel time, could come at a cost to

15 Declared by sustainable coordinator of Wageningen University

16 Klimaatbrief Universiteiten (2018). Retrieved via: <https://klimaatbriefuniversiteiten.nl/>.

17 Wageningen, Groningen, Maastricht, Eindhoven, Tilburg, Twente, Utrecht and Radboud are part of this working group.

18 Also see: TUE Low Carbon Initiative (2020). TUE Low Carbon Initiative. Retrieved via: <http://lowcarboninitiative.nl/>

19 This was declared by the sustainable policy advisor of Erasmus University.

20 Interview with sustainable policy advisor of Leiden University.

21 Interview with environment & sustainability policy officer University of Twente.



academics' personal life. At Tilburg University this was one of the arguments brought up by the University Council against raising the minimum amount of air travel distance from 600 to 800 kilometres:

*'We wanted to increase the minimum, but that would also mean more travel time for staff. Then the question was: what is that going to do for academics' well-being and their families?'*²²

Finally, another argument that is used against academic flying measures is that alternatives to flying are not convenient, especially for longer trips. Interviewees mentioned that besides the significantly longer travel time and (in some cases) more expensive tickets involved in train travel, the process of arranging train trips is also viewed as more time-consuming and inefficient.

5.4 Future initiatives to reduce academia's carbon footprint

Interviews revealed that there is an increasing demand from students and staff to come up with novel policies and practices aimed at reducing academic flying. Therefore, universities have been exploring initiatives that could contribute to reducing academic flying and will possibly be implemented in the near future. These initiatives are either included in sustainable roadmaps or long-term sustainability strategies, or were brought up during the interviews. They vary from video conferencing, nudging, offering flying credits or CO₂ budgets, to alternative ways of hosting physical conferences (see table below).

First, the most-mentioned measure includes the increased use of video conferencing. Sustainability officers at most universities with a mobility or sustainability strategy suggested this possible future measure. Interviewees underlined that the COVID-19 crisis – and the sharp increase in digital conferencing – could serve as an amplifier of video conferencing in the academic domain. The most recent policy documents (on mobility) or sustainable roadmaps of various universities²³ underscore the use of video conferencing as an important initiative to reduce air travel in academia. Interviews showed that universities are increasingly looking at ways to facilitate virtual types of conferencing. Hence, the option of video conferencing is expected to be further considered and implemented in the coming period.

Second, providing flying credits to faculties or individual staff members that only allows a certain number of kilometres or flights per person, is also being considered by at least two universities.²⁴ Currently, WUR and Tilburg University have included this initiative in their mobility policy plans. Interviewees of other universities also mentioned that this option is currently being considered in the light of new mobility or sustainability policy plans.

Third, nudging (a policymaking tool striving to subtly stimulate people to make more eco-friendly decisions) was also brought up, mostly by policy advisors or, less often, in roadmaps or future mobility plans as a possible measure that mainly aims to create awareness of the environmental impact of academic flying. This measure obliges staff to justify how their flights contributed to positive ecological impact, which in turn, creates a possible barrier to book a flight. Various interviewees mentioned this as a potential tool to raise awareness among staff. Additionally, universities also try to raise awareness about the impact of flying among employees, for example, by sharing best practices on sustainable travelling or showing the amount of carbon emissions caused by each flight booked to individual staff members. Finally, universities are exploring alternative ways of hosting physical conferences.²⁵ These include combining different conferences, hosting fewer researchers or organising academic gatherings at central locations requiring less travel distance.

22 Interview with sustainable coordinator of Tilburg University.

23 For example, Radboud University, Tilburg University, Erasmus University, Groningen University

24 Tilburg University and Wageningen University.

25 This was affirmed by Interviewees of Tilburg University and University of Twente

**Table 5: Potential initiatives to reduce frequency of academic flying**

Initiative	Specification
Video conferencing	Facilitating or encouraging attending or organising digital conferences
Flying credits / CO ₂ budget	Faculties or individuals receive a certain amount of flying credits that can be used to travel by plane.
Nudging	Academics who fly for work have to justify how the flight contributed to positive ecological impact
Alternative ways of organising physical conferences	Organising conferences with fewer researchers and/or in a more central location

In conclusion, interviewees indicated that as academic flying is becoming more and more of a priority in the universities' sustainability policies, many of these potential measures are likely to be included in university' policies in the period ahead. Until recently, due to a lack of prioritisation and/or resistance to restricting academic air travel, academic flying measures have not been so evident.²⁶ However, societal debates about the environmental impact of flying and, more recently, the COVID-19 crisis, have put alternatives to academic flying in a different light. This could potentially give weight to these future initiatives and persuade focal actors (e.g. the Executive Boards, faculties, University Councils, academic community) within the universities of their urgency and added value in reaching climate neutrality objectives.

6. Conclusion

Within the sustainability policies of Dutch universities, reducing carbon emission caused by mobility is gaining ground. Most universities are developing new policies and consider mobility measures to be important pillars in achieving their carbon neutrality objectives. Academic air travel is widely recognised as one of the main sources of carbon emissions caused by mobility. Both the impact that air travel has on the carbon footprint and recent societal and academic debates have put academic air travel on the policy agenda of various universities. Hence, an increasing number of universities are considering initiatives and (binding and non-binding) measures aiming to limit academic air travel. These range from carbon compensation, promoting more eco-friendly alternatives, and internal or external travel agencies to a ban on flights up to a certain travel distance. More than half of the universities have a flying minimum in place. However, so far, no measures exist to limit intercontinental flights, which account for a large share of the universities' flight carbon footprint.

