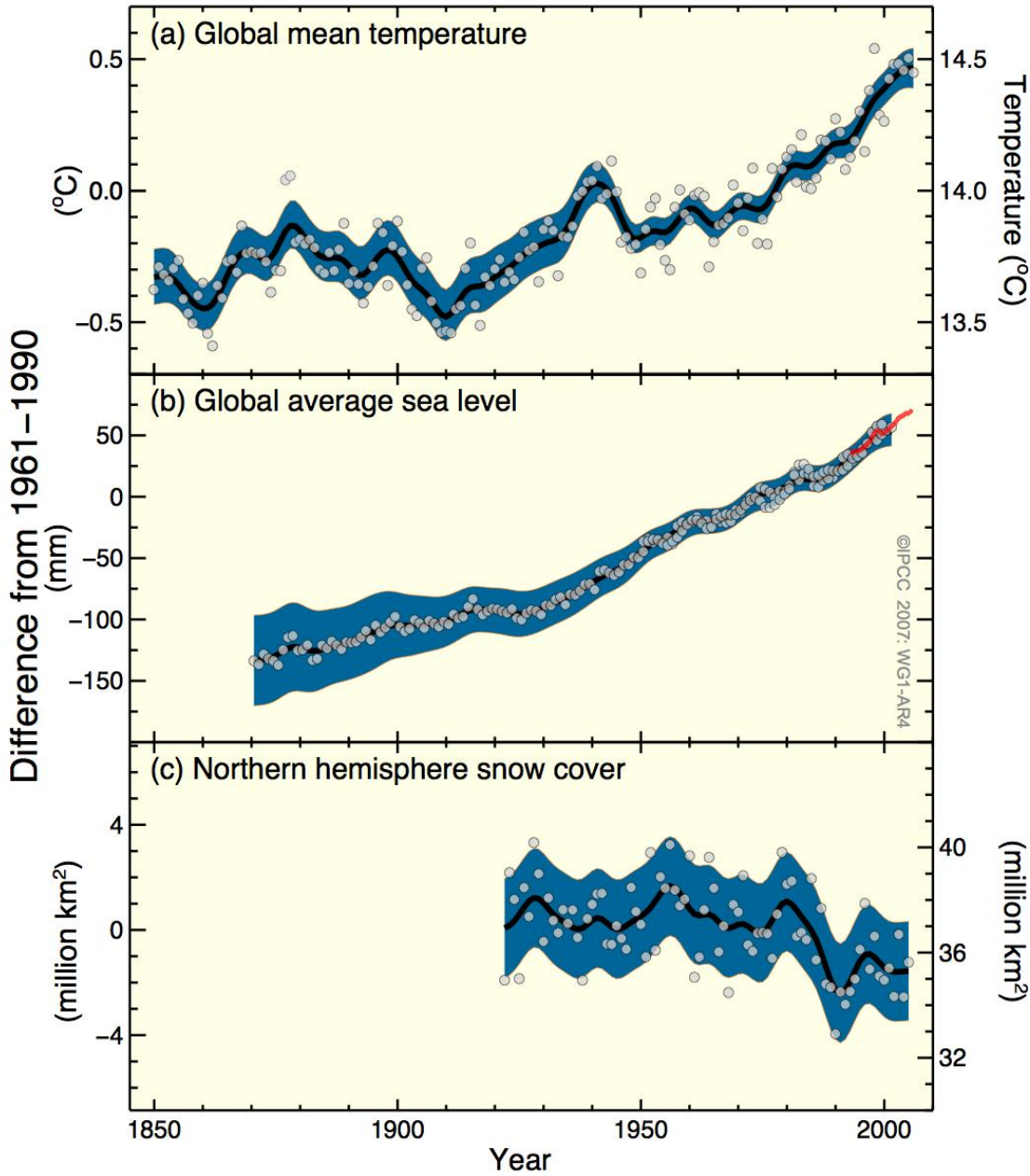
