Tourism, flying and climate: How Helsinki can tackle the challenge

Helsinki

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Tourism, Flying and Climate: How Helsinki can tackle the challenge

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Authors
Senior Advisor Jukka Punamäki
Project Manager Atlas Juvakka

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Executive summary

Tourism plays a vital role in Helsinki's economy and international visibility, and it is an important part of the city's global connectivity. At the same time, tourism is linked to climate impacts that need to be better understood and addressed. More than 90% of tourism-related emissions in Helsinki come from travel to the destination, mostly international flights. While these emissions are largely beyond the city's direct control, Helsinki can still shape its path through smart choices, collaboration, and advocacy.

This publication compiles insights from several analyses and discussions on how tourism, flying, and climate intersect. It outlines what we know about tourism's carbon footprint, why measuring it matters, and how the City of Helsinki and its partners can take realistic steps towards decarbonization.

Key insights:

- Flying dominates tourism emissions: Tourism-related emissions are estimated at around 2.6 million tons of CO_2e in 2024, with approximately 92% originating from travel to the destination.

- Halving emissions by 2030 is possible but challenging: A combination of changes in how visitors travel, stronger focus on European and domestic markets, and longer visitor stays could reduce emissions by 50%.

- Partnerships are essential: Sustainable transition requires joint action between the city, tourism businesses, residents, and international networks.

- Transparency and dialogue: Measuring and openly communicating tourism-related climate impacts supports informed decision-making and credible climate leadership.

The climate crisis demands urgent and collective action. At the same time, it is important to recognize the broader value of tourism and international mobility in supporting cultural exchange, cooperation, and economic vitality. The aim of this work is to contribute to a balanced and informed discussion on how tourism can evolve in line with Helsinki's climate ambitions.

Background

Tourism is one of the world's fastest-growing industries, and its climate impact is significant because a large share of emissions comes from flying. In Helsinki, tourism contributes to the city's vitality, jobs and international image, yet its carbon footprint is heavily shaped by tourism arrivals. The City of Helsinki has committed to ambitious climate targets and is now exploring how tourism can align with the city's goal of reaching net zero emissions by 2040, as well as the global climate goals for tourism by 2050.

This publication brings together a series of blog posts and analyses that examine the relationship between tourism, flying, and climate in the context of Helsinki. It provides a factual overview of the city's recent carbon footprint calculations, discusses the challenges of decarbonizing travel, and highlights the measures and choices that can make tourism in Helsinki climate-smart. The publication also aims to spark an open, informed and forward-looking discussion: What role should tourism play in Helsinki's climate goals? How can we balance accessibility, economic value and responsibility in a global industry built on mobility?

Photo by Jussi Hellsten, City of Helsinki 2019

Measuring the emissions of tourism

How much does tourism affect the climate, and how can we reduce its impacts? We have been seeking answers to this question in two carbon footprint calculations of tourism destinations in Uusimaa region. The results give us an idea on what generates emissions, how they can be monitored and what measures are needed to achieve effective emission reductions. At the same time, this work is linked to broader national and international climate goals, in which tourism plays a major role.

Why calculate the carbon footprint of tourism?

The City of Valencia led the way in 2020 by becoming the first city in the world to calculate and certify the total emissions of tourism in the city. The calculation covered the entire tourist path from arrival and transport to accommodation, meals and use of infrastructure. The work made Valencia an international trailblazer and served as a source of inspiration to develop similar calculation models also in Finland.

Visit Finland made calculating emissions one of the focus areas of its development work. The Climate Action Plan of 2024 set a target that the calculation and reporting of emissions according to agreed methods should be standard practice in the Finnish tourism sector by 2030.

This goal is supported by e.g.:

- Matkailijamittari Border Survey, a monthly statistic that summarizes data such as the number of foreign tourists, their spending and carbon footprint. The statistics allow monitoring of target markets, travel modes, seasons and carbon efficiency, i.e. how much tourism revenue is generated per tonne of emissions. The carbon footprint is calculated for each trip based on country of origin, mode of transport, length of stay and consumption, taking into account outbound and return travels, travel in Finland, accommodation and meals.

- CO_2 calculator ‘Hiilikuri’, which allows tourism businesses to measure and report their own emissions. The tool is integrated in the Sustainable Travel Finland programme. Visit Finland has also been developing a model for calculating the carbon footprint of destinations for the Hiilikuri tool and has been doing pilot and development work in destination-level calculation for a long time. The calculation model includes factors such as a recommendation for the boundaries of the destination calculation.

- Visit Finland's comprehensive Academy trainings on topics such as climate change and emissions calculation (in Finnish).

Helsinki has twice been involved in projects piloting carbon footprint calculations for travel destinations in Uusimaa region. The first project used tourism data from 2021, while the second used the figures from 2024. The previous calculation was based on figures from the COVID-19 pandemic era (2021), so the plan was to create a more realistic picture of tourism emissions by repeating and revising the calculation. The 2024 tourism carbon footprint calculation was carried out for 13 municipalities in Uusimaa and the Visit Kotka-Hamina regions. The calculation was done by Sitowise.

The aim was to develop the calculation model further to better support the monitoring of the effectiveness of regional emission reduction measures. The new calculation used updated emission factors and a more refined calculation model. For example, the emission factors for accommodation were updated from euro-based to nightly averages to slightly improve accuracy.

The results are still indicative, but they provide a framework for further development and replication of the calculation with more accurate data in the future. The aim of the calculations has been to provide an overall picture of where tourism emissions come from and to provide a knowledge base for targeting measures to reduce emissions.

The calculations have also been driven by a commitment to international climate work. Some municipalities in Uusimaa, including Helsinki, have signed the *Glasgow Declaration on Climate Action in Tourism*, which requires the calculation and reporting of tourism-related emissions. The Glasgow Declaration aims to halve tourism emissions by 2030 and get as close to net zero as possible by 2050.

