



Environmental Trends

Ted Thrasher
Environment,
Environmental Modelling Unit
ICAO Air Transport Bureau



SOCIETY

3 billion passengers per year carried worldwide¹

56.6 million jobs supported by aviation worldwide²

Scheduled worldwide passenger traffic forecast to **grow at 4.4%** per year¹

ECONOMY

2.2 trillion USD global economic impact²

Up to **3.5% of global GDP** supported²

35% of world trade by value carried²

ENVIRONMENT

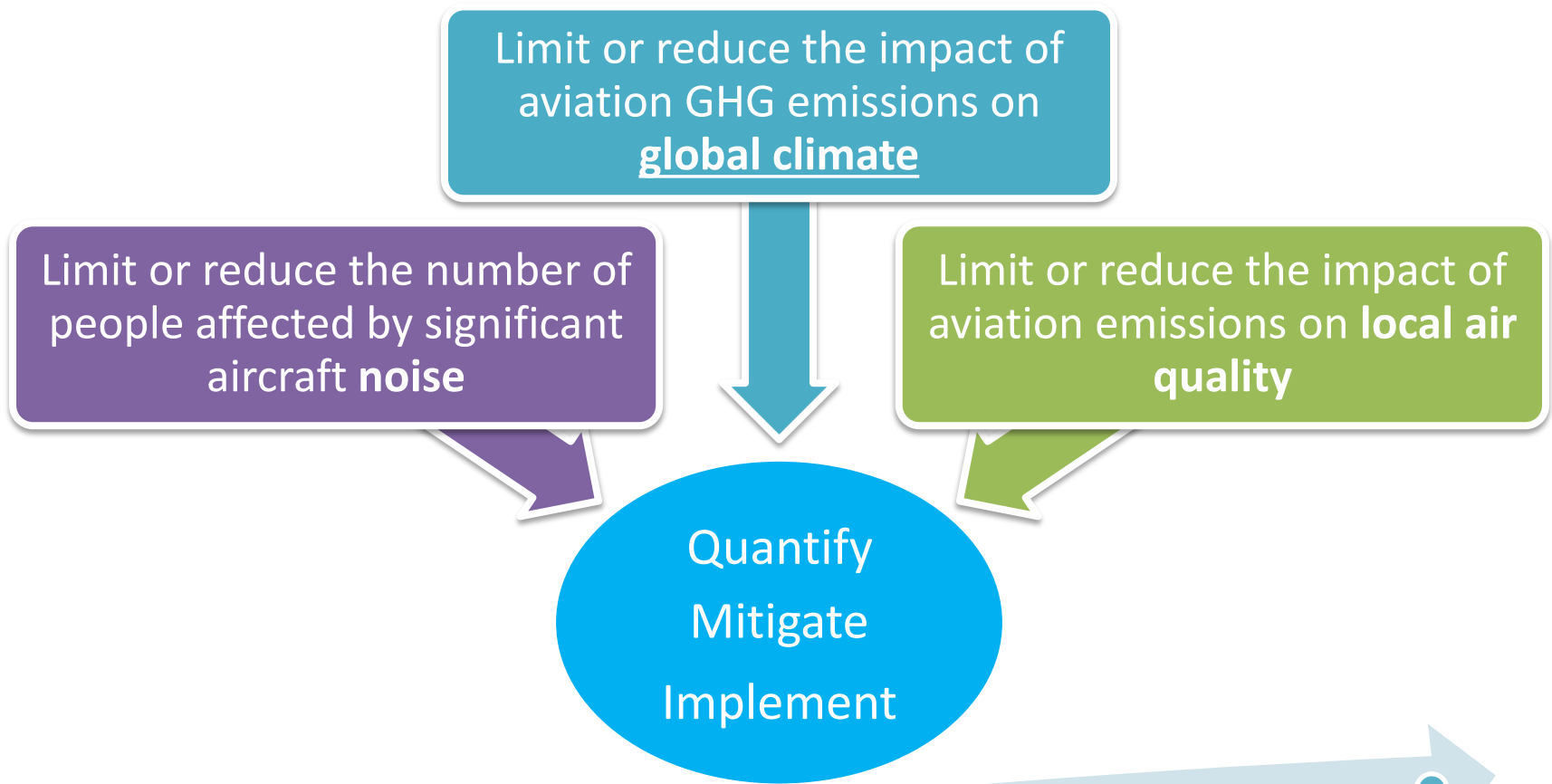
2% of global human-made CO₂ emissions³, approximately **65% of this 2% are from international aviation (≈1.3%)**