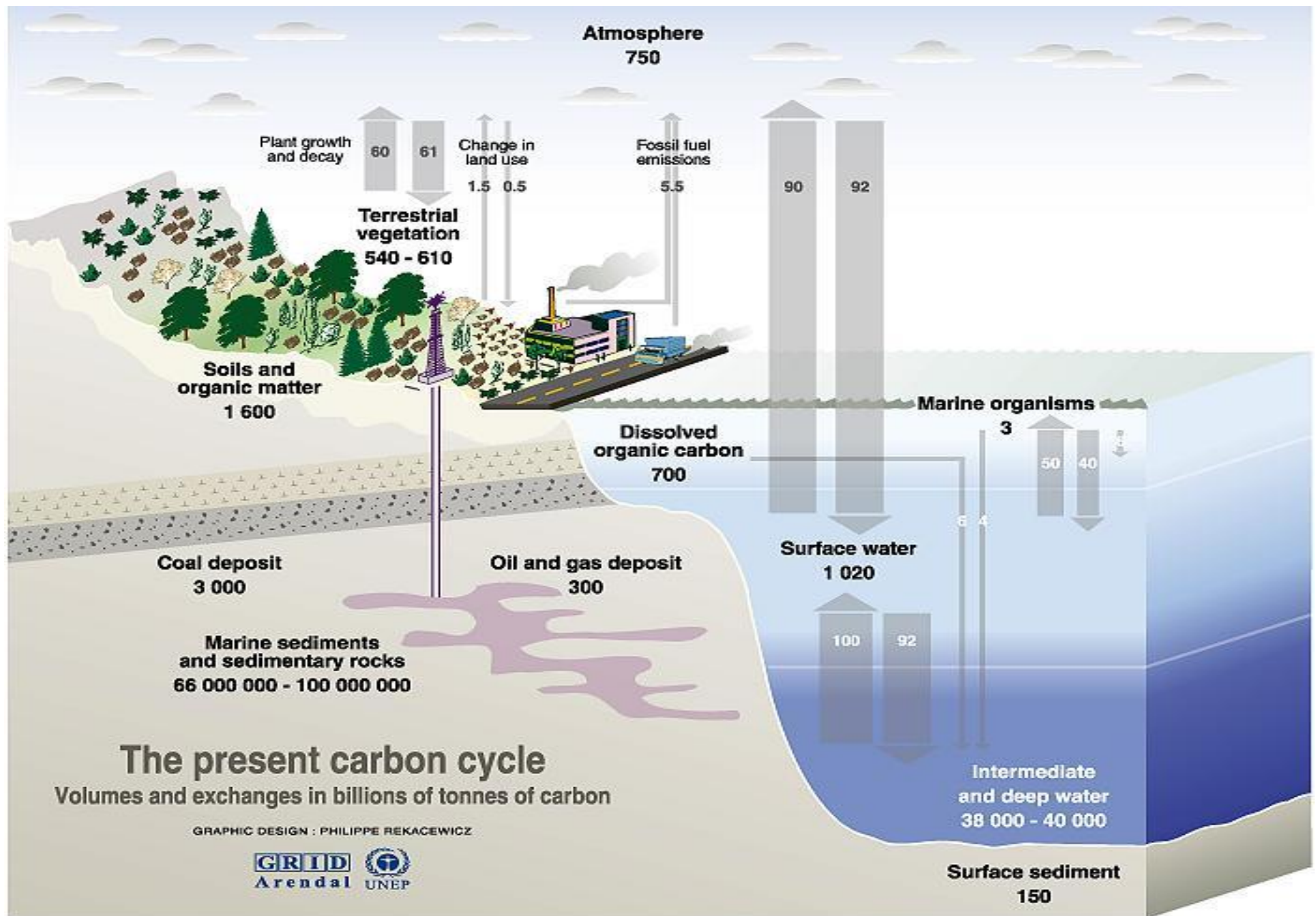