Photo by Maija Astikainen, City of Helsinki 2025

Helsinki aims for net zero emissions by 2040 and for zero tourism emissions by 2050

The City of Helsinki aims to reduce emissions by 85% from 1990 levels by 2030 and reach the net zero target in 2040. These targets apply to the city's direct emissions (scope 1 and 2), i.e. emissions generated within the city's geographical boundaries, such as emissions from heating, electricity consumption and transport.

The tourism sector also has a role to play in this city-level climate work. This work is steered by guidelines such as the 2023–2026 Helsinki Tourism Climate Roadmap, the main objective of which is to halve tourism emissions by 2030, based on the Glasgow Climate Declaration. As part of the City's goal to be the most sustainable destination in the world, the Climate Roadmap focuses on topics such as:

- Promoting climate actions of tourism businesses
- Tourism marketing in line with climate objectives
- Monitoring the carbon footprint of tourism in Helsinki
- Promoting regenerative tourism
- Cooperation with tourism businesses, educational institutions, Helsinki residents and tourists
- International cooperation and sharing of best practices

The roadmap follows the five pathways of the Glasgow Declaration (measure, decarbonize, regenerate, collaborate and finance) and its measures range from business training and productization of climate-friendly services to marketing that is targeted at local markets and the tourists staying longer in the city. The progress of the program and its indicators will be monitored annually, and measures will be refined according to the emission trends.

Emissions calculation is part of a long-term effort that we have carried out in several projects

The Carbon Neutral Tourism (2020-2022)
The Carbon Neutral Tourism carbon footprint calculator for tourism businesses was developed and transferred to Visit Finland for further development (now known as the Hiilikuri tool), and separate emission data collection experiments were conducted on emissions of tourist mobility.

Sustainable boost for tourism businesses - Kestävää nostetta matkailuyrityksiin (2021–2023)
Training and support for dozens of businesses gaining sustainability and climate efforts and certificates.

Carbon Neutral Experience (2021-2023)
A regional tourism emission calculation pilot, supporting businesses towards lower carbon business models through training and tools.

Carbon Neutral Experience 2.0 (2023-2025)
A further development of regional tourism emissions calculations, international climate work through the Glasgow Climate Declaration’s methodologies and training and tools for businesses for the STF programme and decarbonisation.

Carbon Neutral Experience 3.0 starting in autumn 2025
Aims to develop innovative tourism services together with businesses and tourist destinations.

KOKEMO - Congresses and business events as drivers of innovation and sustainability in the Helsinki Metropolitan Area -
Kongressit ja yritystapahtumat innovaatioiden ja kestävyyden moottoreina pääkaupunkiseudulla (2024–2026)
Making the Helsinki Metropolitan Area the world's most sustainable destination for science conferences and business events. Measures include reducing and lowering the carbon footprint of meeting products and building a shared sustainability story.

Over the course of these years, hundreds of tourism operators have been given training, dozens of companies have been supported in gaining their certifications and concrete tools have been introduced to measure and reduce carbon footprint.

Helsinki's tourism carbon footprint 2024 – what does it consist of?

Emissions from tourism in Helsinki totaled around 2.6 million tonnes of CO_2e. The largest contribution by far (92%) came from the travel to the destination, especially from international air travel, which accounted for more than 80% of total emissions. In practice, this means that only a fraction of emissions is generated in the destination. If the international air travel is excluded, Helsinki's tourism emissions fall to 329,000 tonnes of CO_2e. This illustrates the significant impact of aviation on total tourism emissions.

In Visit Finland's destination calculation, the arrival at a destination is excluded from the results for individual destinations to avoid calculating emissions from the same flight several times at different destinations. Instead, the emissions generated due to arrival are reported at the national level. Visit Finland's Matkailijamittari provides information on travel emissions at the county and municipality level, which helps the destinations to create an overall picture of tourism emissions. The emissions of tourists arriving in Helsinki are an important source of information for monitoring emission trends in the destination.

The calculation covers the tourist's entire trip and related activities, divided into four main sectors: travel to destination, transport in the destination, accommodation and other consumption. The calculation covers both domestic and foreign tourists, divided into overnight and day visitors. The boundaries and methodology of the calculation were largely based on the previous calculation. Some refinements were made, such as changing the emission factors for accommodation from euro-based to night-based estimate. The tourism statistics are from 2024, and some emission factors have also been index-corrected.

Table: Breakdown of Helsinki's tourism emissions (2024)

Category	Subcategory / Source	Emissions (t CO_2e)
Travel to the destination – Foreign tourists		**2,271,466**
	Overnight stays: plane, boat, train (connecting), bus (connecting)	2,136,646
	Day travellers: plane, boat, and cruise ships	134,820
Travel to the destination – Domestic tourists		**116,670**
	Overnight tourists: plane, boat, car, train, bus	43,161
	Day travellers: plane, boat, car, train, bus	73,508
Travel in the destination		**24,850**
	Public transport: local transport, electric scooters	12,097
	Passenger car	12,264
Accommodation		**57,743**
	Registered accommodation establishments (domestic and foreign tourists)	47,350
	Non-registered accommodation (e.g. Airbnb)	10,394
Other consumption		**129,332**
	Food: catering services, food purchases	120,782
	Activities and attractions: cultural, sports and recreation services	8,551

