



Air Transport, Social and Economic Development and Climate Change

Callum Thomas

Aviation's Contribution to the Development of Humankind

- Shipping / aviation created global economy.
- Aviation created the global society.
- EC, ASEAN, MERCOSUR, SADC.
- Russia, India, China, Brazil.
- Next Africa?



Aviation, City and Regional Development

- Access to global economy
- Post industrial economy
- Support multicultural society
- Travel for leisure, education.

A world class city/region
needs
world class air routes.



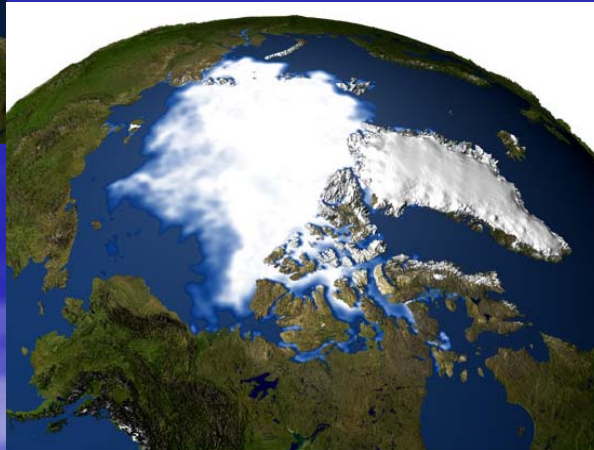
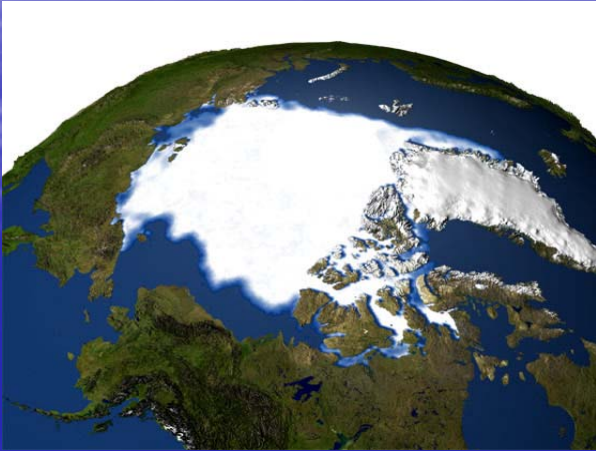
The Growth Challenge

- **Socio-economic benefits significant.**
- **Environmental impacts climate change, fuel use significant also.**
- **Impacts threaten growth and aviation's ability to contribute to sustainable development.**

Compensating for Growth

- **Growth requires ongoing action to address local environmental impacts.**
- **Aviation has track record of improvement that has mitigated local environmental impacts of strong growth (e.g. noise) over 25 years.**

But the climate threat
is of a different order of magnitude



The Magnitude of the Challenge

- CC a threat to:
 - Us as individuals.
 - The aviation industry.
 - Society as a whole.

- Targets for CO₂ reduction by 2050.

UK	60%
<i>France</i>	<i>75%</i>
<i>Germany</i>	<i>80%</i>
<i>Japan</i>	<i>80%</i>

What can aviation deliver ?

CC Challenge for Airlines



- Aviation small contribution to CC but it is increasing.
- Legacy user of carbon fuels emitter of CO₂.
- This is environmentally, politically, economically challenging.

IATA LONG TERM STRATEGY

Carbon-neutral growth by 2020

Carbon free aviation within 50 years

No Growth in CO₂ beyond 2020

- Aircraft technology
- Alternative fuels
- Emissions trading
- Fleet replacement
- Operations
- Business practices
- Carbon offsetting
- *Impact upon cost of flying*



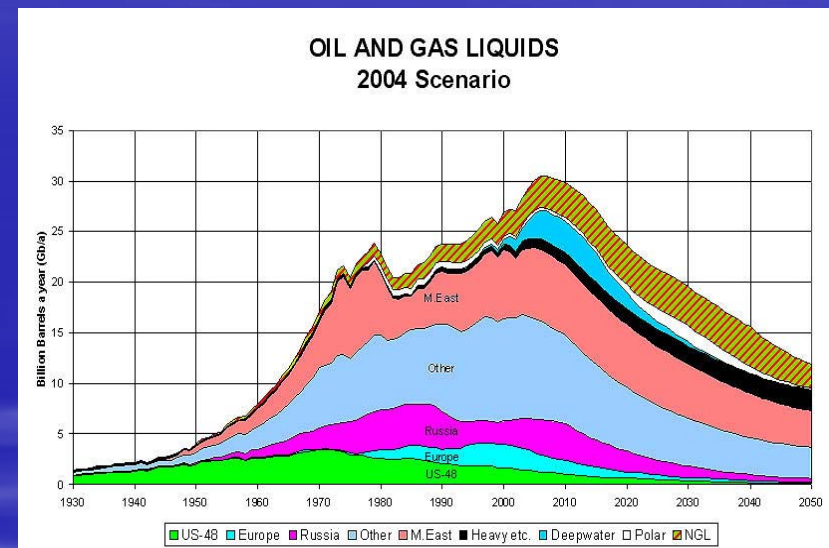
Carbon Free in 50 Years



- Monumental challenge
- Step change in Technology & Infrastructure.
- 20 years away?
- *Who will fund this step away from carbon?*

The Move Away from Carbon Fuels is more than a Climate Issue.

- 1200% increase in demand for aviation fuel by 2050-60?
- Peak Oil before 2030?



What kind of world do we want in 2060

OPTION A

- Carbon constrained.
- Conventional technologies.

OPTION B

- Carbon free mobility.
- Step change technologies.

If aviation is to play the same role in supporting socio-economic development in 2000-2050

- Governments, industry and the travelling public will need invest to deliver technological development and carbon free flight .
- Or protect dwindling fuel supplies for aviation