Barcelona, 13th May 2008



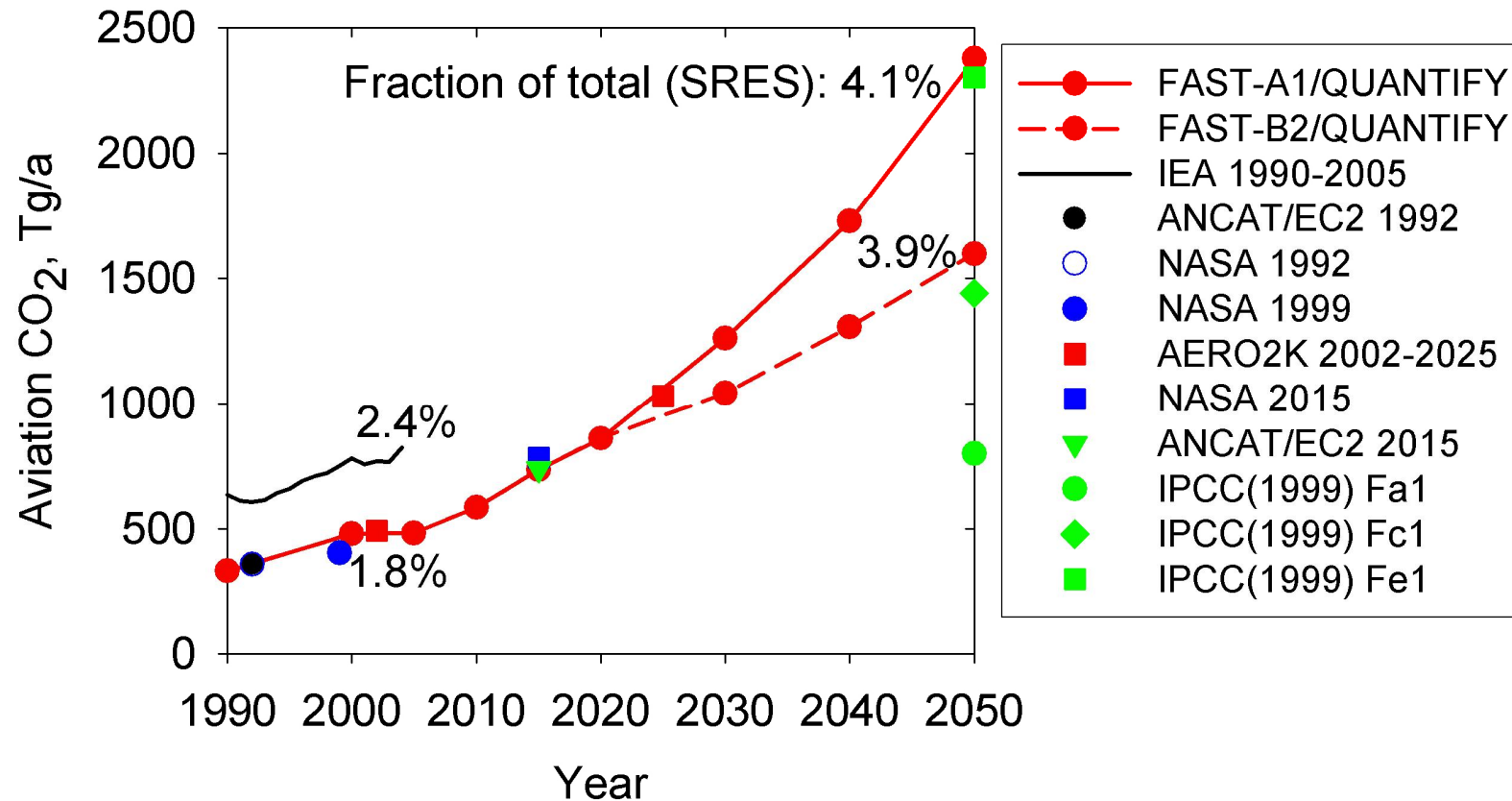
Changes in Temperature , Sea Level and Northern Hemisphere Snow Cover