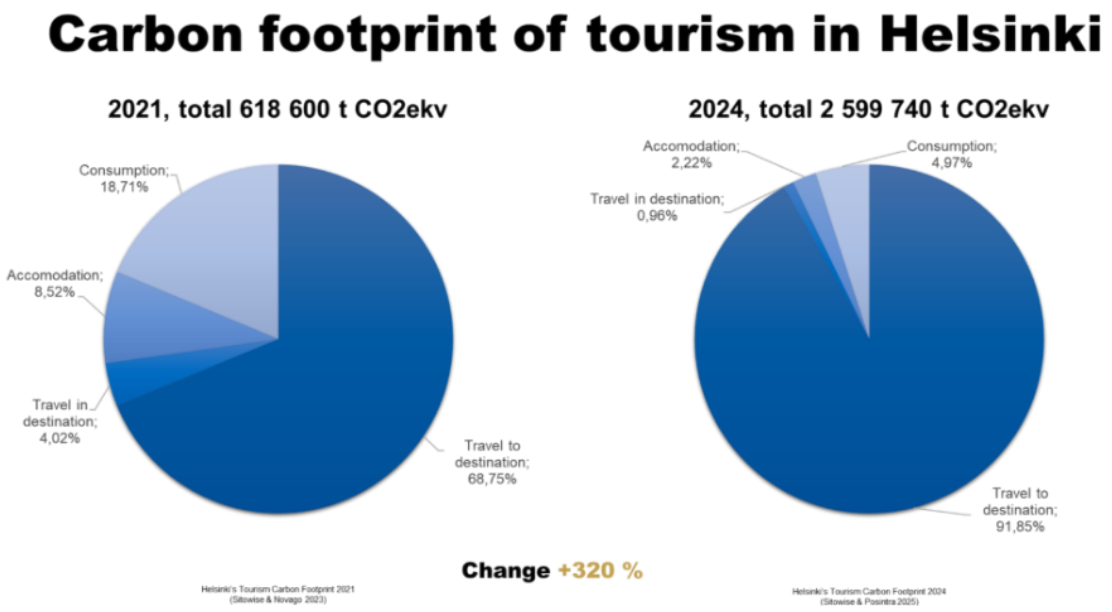
Photo by Janne Hirvonen, Helsinki Partners 2022

Tourist arrivals are estimated based on the country of origin. The flights are calculated from the capital of the country of origin to Helsinki Airport. The number of passengers is multiplied by the number of kilometres travelled and the emission factor. For example, the factor used for short European flights is 0.18592 kg CO_2e per one passenger-kilometre. The calculation includes the outbound and return travel. Emissions from ship travels and other modes of transport have been estimated using the same principle. In addition, the mobility of tourists in the destination was assessed based on factors such as the amount of money spent on public transport and statistics on the use of the different modes of transport. Domestic tourists were also expected to use a car to some extent to get around the destination.

Emissions from accommodation are based on the number of overnight stays. For accommodation emissions, the calculation was shifted from a spend-based (emissions per euro) the average night-based emission factors. This is a more accurate calculation in the long run, although the quality of the emission factor per hotel night is still not very accurate. This includes both registered accommodation service providers and unregistered alternatives such as Airbnb.

Emissions from tourist consumption are estimated based on spending. Included are estimates of spending on catering services, food shopping, activities and attractions, cultural services, sports and recreation.

The euro-based emission factors come from SYKE's ENVIMAT model, which is based on household consumption emissions of 2015. The factors have been adjusted for inflation for 2024. Other emission factors in the calculation are largely based on Defra's 2024 emission factor data.



The figure shows the distribution of tourism emissions in Helsinki in 2021 and 2024. Emissions have increased significantly (by 320%) from the pandemic year 2021 to 2024. This is largely explained by the recovery of international tourism and its rise to new record-breaking levels.

Key indicators are one of the key outputs of the calculation, including indicators such as emissions per tourist per day and emissions per euro spent by a tourist. These can help better highlight the impact of emission reduction measures. The indicators also allow for more comprehensive comparisons, e.g. between municipalities of different sizes or in a situation where the number of tourists is growing significantly at an annual basis. The most interesting key indicators for tourism in Helsinki are the following:

- Emissions per tourist per day: average 300 kg CO_2e (domestic 44 kg, foreign 810 kg)
- Emissions per euro brought in by tourists: average 1.7 kg CO_2e/€ (domestic 0.3 kg, foreign 3.4 kg)
- Emissions per resident: 3.9 t CO_2e

The indicators also help visualise the relationship between emissions and the economic benefits of tourism and its local impacts, which is valuable for tourism marketing and for monitoring emission reduction targets.

Challenges in calculation and decarbonization

The calculation of the carbon footprint of tourism is still only indicative, as not all emission sources and modes of travel can be measured with complete accuracy. For example, assumptions have to be made regarding the methods of arrival, and there are some uncertainties in the emission factors for accommodation, catering services and activities. The emission factors used are often outdated or based on consumption in euros, which does not fully reflect actual emissions. In addition, the availability and comparability of different data varies considerably, making it difficult to interpret the results accurately.

One of the principles guiding the calculation is repeatability – the resources needed to carry out the calculation should be reasonable, so that it can be carried out again in a comparable way in forthcoming years. Due to this, it is recommended that the calculation is linked to other statistical work in the field of tourism.

The calculation assumes that 100% of tourists arriving from all countries other than Estonia and Sweden, and partly from Russia, arrive by air travel. Additionally, 35% of Swedes and 4% of Estonians were estimated to be flying. The nationalities of arrivals from Sweden and Estonia were not specified, so the country of origin of all arrivals in these cases is the previous port. Due to this, the significant proportion of e.g. Germans travelling to Helsinki by ship is not reflected in the results. The assumption raises the share of aviation in total emissions to a high level, but – due the high emissions of ship transport – this is unlikely to change the scale of total emissions.

In addition, the results are affected by their allocation: even if an international tourist spends only one night in Helsinki and continues the rest of their trip elsewhere in Finland, the total emissions of their arrival are shown in this calculation in the Helsinki figures, even if they spend most of their stay elsewhere. This will greatly increase the tourism emissions allocated to Helsinki and may give a distorted view of the total emissions.

Photo by Jussi Hellsten, City of Helsinki 2019

The calculation method of emissions from accommodation has changed from a euro-based method to the average night-based emission factors, which makes comparisons with previous years more difficult, but gives a better picture of the emissions based on the operations. Emissions from food and activity services are still based on consumption in euros, which limits the possibility to monitor the impact of concrete emission reduction measures. The pilot calculation provided valuable information on the carbon footprint of regional tourism and its allocation. However, when developing the calculation model further, it would be important to improve the availability of initial data, e.g. through surveys, and to allow for operator-level monitoring. Emissions from accommodation, food and activity services could be made more accurate if the operators reported their annual emissions in a standardised way. This would allow not only more accurate monitoring, but also an estimation of the impact of different emission reduction measures.