As the majority of these measures have only recently been implemented and universities still face various barriers, the impact of air travel measures on carbon footprint reduction is, in most cases, still limited. Universities face significant obstacles to initiating and implementing flying measures. Flying to conferences and for research has long been the norm in academia. Therefore, flying less will require behaviour change, as its alternatives are still widely deemed to be inconvenient, costly and time-consuming. Moreover, attending domestic and international academic conferences is viewed as a paramount factor for achieving academic success.

Changing this dynamic will require a transition in the way that the academic community values and approaches conferences and events. The role of universities in bringing change to this state of affairs is of great importance. At present, only a few Dutch universities have actual policies (or specific policy documents) in place dedicated to reducing academic air travel. In order to achieve their ambitious climate

²⁶ This was underlined by Erasmus University



neutrality goals, there is a growing need to develop air travel policies, enhancing administrative capacities and set tangible objectives. Furthermore, universities have expressed interest in sharing best practices and are evaluating newly emerging initiatives that aim to change academics' flying habits. All in all, interviewees revealed a clear demand for more rigid academic flying policies within universities and affirmed a growing support for action from both the academic community and higher levels of management.²⁷ Since support for such measures also seems to be on the rise in the international academic community (especially in Young Academies such as the German Die Junge Akademie), the moment seems to be right to further discuss and pursue change on both the national and the international level.

²⁷ Most notably the Executive Boards of the universities.



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Appendix A – List of documentation

University	Policy documents consulted
Erasmus University	<ul style="list-style-type: none"> - EUR Carbon Footprint Report 2018 - Roadmap sustainable campus
Leiden University	<ul style="list-style-type: none"> - Leiden University Environmental Policy Plan 2016-2020 - Duurzaamheidsverslag 2019
Tilburg University	<ul style="list-style-type: none"> - Sustainability plan 2019-2021 - Towards a Sustainable University - Mobility Plan of Tilburg University
TU Delft	<ul style="list-style-type: none"> - TU Delft Strategic framework 2018-2024 - TU Delft en Klimaatactie - CO2 roadmap - Visie Mobiliteit en Bereikbaarheid 2018-2028
TU Eindhoven	<ul style="list-style-type: none"> - Duurzaamheidsvisie TU/E 100% Future Friendly (this is a policy draft and not a formally approved policy document)
Radboud University	<ul style="list-style-type: none"> - Policy on reducing business air travel - Concept Sustainability Policy 2020-2025
University of Amsterdam	<ul style="list-style-type: none"> - Green paper on sustainability
University of Groningen	<ul style="list-style-type: none"> - Roadmap 2015-2020 - Travel policy map - Travel policy decision three - Jaarverslag duurzaamheid RUG 2020 - Beleid Dienstreizen Buitenland RUG - RUG Carbon Footprint Calculator 2019
University of Twente	<ul style="list-style-type: none"> - Sustainability Policy. Sustainability in Operational Management - Implementation plan Sustainability Policy. Sustainability in Operational Management - University of Twente Carbon Footprint 2019. Management Summary.
Utrecht University	<ul style="list-style-type: none"> - CO2 strategie Universiteit Utrecht 2017-2020 - CO2 footprint reportage 2019 - The train zone map
VU Amsterdam	<ul style="list-style-type: none"> - Milieubarometerrapport 2018 - Sustainable Campus 2020-2025
Wageningen University	<ul style="list-style-type: none"> - Mobility policy 2030 - Mobility implementation agenda 2018-2022 - Business trips: train and air travel policy - Strategic plan 2019-2022 - WUR travel check - Energy vision for 2030 - Annual environmental report 2018 - CO2 footprint 2018
Maastricht University	<ul style="list-style-type: none"> - Vision and strategy sustainable UM2030 - Establishing a carbon-conscious air travel cycle at UM - Jaarverslag 2019

**Appendix B - List of in-depth interviews**

Universities Interviewed	Interviewee	Title	Interviewer	Date
Tilburg University	Marieke de Kort	Program Manager Sustainability	Jasper Kars	21/04/2020
Wageningen University	Joris Fortuin Erna Maters	Deputy Director at Facilities and Services department (Integrated Facility Management) Policy Officer CSR at Facilities and Services department (Team Safety & Environment)	Elissa Cardoso	30/04/2020
Leiden University	Daphne van den Berg	Sustainability Program Manager	Elissa Cardoso	01/05/2020
University of Twente	Brechje Maréchal	Environment & Sustainability Policy Officer	Elissa Cardoso	06/05/2020
University of Amsterdam	Ewout Doorman	Sustainability Policy Officer	Elissa Cardoso	19/05/2020
Erasmus University	Boris Pulskens	Strategic advisor sustainability	Jasper Kars	27/05/2020
TU Eindhoven	Erwin Kerkhof Simone Vonken	Advisor Sustainability and Policy Advisor Mobility and Sustainability	Jasper Kars	28/05/2020
Working Group on Academic Air Travel / Mobility 'Werkgroep Vliegen'	Thijmen Sietsma	Coordinator Radboud Green Office and Representative of the working group on Academic Air Travel / Mobility	Elissa Cardoso	04/06/2020
VU Amsterdam	Ivar Maas	Team Lead Sustainable VU	Jasper Kars	17/07/2020
Maastricht University	Anja van Bogaert	Coordinator Taskforce Sustainable UM 2030	Jasper Kars	30/07/2020