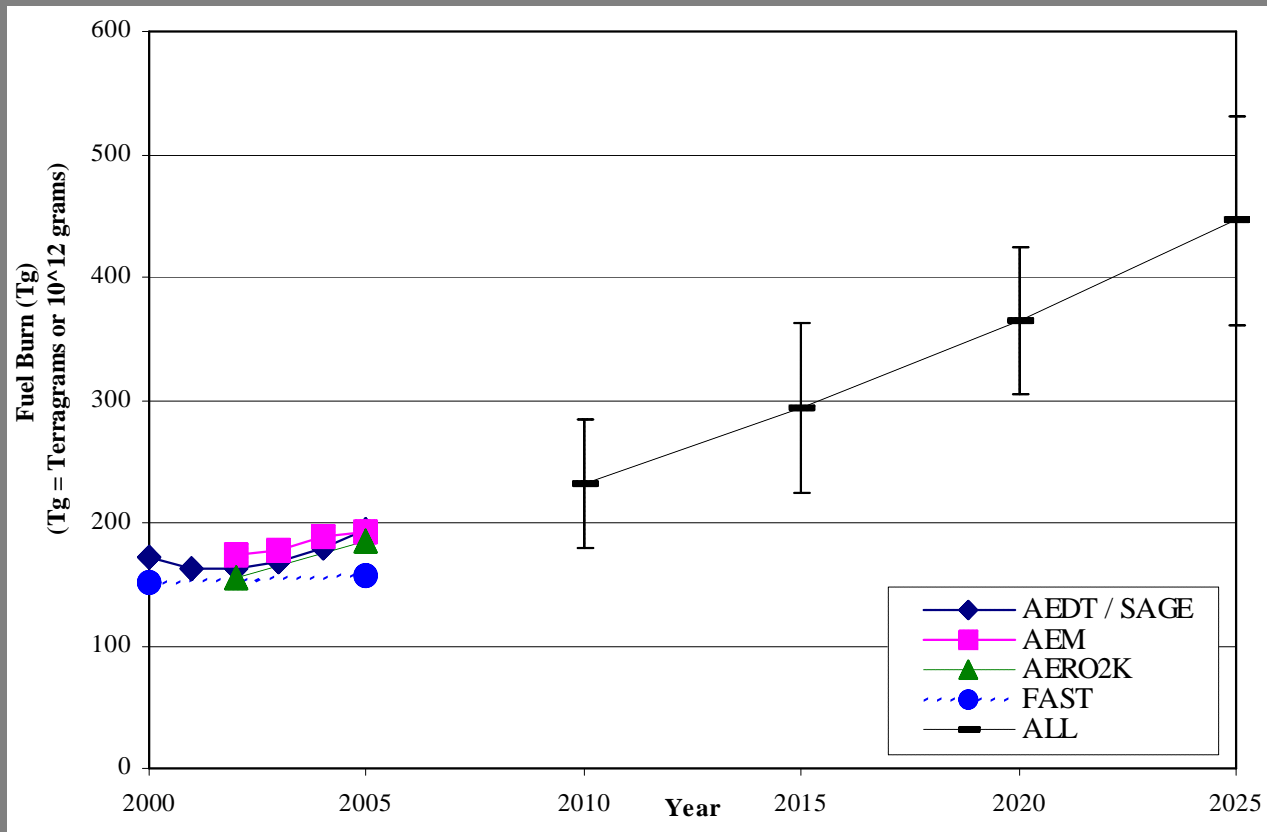


Sources: Center for climatic research, Institute for environmental studies, university of Wisconsin at Madison; Okanagan university college in Canada, Department of geography; World Watch, November-December 1998; Climate change 1995, The science of climate change, contribution of working group 1 to the second assessment report of the intergovernmental panel on climate change, UNEP and WMO, Cambridge press university, 1996.