Overall, the pilot calculation provides a valuable starting point for monitoring the carbon footprint of tourism, but its results should be interpreted with caution, and both the calculation models and the accuracy of consumption data and emission factors should be further developed in the future to ensure that the calculation can be used consistently across regions and that it can also be used to monitor the effectiveness of measures.

Further development together

Measuring the carbon footprint is only the starting point. It will help us get an indicative view of the big picture and to target measures correctly, but we cannot solve the climate challenges of tourism alone. For this, we will need cooperation with the different regions, businesses, public actors, organisations and international networks.

It is this power of cooperation that we are now promoting through the CliNeDest project, where eight destinations in the Baltic Sea region are working together to develop tools and solutions for climate-smart tourism. The aim is to create a shared vision, as well as practical ways for tourism to adapt to the changing environment and meet the growing expectations for sustainability, while supporting Helsinki's goal to be the most sustainable destination in the world.

Photo by Janne Hirvonen, Helsinki Partners 2021

Tourism, growth, flying and climate

It is clear that flying is extremely damaging to the climate. By now, global warming has already reached a point where its effects are increasingly visible in extreme weather phenomena, changes in ecosystems and the daily lives of people around the world. Even just a single flight eats up a significant part of a person's annual carbon budget. Flying is also a transport method for a select few people. The vast majority of people in the world do not fly.

Tourism is growing strongly globally, as is air travel. The Boston Consulting Group predicts that leisure travel will triple by 2040. The IATA has forecast that air travel will double in about 20 years. The number of air travellers globally was estimated to be around 9.5 billion in 2024.

As mentioned in the previous chapter, tourism to Helsinki is responsible for around 2.6 million tonnes of CO2e emissions, of which 2.3 million tonnes are caused by travel to the destination. However, this figure must be treated with great caution because of the challenges of statistics, but it is still indicative of the magnitude. In a post on LinkedIn, Niklas Kaskeala brought up an interesting comparison to the Hanasaari power plant and its emissions. Helsinki has now also closed down the Salmisaari power plant. ChatGPT was able to tell us that the total emissions from the two power plants were 2.3 million tonnes in 2022, which is practically equal to the total emissions of flights of tourists arriving in

Helsinki. The previous chapter has explained the rationale behind the calculation in more detail, so we will not go into it here.

- The City of Helsinki's emissions in 2025 are estimated to be 1.1 million tonnes CO2eq (including Scope 1 and 2).
- The emissions from travelling to Helsinki are calculated at 2.3 million tonnes of CO2eq.
- The rough estimate of the combined emissions from the Salmisaari and Hanasaari power plants is 2.3 million tonnes of CO2eq.
- Globally, emissions from the aviation sector are roughly estimated at around one billion tonnes.

In his post, Niklas states that 'It's even more shocking that no one is talking about this. International tourism to Helsinki is seen almost exclusively as a positive phenomenon, and the city's decision-makers have not come out with any criticism on the topic.' So, should we come to the conclusion that the city is doing very ambitious climate work, but at the same time 'turns a blind eye' to the problems of tourism and is even looking for strong growth in tourism – especially from abroad?

As a result of its determined work, Helsinki has become the most sustainable travel destination in the world, rising to the top of the Global Destination Sustainability index last year. This year, Helsinki became the first major city to be awarded the destination certificationof the Green Destinations GSTC standard. All in all, the City has done a very good job to promote sustainability... but what about those flights? The City of Helsinki's new City Strategy has very ambitious emission targets, but these do not include tourist flights. But should these flights be intervened in? Should we forget about the growth targets for tourism and strive to reduce international travel, instead? This way, the city would be 'true to itself' and would play its part in the fight against the greatest threat to humanity. At the same time, we should also naturally discuss the issue of Helsinki residents flying abroad.

Some perspectives on the topic

If we want to discuss aviation and the city's attitude towards it, it is important to raise different points of view from different parties.

There were about 38 million global commercial flights in 2024. In Finland, flight numbers remained just below 0.2 million. Finland's share of global flights is therefore roughly 0.5%. It is also likely that air travel will double in 20 years, and it is safe to estimate that the growth will not occur at the same rate in Finland, so this percentage will likely decrease. To a Finn, the volume of global growth is staggering. Sources, now already a couple of years old (1,2), report on the acquisition of thousands of new aircraft, mainly in Asia and the US. In the US, this is more about the renewal of old airline fleets, whereas in Asia it is all about pure growth. Finnair's books have a standing order for one airplane.

Whatever Helsinki does, the direct impact on total aviation emissions is very small. Other kinds of impacts are of course possible.

Estimates of aviation emissions vary somewhat. According to several sources, air transport is responsible for around 2-2.5% of global carbon dioxide emissions associated with humans. However, this does not yet take into account other climate impacts of air travel, such as nitrogen oxides, water vapour, condensation trails, etc. Overall, the total impact of air transport on global warming is estimated to be around 3.5-4%. Here's one source on the topic. By comparison, emissions from the steel industry are about eight percent and for meat production about 15 percent on a rough magnitude (this is a challenging subject with several calculation models applied). The figure could also be considerably higher. Just because some other sector produces more emissions than flying does not make flying any better. All emissions have an impact.

There is also debate on the internet about whether flying is always as bad as it is made out to be, if you compare it to, say, a combination of a ferry and a car. This comparison involves a huge number of variables, and there's no perfect answer. However, it is safe to say that flying is almost always the worst option, especially if all the factors of flying affecting the climate are taken into account. The difference compared to other modes of transport is still interesting. In not all cases is this difference that major, and the cost of travel and, perhaps most importantly, the time involved are also factors to be considered. A flight to Spain is 5 hours; by land and sea the trip takes 50–65 hours.

