



| ICAO

ENVIRONMENT

# ENVIRONMENTAL TOOLS

## Quick Guide

### INTRODUCTION TO UN ICEC

## ICA CARBON EMISSIONS CALCULATOR

### What is the UN ICEC, and who can use it?

- The United Nations interface of the ICAO Carbon Emissions Calculator (ICEC) is the official tool of the UN system for estimating CO<sub>2</sub> emissions from air travel. It is available as an MS Excel® application and through an Application Programming Interface (API), enabling consistent and harmonized emissions calculations across UN entities.
- The UN ICEC is designed for use by UN organizations to support sustainability management and reporting, including the preparation of the UN system-wide greenhouse gas inventory. It is intended for use in the 2025 inventory and should not be used to recalculate emissions from previous years.

### How UN ICEC Calculates Flight Emissions




- The UN ICEC methodology uses the best publicly available industry data, taking into account key parameters such as aircraft type, route-specific information, passenger load factor, and cargo carried.
- Emissions can be calculated for all scheduled flights within the reporting year, with the option to include user-defined flight as needed.

### UN ICEC methodology now applies to four Cabin Classes

- UN ICEC v6.0 calculates CO<sub>2</sub> emissions across four cabin classes: Economy (Y), Premium Economy (W), Business (C), and First (F).
- It provides emissions estimates per passenger, supporting UN entities in assessing and reporting their environmental impact. The methodology has been refined to improve usability, including enhanced estimates for airport pairs with limited data, minimizing user input while maximizing accuracy.



### Key Features of UN ICEC v6.0

-  Calculates CO<sub>2</sub> emissions for all scheduled flights
-  Covers economy, premium economy, business and first class
-  Easy-to-use and downloadable reports

## Mandatory information and how UN ICEC works

- The UN ICEC users need to provide three mandatory information:
  - ✓ Year of reporting period;
  - ✓ Airport pairs of each trip using the 3-letter IATA airport codes (e.g., “YUL” for Montreal International Airport);
  - ✓ Cabin classes for each airport pair (or trip).

### ① Input flight details

### ② Calculate emissions

### ③ Get results per cabin classes



Route	Class	CO <sub>2</sub> (kg)	Distance (km)
BOG-MAD	Y	389.7	8026
BOG-MAD	W	553.6	8026
BOG-MAD	C	1640.0	8026
BOG-MAD	F	2290.0	8026

## UN ICEC Methodology update

- The UN ICEC v6.0 update the methodology from two to four-cabin classes. As a result, the total CO<sub>2</sub> emissions may differ from previous-year calculations, depending on users’ travel profiles.
- Comparisons with the baseline and with results from the previous two-cabin UN ICEC should not be used to inform decision-making, given the change in methodology. The observed differences reflect improved methodological accuracy rather than substantial changes in travel activities.

## Supplementary Information (CO<sub>2</sub> emissions offsetting)

- The UN ICEC also provides supplementary information on emissions covered under ICAO’s Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).
- UN ICEC v6.0 (March 2026) includes emissions offsetting information only on CORSIA, as it is the only global market-based measure applying to CO<sub>2</sub> emissions from international aviation.
- The UN ICEC tool is not intended to inform offsetting policies, and any decision to offset air travel CO<sub>2</sub> emissions is solely at the user’s discretion. With these changes, there will be only one annual update to the UN ICEC in March of each year.



## For more information about the ICEC and other ICAO Environmental Tools

- ICAO ENV tools website ([click here](#)) or e-mail to: [officeenv@icao.int](mailto:officeenv@icao.int)