Current and projected aviation CO₂ emissions



Summary of total fuel burn

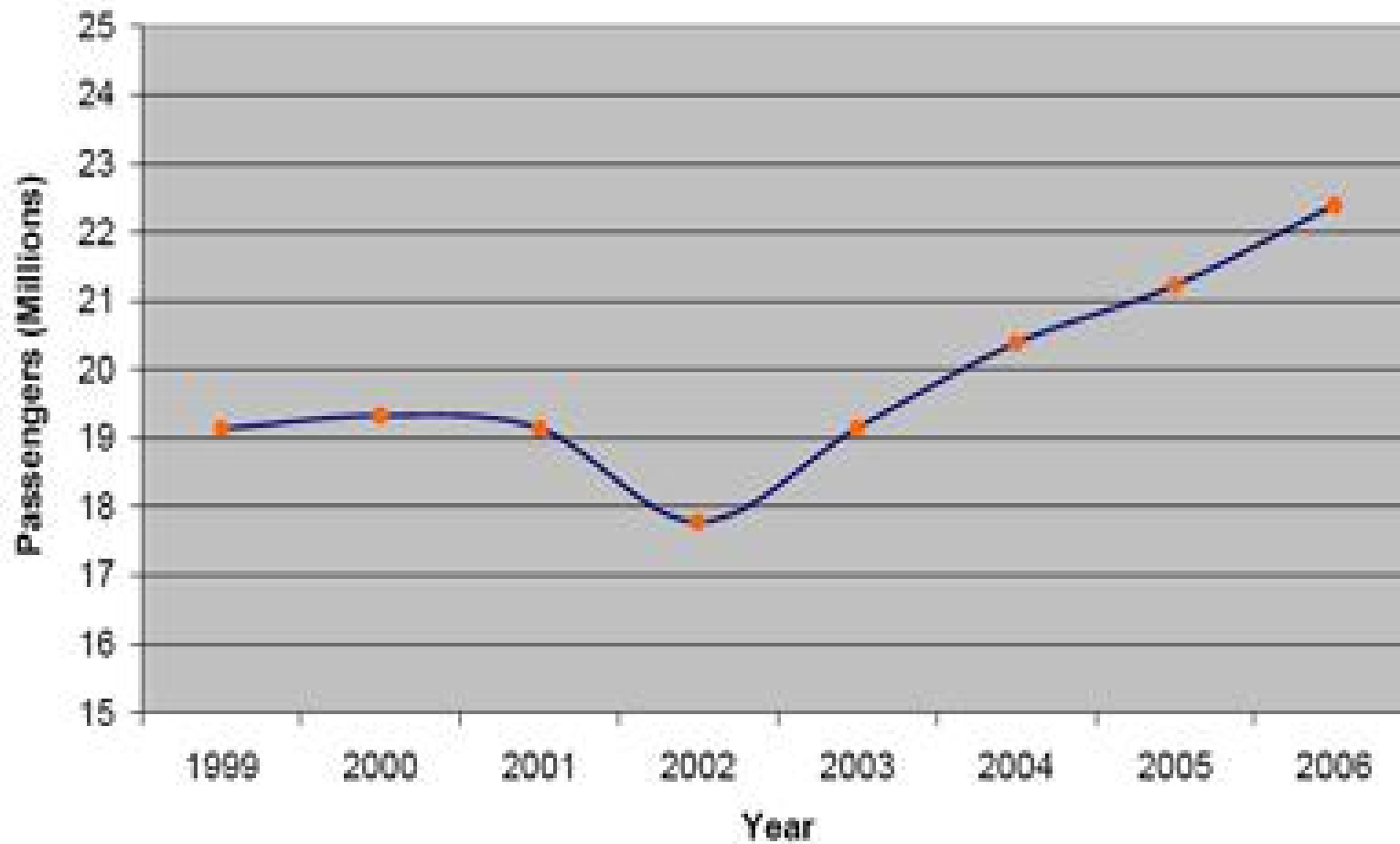


Forecast global aviation CO₂ emissions
from regulator databases:

| | |
|------|----------|
| 2005 | 610.637 |
| 2010 | 776.612 |
| 2015 | 991.101 |
| 2020 | 1088.886 |
| 2025 | 1228.934 |