Tourism is not going anywhere. It will continue to grow, and people will continue to travel to interesting and accessible destinations and also for business. If Helsinki 'opts out' of tourism, tourists will fly elsewhere. One might ask whether it would be better for tourists to fly to the world's most sustainable destination rather than somewhere else? Ideally, those travelling to Helsinki could learn something about sustainability and take these lessons back home with them. The City will also continue to invest in 'regenerative tourism', where the aim is for the tourist to leave the destination in a better condition than it was before their trip there. However, no one is claiming that travelling will improve the state of the environment. This is all about the direction and the goal.

Photo by Outi Neuvonen, Helsinki Partners 2024

On the other hand, in relation to the previous point, the City of Helsinki is not the only actor in the overall promotion of tourism. Even if Helsinki decides to stop promoting tourism, the government, among other actors, is investing in increasing international tourism through Visit Finland. In addition, hundreds of companies in Helsinki are investing heavily in international markets. Many international tour operators are also promoting Helsinki, whether the city wants them to or not.

Finland's economic growth has been almost non-existent for 15 years and GDP has increased by 3 percent during this period. Meanwhile, registered overnight stays in Helsinki have increased by 50%. The figures are not directly comparable, but they do illustrate the magnitude of this growth. Currently, the Ministry of Finance forecasts economic growth of 1–2% for Finland in 2025. Registered overnight stays in Helsinki are expected to grow by up to 10% in 2025.

Next, we'd like to highlight one key perspective. Without tourists or congress visitors, for example, there would be next to no air connections to Helsinki. How many companies would keep their headquarters in Finland? How long would Kone or Nokia continue to stay here? How many start-ups would set up their operations in Helsinki? How many investors would invest their money in a place that is not easily/quickly accessible? How many international professionals and their families would settle in a place with poor accessibility? Where would Aalto University or the University of Helsinki stand without any international air connections? Sure, we now have remote meetings, but there is still at least a fair risk that our exceptionally vital export-driven economy would collapse very quickly without good connections. It should also be kept in mind that airplanes always carry freight, which is also often related to the business operations of

Finnish companies. Security of supply is another factor that needs to be taken into account. In this equation, the impact of tourism is therefore crucial.

Reducing emissions from international aviation is an extremely tricky matter. The airline industry is subsidised to a staggering degree. Of course, Finland could go its own way in this (or maybe not, it's hard to say) and reduce subsidies or restrict flying in some other way, but what would this do to Finnair and other airlines? Helsinki cannot solve this issue alone. This requires negotiations between states involving airlines with a turnover of billions, as well as other interest groups. This debate needs to take place at the EU level and will certainly involve actors such as the UN and IATA. Pick your battles. Is this the kind of thing that Finland or Helsinki should start to push through, especially considering the previous point (i.e. the importance of flights for all operations in Finland)? Successful welfare states should take responsibility for promoting matters at the international level, but is this the area Helsinki should be focusing on? Without significant lobbying efforts, this issue will not be moving in any direction.

Ultimately, it's a question of disadvantages versus advantages. Almost all human activity affects the environment. I think we can all agree that we do not want to give up e.g. food production, despite its current emissions even at its most sustainable form. There are many different kinds of flying. Quite a few people are likely prepared to accept that Nokia executives will fly abroad to promote sales. Or perhaps it is acceptable for the Prime Minister to fly to a meeting, for medicines to be flown to Finland or for international experts to come to Helsinki to code games. Professors can attend their conferences and parents can fly out to see their children living abroad. But – as noted earlier – very few of the situations described above can take place if leisure travel is no longer included. The number of connections would collapse.
Finland is an island. This has also been a topic of discussion on LinkedIn and it has been stated to be untrue: There are land connections, too. Promoting tourism via land connections is important and it must be part of the future solutions. While the Helsinki-Tallinn tunnel will not be completed this year, it should not be forgotten. However, today's reality is that Finland is an island. The only way to get here is by plane or by ship. And both modes of transport have their own climate challenges. Is flying acceptable for Greenland, Australia or New Zealand?

The theme of travelling by land has also been considered in Finland. Visit Finland published a study on the subject in 2024. Travel by land has also been promoted in Europe. France banned short flights that can be replaced by train. I guess it's easy to reduce flying in continental Europe. Everything is close by, and there is no sea in between.

Before the war, there was talk about visa-free travel between Russia and Finland. Tourism in Helsinki would certainly look quite a bit different now if you could get from St Petersburg to Helsinki by Allegro without a visa.

Next up: get ready for what could be the biggest tourism cliché. ‘Tourism is the biggest peace movement in the world.’ But there is some truth to this. What is the value of people meeting each other, building relationships and exchanging information? What would the world look like if nations isolated themselves within their borders? Not to even mention the impacts of tourism on income, employment and well-being...

Photo by Outi Neuvonen, Helsinki Partners 2024

What is Helsinki doing?

Helsinki is implementing an ambitious climate policy. An example of this are the power plant closures mentioned earlier in the text. There are hundreds of further measures and Helsinki has also recorded stricter emission reduction targets for its new City Strategy, with a net zero target for 2040.

The Helsinki Tourism and Destination Management unit promotes sustainable tourism in the city. The City has a tourism and events action plan, a climate roadmap and many other plans and studies related to the topic. However, it is clear that flying is an issue for which solutions are hard to find.

People have also debated about whether Helsinki is being hypocritical or doing greenwashing when boasting about its ranking in the GDS index or sharing its other sustainable tourism achievements while also seeking to grow international tourism. It is quite safe to say that there is some hypocrisy involved in talking about sustainability without mentioning the disadvantages of flying. However, it is worth remembering that GDS and Green Destinations measure other aspects than just flying. Sustainability also includes the social dimension, for example. Both tools consist of nearly 100questions on different aspects of sustainability. Climate – as important as it is – is only one part of the picture. Much has also

been said about the phenomenon of ‘green hushing’. Should Helsinki just shut up about its efforts in promoting the sustainability of tourism, ‘because flying’?

