



3D exhibition on the carbon footprint of air travel

Given EPFL's growing international reputation, transnational collaborations and exchanges have intensified in recent years: in 2019, for example, more than 20,000 flights were taken by the EPFL community.

Travel currently represents the School's main source of CO₂ emissions (35% in 2019, or 16,600 tons of CO₂-eq), excluding purchases and services currently being quantified. Of these, 87% are generated by staff travel and 13% by student travel (bachelor-master).

In order to align itself with the objective set by the Swiss Confederation of reducing

travel-related greenhouse gas emissions by 30% by 2030 compared to 2019, EPFL has adopted new guidelines for business and student travel, which came into force at the beginning of 2023. These new rules alone will not suffice without a voluntary reduction in long-haul and other air travel by members of the community.

This exhibition aims to raise public awareness of the CO₂ impact of travel, depending on the destination and means of transport chosen.

Why cubes and what do they represent?

We hear a lot about carbon footprints, but it's often an abstract concept. What is the CO₂ footprint of a trip? Is it a lot? We've tried to put some figures into perspective. How many tons of CO₂ would we be allowed to emit to meet the targets of the Paris Agreement? In Switzerland, are we close to or far from this figure? What is the CO₂ cost of a trip to California, a hotbed of international research and a most popular destination for EPFL members?

The figures are there. But how can we represent them for a better understanding? For example, they can be represented graphically (see chart) or in 3D. Hence these cubes. Each one represents a given volume of CO₂-eq. In the exhibition, their sizes are more than 100 times smaller than "real" volumes, the latter being too large to be tangible and dependent on parameters such as temperature and pressure. Nevertheless, their proportions are respected.