Passenger Numbers at Palma de Mallorca Airport 1999 - 2006



Forecasted Passenger Numbers for Selected European Nations

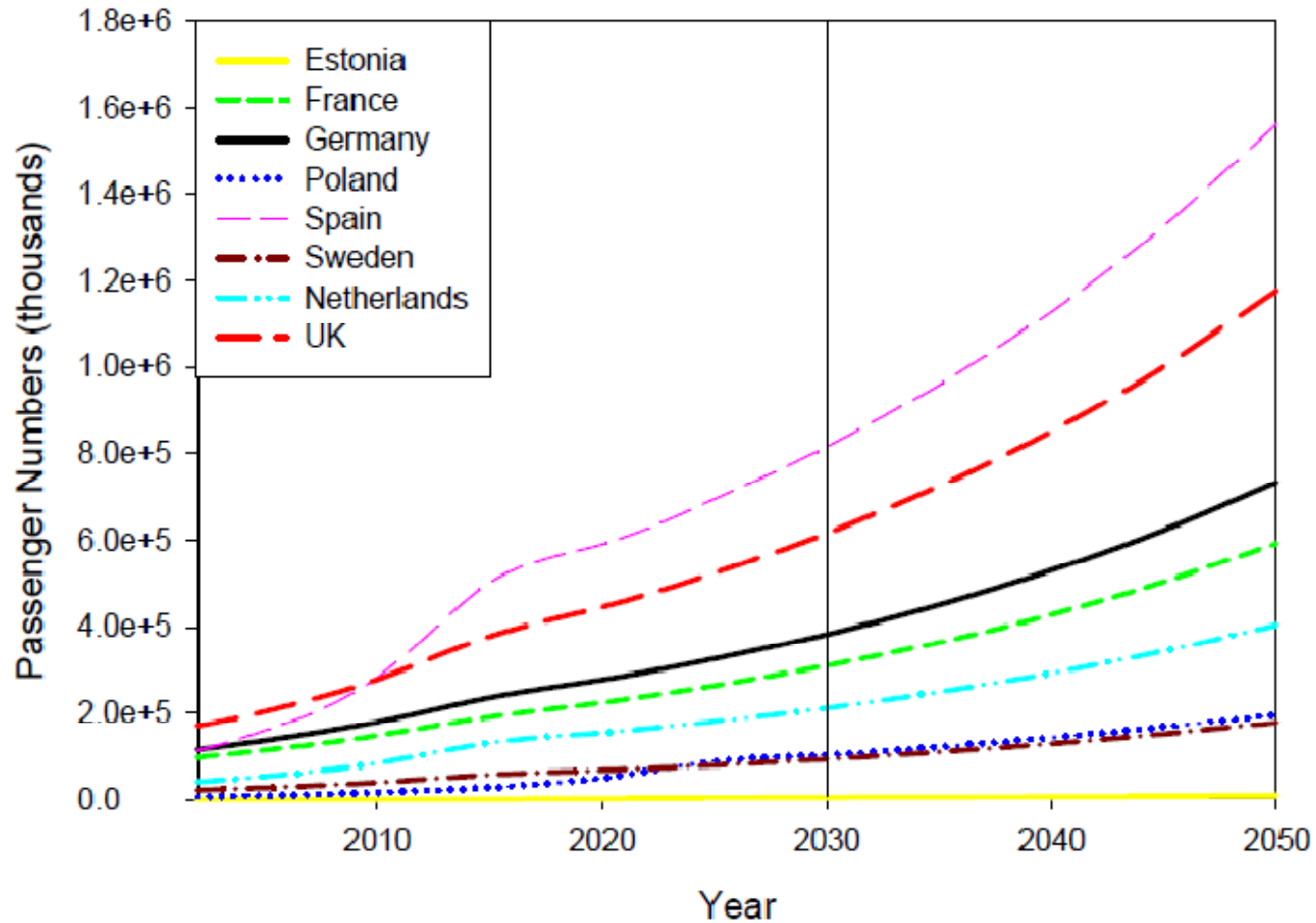


Figure 1: Forecast passenger numbers for selected European nations. The passenger scale is a linear scale in thousands (i.e. 1.0e+6=1 billion passengers).