Tourism is one of the most important industries in Finland. It covers five percent of Finland's foreign exports. Tourism exports were worth €4.5 billion (in 2023) and account for 14.5% of service export income. The sector also employs a great deal of people, more than five percent of all employed persons. The balance between emissions and economic benefits is considered in all business. For tourism, flying is a matter of life or death, and we have to work hard to solve this issue. Its economic importance does not absolve us from the need to take action against climate change. Even with these problems, shouldn't we be happy about the exceptional work of Helsinki's tourism businesses? The companies have invested in growth and managed to achieve it despite the exceptional times (pandemic, war, inflation, etc.). They have employed thousands of young people and the hard-to-employ. Helsinki's tourism businesses are also proven world leaders in promoting sustainable tourism. For example, 99% of hotel rooms in Helsinki are environmentally certified (hotels with more than 50 rooms, 11,880 certified rooms in total). By comparison, the corresponding figure in Europe is around 10%. Likewise, local attractions, meeting and conference facilities, tour operators and others have a very high level of certification.

Finavia has achieved a net zero level of carbon dioxide emissions, Viking Line has acquired LNG ships, the Port of Helsinki was able to cut the greenhouse gas emissions of its own operations to a minimum and Messukeskus is doing pioneering work on climate issues. The large hotel chains are investing heavily in sustainability. For example, the new Pier 4 aims to be the most climate-responsible hotel in Finland. The motivation of companies is also proven by the fact that the biggest tourism operators in Helsinki and Tampere have set up a group called Urban Climate Leaders in Tourism, where the companies are working together to find solutions to the climate crisis. It is quite extraordinary that companies in a highly competitive environment can still sit down at the same table and try to find solutions to a common challenge.

Contrary to what has been speculated on social media, Helsinki has been open and active in highlighting the challenges of flying. Efforts have been made to measure tourism emissions in a transparent and credible manner, and the results are publicly available on the website of tourism development. The latest calculation report stated on its very first page that “When it comes to tourism, the elephant in the room – aviation emissions – is in a class of its own, making other emissions and all climate actions barely a drop in the ocean”.Countless measures have been taken to tackle the climate challenge. In recent years, Helsinki and its partners have been involved in many development projects related to climate work in tourism, such as: Carbon Neutral Tourism, Carbon Neutral Experience 1 and 2, Kestävää nostetta matkailuun – A sustainable boost for tourism, Kokemo and Climate Neutral Destinations. In addition, the Sustainable Travel Finland programme is playing a key role, and Helsinki has already been involved as a pilot destination.

In addition, the City Strategy – both the previous and the current one – explicitly talks about promoting sustainable tourism.

Helsinki has recognised the harmful effects of flying in its own climate roadmap for tourism. We have increased our marketing for domestic tourism, for example. We have also developed a tool that allows us to compare different target markets in terms of the amount of money tourists leave behind and their carbon footprint, among other things. For example, US tourists stay longer on average and also spend more money than Europeans, for example. In this light, it is not obvious which group is better for the climate if compared in terms of euros and emissions. Helsinki has also invested heavily in the European market, in particular.

As a small additional remark, we'd like to highlight a topical issue. People have been concerned about the desertification of Helsinki city centre for a long time now, and a study has been carried out and various working groups have been set up on the issue. Tourism plays a key role in this. Tourists help maintain the services in the city centre, which can also be used by locals. We once roughly calculated that tourism supports at least a hundred restaurants in the city centre. On top of this, there are shops, cultural services, events, etc. This also has value when comparing the emissions and benefits of tourism.

Photo by Jussi Hellsten, Helsinki Partners 2016

Politicians to decide

The debate on the future of the Finnish forest industry has been going on for a long time. How will EU regulation and climate targets affect Finland's traditional economic cornerstone? How are forest emissions calculated? Should the whole industry be run down? It seems there are several different perspectives and facts. Ultimately, the debate on tourism is exactly the same as with any other industry, and should be treated in the same way. If forestry is acceptable in Finland, despite the emissions it causes, why not tourism? The scale of emissions is also often difficult to grasp. This article in Helsingin Sanomat is one of the many that talks about Finland's carbon sink deficit, which for the years 2021–2025 is 111 million tonnes of carbon dioxide equivalent.
However, there's one key aspect that should be noted. When we talk about forests and carbon sinks, they count towards Finland's targets. Flying is not part of these objectives – nor is it included in Helsinki's goals. Flying seems to be left out of many objectives.

It has also been pointed out that the emissions from tourism are high in relation to the euros generated. This is a possibility, but what about in terms of jobs created, visibility, accessibility, increased trade, better services for locals or peace of mind?

These are things that are ultimately decided together, and here in Finland it is done through representative democracy. The only thing that is certain is that there will be views both for and against it. The fight against climate change is something that touches us all. Individuals, businesses and governments alike. No one can shirk responsibility.

The next phase of this article will discuss possible solutions and approaches to the challenges outlined above.

Let's end this with a strong disclaimer: The sources of this article have not been thoroughly verified and some of the facts presented may be only indicative. However, there's strong belief that they are correct enough, considering the context. We are ready to correct the text if any errors are found.

What can Helsinki do to reduce emissions from tourism-related flights?

The two previous parts of this post have discussed the emissions from tourism-related aviation (and sea travel) and the different perspectives on the harms and benefits of flying.

This third part in the series looks at possible ways in which Helsinki can take action to reduce emissions from flights. There is no perfect solution, but many choices and cooperation can help reduce emissions while also maintaining a vibrant tourism industry.

1. Destination markets and direct flights

Market choices play a major role. The emphasis on domestic and local markets reduces the need for flying. Efforts could be made to direct tourists from nearby destinations to use other modes of travel than air travel. Preference should be on European markets over distant markets. Helsinki can invest particularly in markets with direct flights already available and promote new direct connections from areas with high demand.

2. Emissions as part of the indicators

Income from tourism should not be the only measure of success. Emissions per euro generated by tourism and emissions per overnight stay can be highlighted as key KPIs. This would guide the productization, segmentation, marketing and collaboration of the sector towards more sustainable solutions.

