

Press Release

The Impact of Flying – myclimate has Updated the Flight Calculator

Monday, 27th of November 2023 - myclimate has expanded and updated its online flight calculator. For around twenty years, climate interested people have been able to calculate the climate impact of air travel free of charge using the platform at co2.myclimate.org, and, if they wish to do so, finance climate protection projects at a level that matches the impact calculated. In addition to updating all emissions factors and validating data and the calculation model, the latest version includes a new seat class, the option to select from the ten most common aircraft types and an adjustment to the weighting of the short-term effects of “non-CO₂” impacts.

myclimate experts review the calculation principles behind our emissions calculators at regular intervals. With the help of current scientific studies (Lee et al. 2021, Swiss Academy of Sciences (SCNAT) 2021) and data from the aviation industry, the popular flight calculator has now undergone an update. The last update was back in 2019. In general, the myclimate flight calculator is based on and meets the current European standard for transport, (DIN EN16258).

The most important adjustments to the calculation principles behind the myclimate flight calculator at a glance:

- The RFI (Radiative Forcing Index), which expresses the ratio of the climate impact of all climate-impacting effects of air travel as a multiplier of CO₂ emissions, has been increased from 2 to 3. Premium Economy class has been added.
- A selection of ten of the most common short- and long-haul aircraft types flown in Europe and globally have been added.

What exactly does this mean?

Based on current studies (Lee et al. 2021, SCNAT 2021), myclimate has decided to increase the RFI from 2 to 3. “Non-CO₂” effects are caused, for example, by the short-term increase in tropospheric ozone as a result of nitrogen oxide emissions (NO_x), the contrails produced and the possible formation of cirrus clouds as a result. The studies in question recommend this factor in order to map the entire climate impact of air travel in CO₂ equivalents when considering a time horizon of 30 years, which is essential for achieving the net-zero target by 2050. The adjustment now gives the historical impact and the shorter-term effects additional weighting. This means they meet the myclimate guidelines for calculating climate impact and are now taken into account when calculating the overall climate impact of flights. As a result, the myclimate flight calculator also consistently accounts for the net-zero target (2050).

In addition to the adjustment to the RFI, a new seat class is now available for selection: Premium Economy. This means that the following four seat classes are now available to users in the updated myclimate flight calculator: Economy, Premium Economy, Business and First Class. The better the seat class, the more space a passenger takes up on the aircraft and the fewer passengers can be transported.

The third major change in the new flight calculator is the ability to specifically enter each type of aircraft used. This means that actual flight emissions can be calculated with even more customisation, if desired. The ten most common aircraft types in European and global air

traffic can be selected. If the aircraft type is not known or not listed in the flight calculator's drop-down menu, the climate impact can be calculated as usual using the stored average standard data for short- and long-haul flights.

[Calculation principles behind the flight calculator](#)

How does this affect the results of the calculated climate impact?

In particular, increasing the RFI to a factor of 3 has a decisive influence on the level of the calculated climate impact. In the previous versions of the myclimate flight calculator, the RFI factor was set to 2 based on the sources available at the time. myclimate is aware that the use of this factor can only serve to estimate the relationship between CO₂ emissions and overall climate impact.

At the same time, the updated data for aircraft fleets lead to a comparative reduction in flight emissions due to more modern and efficient technology in this calculation sector.

For example, the CO₂ emissions for a return flight from Zurich to New York JFK Airport in Economy class have increased from 2.0 tonnes in the previous version to 2.3 tonnes in the current flight calculator.

“With our online calculators, we endeavour to make tools freely available that are able to make the most accurate statements possible on the climate impact of certain activities in a user-friendly way. The new version of the flight calculator maps individual flight scenarios even more accurately and puts their impact in clear relation to the net-zero targets. We are convinced that the resulting tool can offer interested private individuals and corporate customers an accurate, state-of-the-art and easy-to-obtain calculation of the climate impact of flights,” says Martin Lehmann, the myclimate expert responsible.

The project was planned and implemented at myclimate under the leadership of Martin Lehmann, Senior Consultant for Footprint Analysis, Alina Schmidt, Consultant for Product Solutions, and Maren Heltsche, Senior Web Developer.

Contact for media requests and interviews

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Link to the myclimate flight calculator (English)

https://co2.myclimate.org/en/flight_calculators/new

Link to detailed information about the calculation principles

[The myclimate flight calculator](#)

Selection of sources used in the creation of the flight calculator

IATA 2023: Passenger CO2 Calculation Methodology. <https://www.iata.org/>

Lee et. al. (2021): The contribution of global aviation to anthropogenic climate forcing for 2000-2018. Atmos. Environ. 244 117834.

SCNAT (2021): The impact of emissions from aviation on the climate. Swiss Academies Communications. Vol. 16, No.3, 2021.

About myclimate

myclimate is a partner for effective climate protection, globally and locally. Together with industry partners and private individuals, myclimate wants to shape the future of the world through advisory services and educational programmes, as well as its own projects. It does so in a market-oriented and customer-focused way as a non-profit organisation.

This international initiative with Swiss roots is one of the world's quality leaders in CO₂-compensation measures. Its customers include large, medium-sized and small companies, public administrations, non-profit organisations, event organisers and private individuals. Via its partner organisations, myclimate is represented in other countries such as Germany, Austria, Sweden or Norway.

The high-quality projects promote quantifiable climate protection and greater sustainability worldwide. myclimate has developed and supported 174 carbon offset projects in 45 countries around the world since its foundation in 2002. Here, emissions are reduced through replacement of fossil energy resources with renewable energies, storing of CO₂ in natural sinks (alternative: in nature-based projects) (such as local afforestation measures or renaturation of moorland), and implementation of energy-efficient technologies. myclimate climate protection projects meet the highest standards. International projects can gain certification according to the Gold Standard, Plan Vivo or VCS (incl. CCB and/or SD-VISta), and Swiss projects according to the guidelines from the Swiss Federal Office for the Environment (FOEN)/ Swiss Federal Office of Energy (SFOE) or the myclimate CH VER guidelines. The projects not only reduce greenhouse gases locally and regionally, but also make a positive contribution to the UN's Sustainable Development Goals (SDGs).

myclimate encourages everyone to make a contribution to our future through interactive and action-orientated educational programmes. With this aim in mind, myclimate has already reached more than 65,000 school children and 11,000 trainees in Switzerland, Germany and Liechtenstein and established a global network of 1,400 students and young professionals. Moreover, the foundation also advises on integrated climate protection with tangible added value. In the field of CO₂ and resource management, myclimate supports companies with advice, analyses, IT tools and labels. The portfolio ranges from simple carbon footprints (emissions calculations) at the corporate level through to comprehensive life cycle assessments for products. Our experienced advisors help with identifying and tapping into potential in the areas of energy and resource efficiency.

Since the foundation was established, the myclimate climate protection projects have created thousands of jobs, protected biodiversity and improved the general living conditions of hundreds of thousands of people. Not least because of this, the German Federal Environment Agency is explicitly showcasing myclimate as a supplier for voluntary CO₂ compensation. In both 2015 and 2012, the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) recognised two myclimate projects as "game-changing Climate Lighthouse Activities", which were subsequently honoured by UN Secretary-General Ban Ki-moon at the UN climate conferences in Paris and Doha. In addition, the myclimate education project "KlimaLokal" was awarded the Milestone Prize in 2012, the Swiss tourism industry's highest distinction. In May 2016, myclimate received the Swiss sustainability award PrixEco.