Fast, reliable, and safe mode of transport

No comparative alternatives for long haul passenger transport

Source: 1. ICAO Facts and Figures retrieved 27 March 2014, 2. ATAG "Aviation Benefits Beyond Borders,"2010, 3. IPCC 4th Assessment Report, 2007.

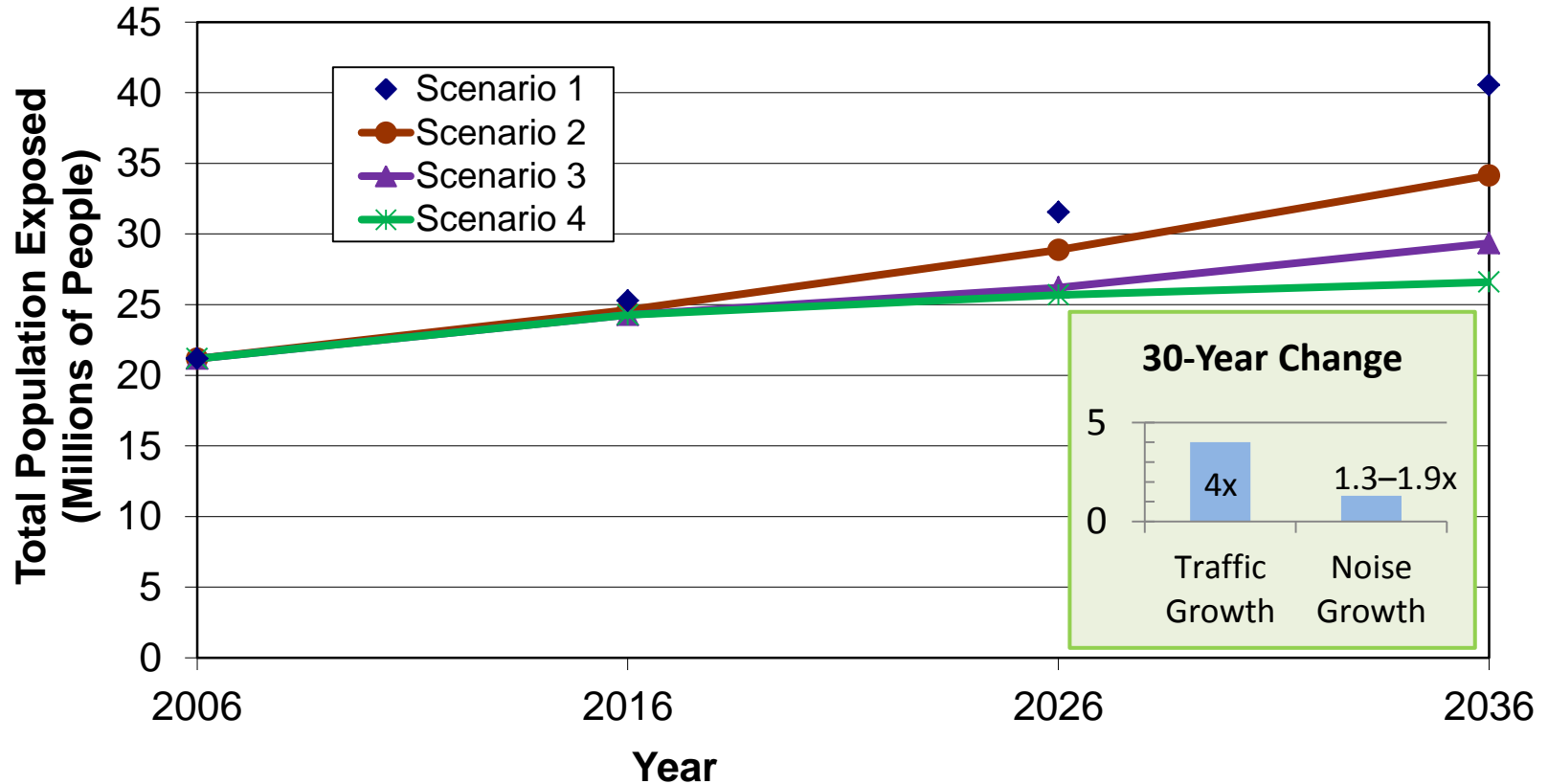




Minimize the adverse effect of global civil aviation on the environment



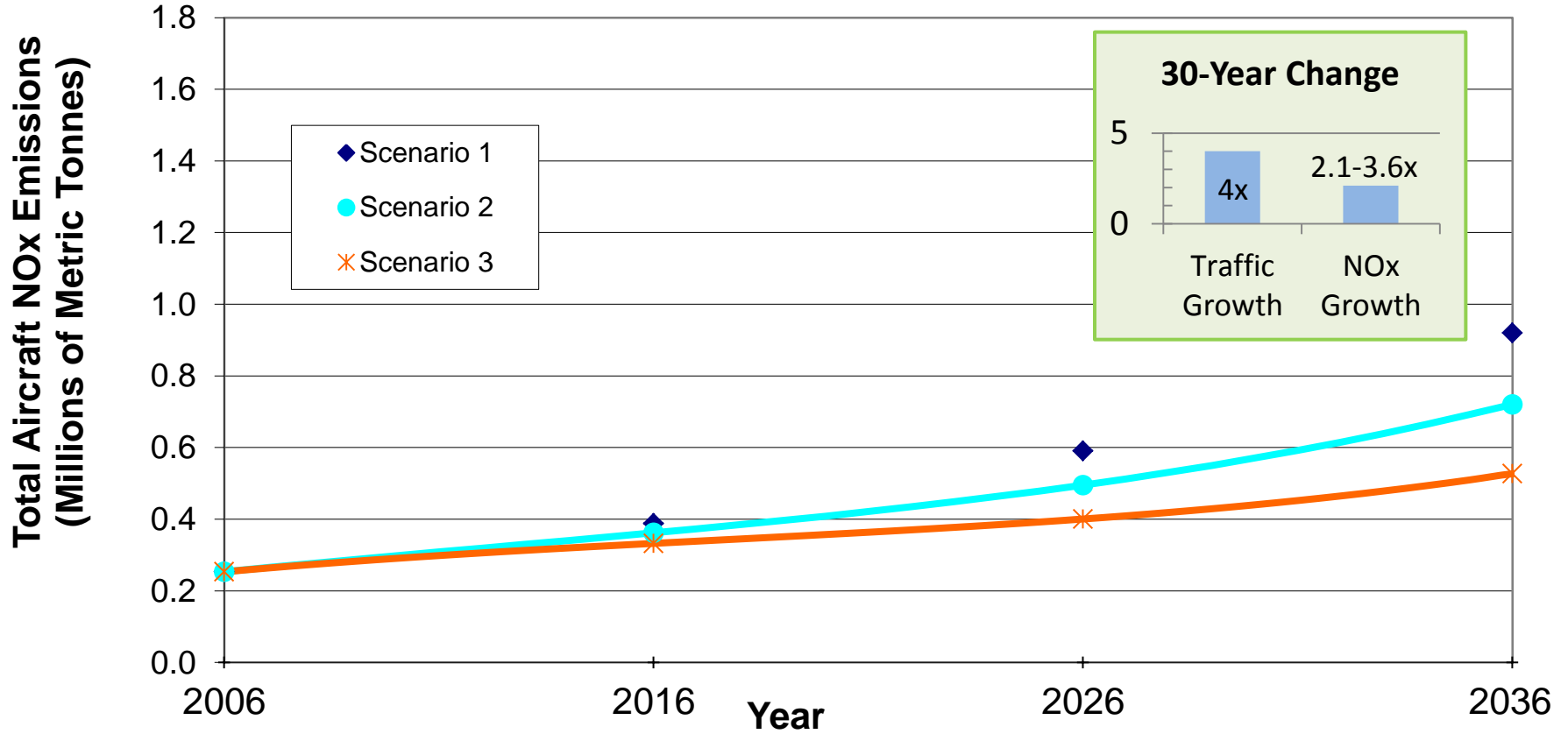
Population Exposed to Aircraft Noise Above 55 dB DNL