3. Cooperation with airlines

It is not necessary to work together with all the airlines. Helsinki can focus on operators with a modern, lower-emission fleet, although this is difficult to achieve perfectly in practice and requires seamless cooperation with Finavia and airlines, for example.

Mechanisms can also be put in place to identify low-occupancy flights well in advance and implement tactical marketing measures in the area. This ensures that the planes are as full as possible. Empty seats are the most pointless thing in terms of emissions.

4. Railway as part of the travel experience

When a traveller arrives in Helsinki, they can be encouraged to continue their journey by train instead of flying. This would ensure that Helsinki will not just be a ‘stopover,’ but that visitors will stay overnight in the city and then continue their journey to e.g. Lapland by train. This will require working together with other regions and the VR Group.

5. Lighter luggage

Even small things can have an impact. Lighter baggage reduces fuel consumption on flights. Communication on this can be increased through marketing and partners.

6. FAM trips to promote sustainability

Helsinki should also organise familiarisation trips (FAM trips), especially for those tour operators who focus on sustainable tourism and also offer options to travel by land.

7. Longer stays

Currently, the average stay of all tourists in Helsinki is only 1.8 nights. Even a small increase in this would significantly boost tourism revenue without increasing the number of flights. In practice, this means that each flight brings more money, jobs and tax revenue to Helsinki.

8. Carbon waste management

Different carbon removal methods can be part of the solution, but they must be carefully considered. Carbon offsetting and different types of carbon sinks involve a wide range of risks and uncertainties. The development of carbon removal and technical carbon sinks will be closely monitored alongside emission reductions.

9. Advocacy and research

Helsinki can also make a difference at the EU level by supporting regulatory work to reduce climate impacts, engaging in a critical debate on subventions and encouraging the promotion of climate action in the aviation sector. The City can also invest in research to help reduce emissions from aviation in the long term.

10. Helsinki as an example city

The City of Helsinki has almost 40,000 employees and a large number of flights for business travel every year. Reducing the number of its own flights and promoting sustainable alternatives is a concrete way to start from the homebase.

11. Train connection to Tallinn

One of the long-term solutions could be a train connection between Helsinki and Tallinn, especially now that the Rail Baltica project is finally moving forward. A rail link would create new opportunities for tourism without flights and would strengthen Helsinki's accessibility in a sustainable way. Even if the tunnel never comes, Rail Baltica will still create an important new link to Helsinki.

12. Realism first

We cannot impact everything. That's why Helsinki should focus on actions it has a real chance to promote – and it should do so bravely, working together with the industry operators.

Point 13 could be to reduce tourism, either by stopping the support for it or by preventing it in a concrete way. However, this is a matter that will be decided democratically – and hopefully in a way where the issues raised in the previous chapter will be taken into account when making the decision.

Helsinki is preparing a new development programme of tourism and events, due to be completed in spring 2026. The debate on the sustainability of tourism, and particularly the challenges of flying, should be held now, before the development programme is finalised.

Halving Helsinki’s tourism emissions by 2030 – scenarios and measures

The City of Helsinki has signed the Glasgow Climate Declaration, which aims to halve tourism emissions by 2030. The declaration has been signed by dozens of companies and destinations in Finland, as well as hundreds of international actors. Signing the declarations is easy, but how could Helsinki’s tourism sector practically achieve the set goal?

Baseline

The reference year for halving emissions is 2019, the last “normal” year before the pandemic.

Helsinki’s tourism emissions were not calculated in 2019, but a calculation made in 2025 (based on 2024 data) represents the 2019 level well enough. The calculations are indicative; this article examines the situation on a broad scale.

Vuosittaiset yöpymiset ja saapuneet asuinmaittain muuttujina Alue, Asuinmaa, Tiedot ja Vuosi

	Yöpymiset, lkm	
	2019	2024
....091 Helsinki		
Yhteensä	4 489 741	4 552 814
Kotimaiset	2 078 045	2 349 479
Ulkomaiset	2 411 696	2 203 335

Figure 1 Source: Visit Finland, Rudolf statistical database, 13.10.2025

The amount of tourism emissions in 2019 is therefore estimated to be roughly the same as in 2024, about 2.6 million tonnes CO_2e, of which 2.4 million tonnes CO_2e come from travel to the destination. Most of the travel-related emissions come from flying, which is why special attention must be paid to it if emissions are to be halved.

Halving travel-related emissions

What measures could be taken to halve emissions from air travel by 2030?

- Reduce travel enough to halve emissions.
- Encourage travellers to use so-called overland alternatives (including ferry services).
- Shift focusses to nearby markets. Nearby markets include the Baltic countries, Sweden, and Norway. Travel from Russia is unlikely to recover within five years.
- Focus on nearby European markets instead of long-haul markets, e.g., Germany and Poland. Currently, key long-haul markets for Helsinki include the USA, Japan, China, India, and Australia.
- Replace international visitors with domestic visitors.
- Reduce flying while simultaneously extending visitor stays.

Six scenarios

1. **Reducing travel**
   Travel emissions come almost entirely from international visitors. Halving emissions would mean half as many international visitors. Helsinki's tourism revenue was €1.4 billion in 2024, of which about €500 million came from international visitors. A rough estimate indicates that tourism revenue would drop by €250 million, about 18% of total revenue.

2. **Overland travel**
   If halving emissions were achieved solely by shifting flights to land and sea routes, about 77% of all flights would need to be replaced. This would reduce emissions by about 1.2 $MtCO_2e$, meeting the halving target.

3. **Nearby markets**
   If all visitors came from nearby markets (Baltic countries, Sweden, Norway) instead of flying, about 83% of visitors would need to come from these markets. This would result in a reduction of roughly 1.2 $MtCO_2e$.

4. **Central European focus**
   Replacing long-haul visitors entirely with European visitors would not be enough to halve emissions. Replacing 100% of long-haul flights with European flights would save only about 0.55 $MtCO_2e$, less than half the target reduction.