Carbon emissions from the aviation industry for selected European nations

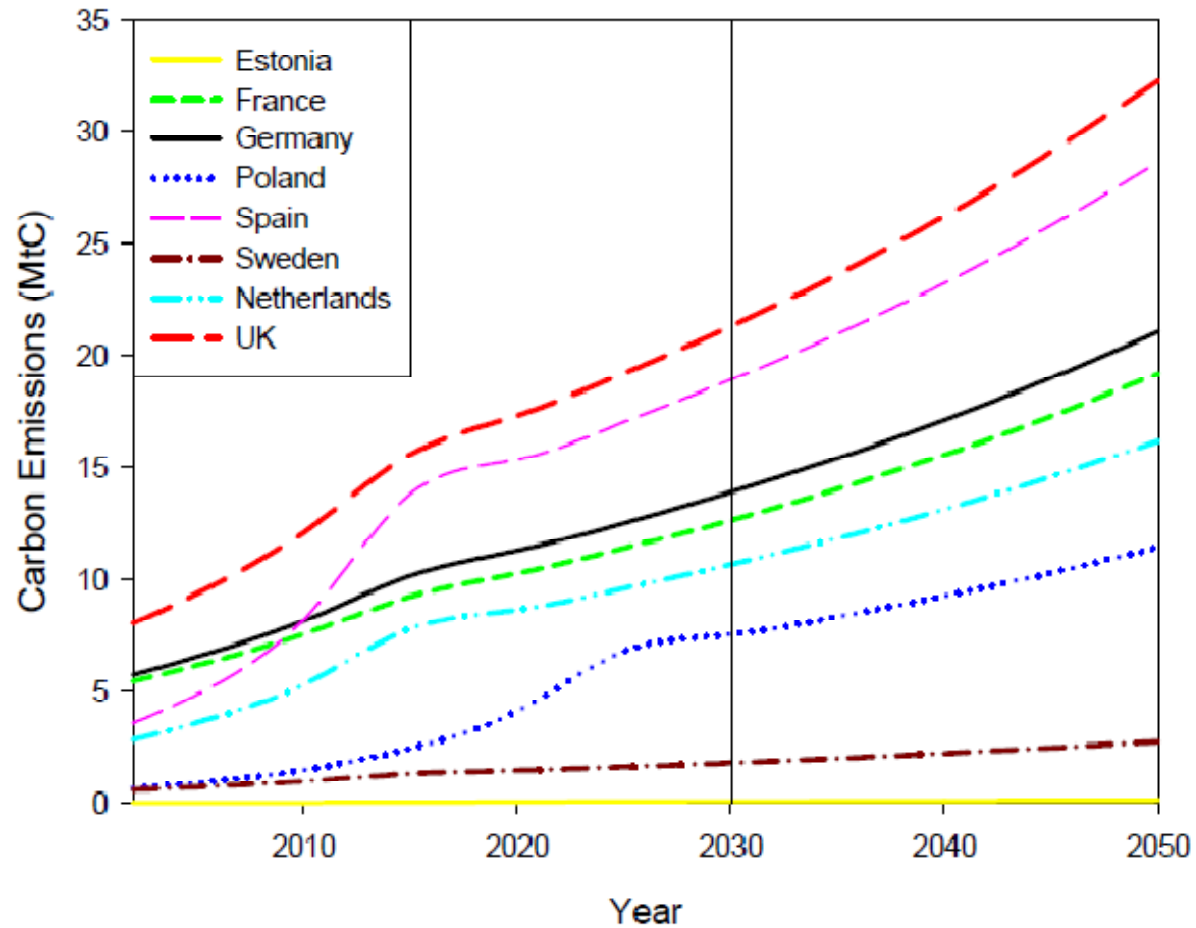


Figure 2: Carbon emissions for the aviation industry for selected European nations. Carbon values are in million tonnes of carbon.

Un problema muy grande para España

- Spanish total CO₂ emissions 2005 **440.6 MtCO₂**
- Domestic aviation emissions 2006 **7.204 MtCO₂**
- International aviation emissions 2006 **10.012 MtCO₂**
- Total Spanish aviation emissions **17.216 MtCO₂**

