To better understand the carbon emissions associated with commercial aviation, this study developed a bottom-up, global aviation CO₂ inventory for calendar year 2018.

**CO₂ EMISSIONS FROM COMMERCIAL AVIATION, 2018**

- **918 million metric tons (MMT) CO₂ from passenger and freight transport**
- **32% increase since 2013, using IATA values**
- **38 million passenger flights (67% domestic / 33% international)**

**TOP CO₂ EMITTERS**
(based on country of departure)

1. **United States**
   - **182 MMT**
   - 24% of global total
   - 69% from domestic operations

2. **European Union**
   - **142 MMT**
   - 19% of global total
   - 47% from in-bloc operations

3. **China**
   - **95 MMT**
   - 13% of global total
   - 69% from domestic operations

**PASSENGER CO₂ EMISSIONS**

- **1/3 occurred on short-haul flights**
  (less than 1,500 km)
- **1/3 occurred on medium-haul flights**
  (1,500 km to 4,000 km)
- **1/3 occurred on long-haul flights**
  (greater than 4,000 km)

**FLIGHTS ≤ 500 km**

- Approximately 5% of global CO₂ total
- Nearly 2x as much CO₂ per passenger km as longer flights

For the full study: www.theicct.org/publications/co2-emissions-commercial-aviation-2018