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ISAE-SUPAERO launches an app to measure the climate impact of aviation

While a referendum to include environmental protection in the Constitution could be held by the end of Emmanuel Macron's five-year term, climate protection initiatives are multiplying. To contribute to the debate, ISAE-SUPAERO is launching CAST: an innovative app that allows everyone to assess the climate impact of aviation by including all phases of the life cycle.

A unique app that highlights the real carbon impact of aviation
Thomas Planès, a doctoral student at ISAE-SUPAERO, has been working on this project for over a year as part of the CEDAR (*) eco-design research chair.
Today, his research has resulted in a modeling tool that takes the form of an open access app.
The CAST (Climate and Aviation - Sustainable Trajectories) tool allows anyone to estimate the impact that air transport will have on the climate up to 2050, depending on variables such as traffic volume, fuel consumption per passenger-kilometer, or the decarbonization of the fuel used. In addition to CO2 emissions, it also takes other effects that affect the climate into consideration, such as contrails, water and nitrogen oxide emissions.

CAST is an interactive and educational tool. It offers a manual mode intended for the general public, which allows the user to become aware of the environmental challenges of aviation, by highlighting the quantified impact of the various parameters on which we can influence, but also the uncertainties that remain. In addition, an expert mode offers more possibilities to measure trends and to evaluate the effectiveness of impact reduction strategies in relation to international commitments to fight global warming.

"*CAST uses an engineering and scientific approach, rich in objective models of the aircraft system, to better understand the challenges facing aviation. It aims to enable a rational debate between those in favor of continued air traffic growth and those in favor of a drastic reduction. The application provides a reliable, transparent, concrete and cross-cutting analysis that helps to evaluate sustainable trajectories for aviation*" explain Thomas.

More informations : www.cast.isae-supaero.fr
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