Control & reduce impacts

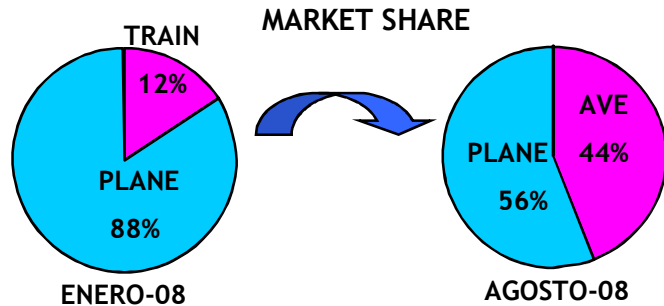
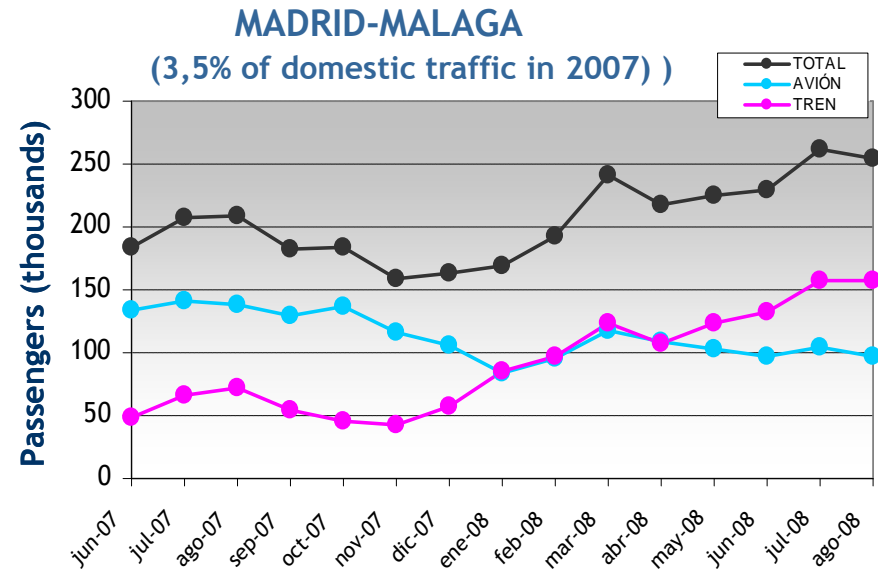
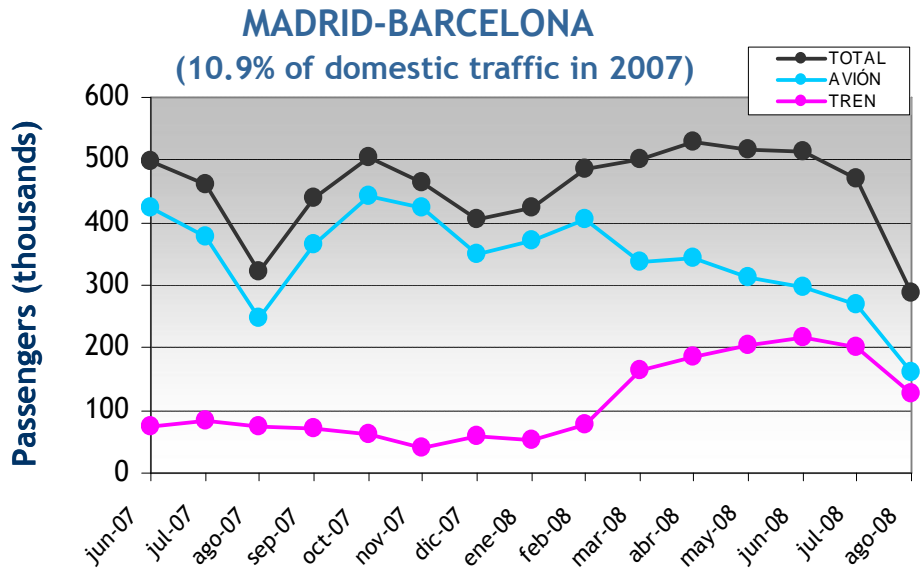
- UN IPCC Special Report “Aviation and the Global Atmosphere” 1999
- Efficiency gains would be 50% by 2050 approx 1% p.a.
- Operational gains inc. CNS/ATM would be 18% over the same period
- Average efficiency gain of around 1.3%



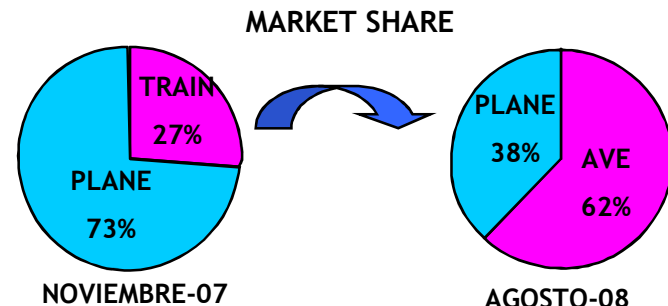
Conclusions

- Demand management & behavioural change screamingly urgent!
- Aim to stabilise growth at 1-2% p.a. in line with fuel efficiency claims
- Tough technology & operational goals, not greenwash, with independent monitoring
- 2030 & 2050 sectoral forecasts of emissions reductions and share - where are we going?

- New high-speed trains have increased competition on some domestic routes



Source: AENA and RENFE (2008)



Source: AENA and RENFE (2008)