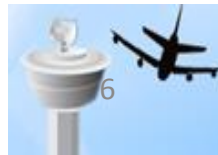
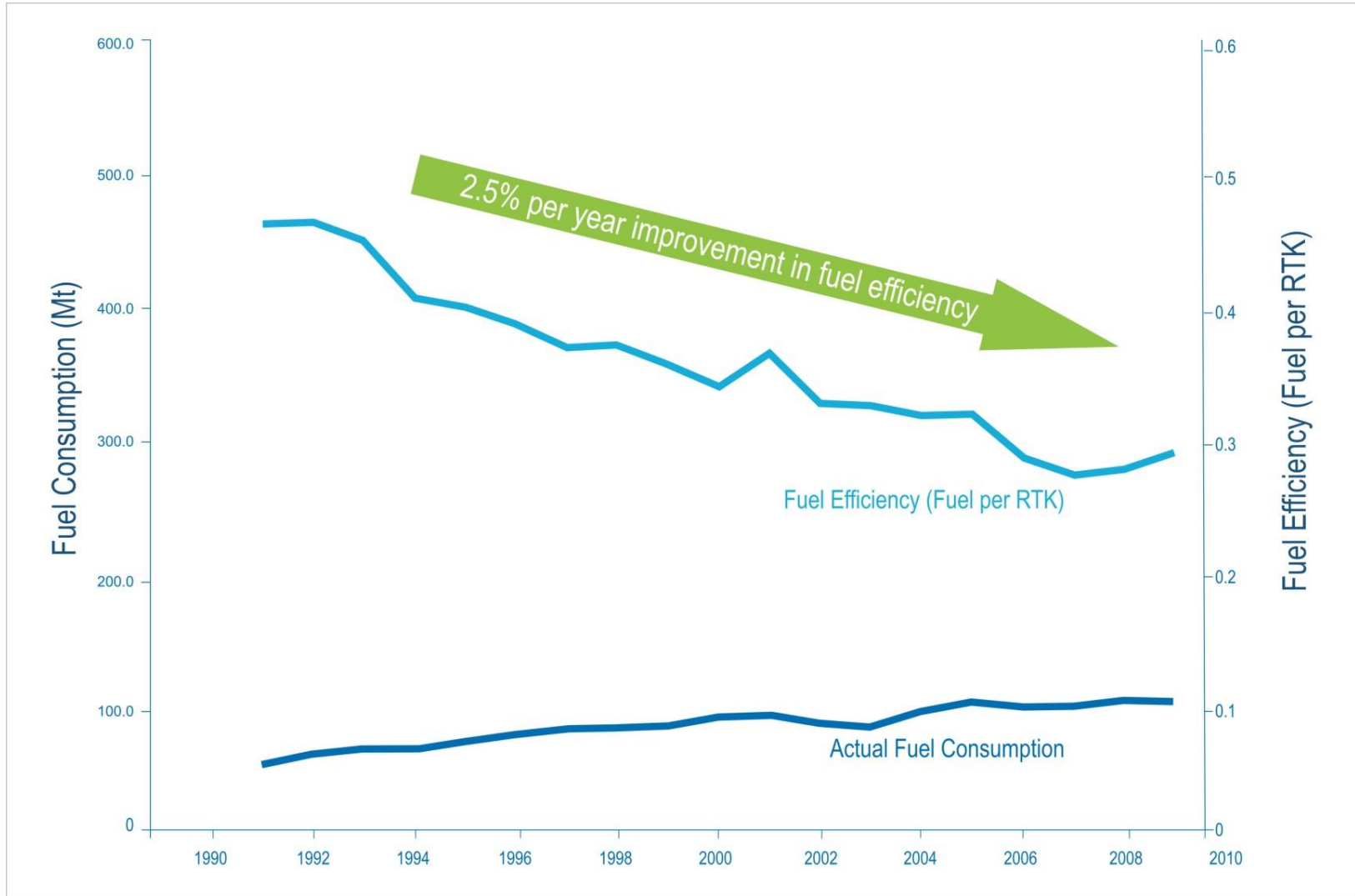
Note: Population exposed relative to 2006 baseline.
 Population levels are assumed constant from 2006 to 2036.