5. **Domestic markets**
   If international visitors were replaced with domestic visitors, about 56% of flights would need to be substituted. This would also reduce emissions by roughly 1.2 $MtCO_2e$.

6. **Extending stays**
   Halving the number of flights while keeping the number of overnight stays constant would practically require extending visitor stays.

The average stay in Helsinki has remained practically the same since 1995: 1.7 nights (domestic visitors 1.5 nights, international visitors 2.0 nights). Halving international visitors would require the average stay to rise to about 3.6 nights (i.e., double) to halve emissions from flying.

Alternative action model for the next five years

Since no single scenario is realistic over the next five years, a combined model using multiple approaches can be built:

- **Overland:** 16% of flights shift to land and sea routes → savings ~0.210 $MtCO_2e$ (80% ferry / 10% train / 10% car)
- **Nearby markets:** 19% increase in nearby market share → savings ~0.242 $MtCO_2e$
- **Europe focus:** 17.5% of long-haul visitors replaced with European visitors → savings ~0.087 $MtCO_2e$
- **Domestic markets:** 12% of long-haul visitors replaced with domestic visitors → savings ~0.259 $MtCO_2e$
- **Extended stays:** average stay rises for international visitors from 1.8 to 2.16 nights → savings ~0.400 $MtCO_2e$

Together, these measures result in roughly 1.2 $MtCO_2e$ reduction, halving Helsinki's tourism emissions from 2019 levels over the next five years. This model does not include scenario 1, i.e., reducing tourism revenue in a situation where Finland's economy has struggled for the past fifteen years.

Necessary measures

What could Helsinki do to achieve the targets above? Clearly, it would be extremely challenging, but let's consider the possibilities.

Travel by land
Helsinki could invite European tour operators offering overland travel to explore the city and its sustainable tourism products. Helsinki should be made as attractive as possible to this target group. The most likely alternative to flying to Helsinki is via sea routes. While emissions from these modes are not yet significantly lower than flights, they are developing faster than sustainable aviation fuels. It is important to provide clear information on available ferry routes and other ways to reach Helsinki. Attractive ferry + city packages could be offered.

Nearby markets and Europe
Marketing efforts should focus more on nearby markets and Europe. Long-haul markets cannot realistically be blocked, so flights from e.g., the USA will continue even without targeted marketing.

Domestic markets
Domestic tourism can be promoted much more than currently, especially in off-peak seasons, including more events, services, VR partnerships, etc.

Extending stays
A very challenging area requiring participation from all Helsinki tourism actors. Measures could include promoting bleisure travel, improving productization, pricing strategies to make longer stays relatively cheaper, ambitious marketing of long stays, and attracting certain target groups (e.g., retirees with time). Even with these measures, it is unlikely to reduce the number of flights.

Conclusions and next steps

Tourism emissions are a complex mix of global systems and local choices. For Helsinki, the task is not to eliminate tourism, but to ensure it supports the city's climate goals. The findings in this publication highlight both the scale of the challenge and the pathways forward.

Achieving these goals over the next five years will be extremely challenging, especially as international tourism continues to grow. Yet even though climate change has already reached the 1.5-degree threshold, it remains essential to aim for ambitious targets and take concrete steps forward. The City of Helsinki alone does not determine the future of tourism in the city, but it does have tools to influence the direction of development, set the tone for cooperation, and lead by example.

Key conclusions

- International aviation remains the single biggest source of tourism emissions, but focusing on local measures, such as visitor behavior and market prioritization, can make a measurable difference.
- Data and monitoring must continue to improve. The next steps include refining calculation models and strengthening the link between emission data, tourism planning, and business decision-making.
- Collaboration across levels — city, national, regional, and international — is the only way to drive real progress.

Next steps for Helsinki's tourism policy

1. Integrate emission indicators into all tourism strategies and decision-making.
2. Prioritize markets and travel modes with the lowest carbon intensity.
3. Support longer stays.
4. Deepen partnerships with tourism businesses through training and shared targets.
5. Use Helsinki's global visibility to promote climate-smart tourism internationally.

The path to climate-neutral tourism will take time, but Helsinki is well positioned to lead by example, with science-based data, open communication, and collective commitment to change.

Appendix: Methodology and data sources

How the Calculations Were Made

The emission calculations presented in this publication are indicative and intended to illustrate potential development paths, not to provide absolute values. They combine tourism emission data, scenario analysis, and AI-assisted modelling to help understand the scale and direction of change required to reach Helsinki's tourism climate goals.

Methodological Overview:

- Based on 2024 Sitowise data and Visit Finland emission factors.
- AI-assisted scenario modelling combining quantitative and qualitative insights.
- Four separate approaches analyzed: overland/sea routes, nearby markets, Central Europe, and domestic tourism.
- Combined hybrid model developed using partial shares of each scenario to achieve a total estimated reduction of 1.2 Mt CO_2e by 2030.
- Baseline year: 2019, with estimated total emissions of 2.6 Mt CO_2e, of which 2.4 Mt CO_2e originated from travel to the destination.
- Emission factors for different travel modes derived from *Visit Finland's Low-carbon Accessibility to Finland* report (2024) and Helsinki's tourism emission calculations.
- Extended-stay effects estimated using Statistics Finland data on registered overnight stays.

Interpretation and Limitations

The calculations are based on averages, assumptions, and available datasets that contain uncertainties typical of tourism emission modelling. Not all travel modes or indirect impacts can be measured with full precision. Nevertheless, the results provide a credible indication of the behavioral and structural shifts required to halve Helsinki's tourism-related emissions by 2030.

Continuous improvement in data quality, methodology transparency, and collaboration across tourism destinations will be essential for refining these calculations and monitoring progress in the years ahead.

More information on Helsinki Sustainable Tourism Development can be found here.

Helsingin kaupunki
Business Helsinki
Matkailu ja kohdepalvelut
-yksikkö

Kansakoulukatu 3
PL 70
FI-00099 Helsingin kaupunki
Puhelinvaihde 09 310 1641

www.hel.fi