Aircraft NOx Emissions Below 3,000 feet / 914 metres Above Ground Level



Historic Trend in Fuel Efficiency

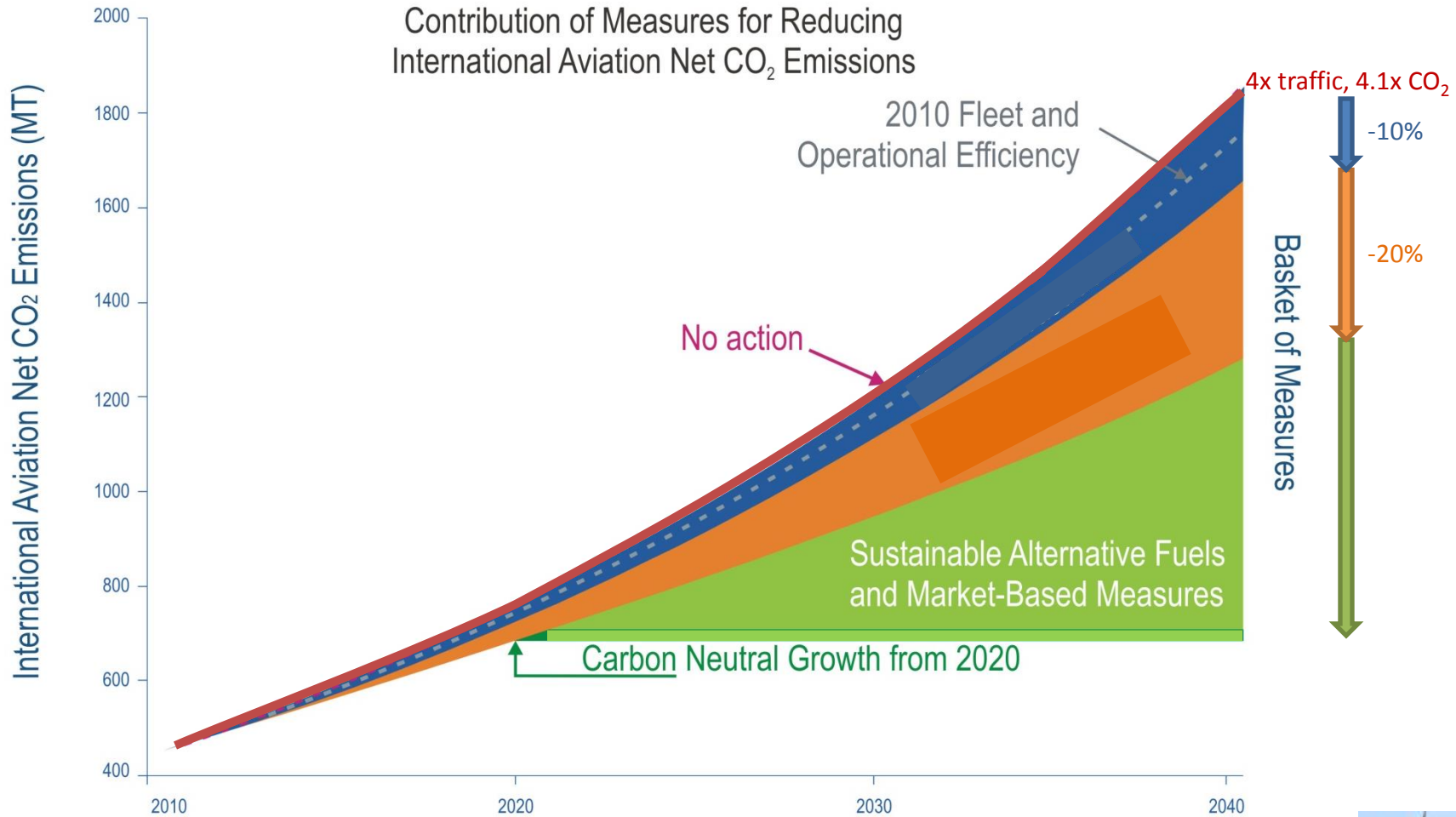


- ICAO CO₂ Reporting and Analysis System (ICORAS)
 - Integrates and verifies measured fuel consumption and RTK data from States with modelled results
 - Enables measurement of progress toward goals
 - Facilitates reporting to UNFCCC
 - Aids in interpreting Action Plans



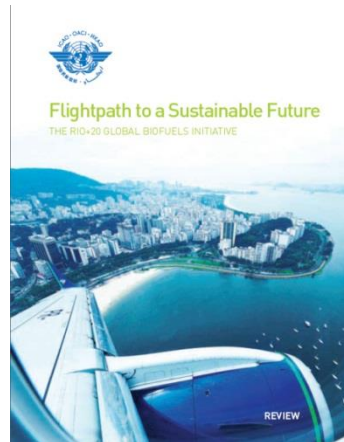
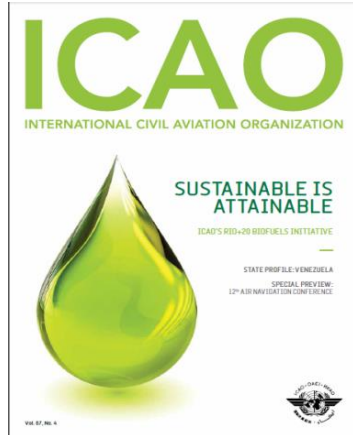
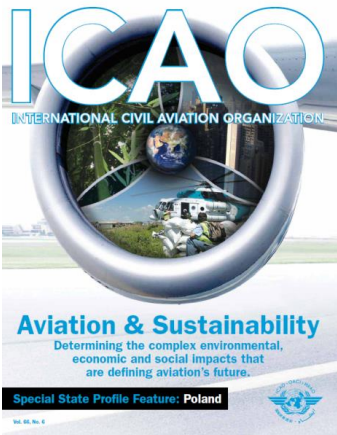


CAEP International Aviation Net CO₂ Emissions Trends



- Noise, LAQ, CO₂ emissions expected to grow slower than demand
- Achievement of goals requires action beyond that evaluated
- This is challenging, but not impossible
- Important to find solution that will allow aviation to grow sustainably and continue delivering benefits





For more information on our activities, please visit ICAO' website: <http://www.icao.int/env>

