The Environmental Effects of Civil Aircraft in Flight

According to the Royal Commission's report, emissions from aircraft are likely to be a major contributor to global warming if the present increase in air traffic continues unabated.

Short-haul passenger flights, such as UK domestic and European journeys, make a disproportionately large contribution to the global environmental impacts of air transport and these impacts are very much larger than those from rail transport over the same point-to-point journey.

A shift away from the use of air transport over such distances could reap considerable environmental benefits as well as relieving pressure on major airports. Rail transport is demonstrably more sustainable than air transport. The fact that rail transport cannot compete at present, at least in the UK, is a consequence of several factors, but these certainly include a failure to invest in a rail infrastructure and a failure to reflect environmental externalities in the cost of air transport.

Instead of encouraging airport expansion and proliferation, it is essential that the government should divert resources into encouraging and facilitating a modal shift from air to high-speed rail for internal UK travel and some intra European journeys.

The report notes the ambitious targets for technological improvement - such as new airframe and engine designs and alternative fuels - and considers the potential for such developments to mitigate environmental effects. However, it concludes that the projected increase in demand will easily outstrip any such technological developments for several decades.

According to the authors, international aviation emissions should be included in the emissions trading scheme envisaged as one of the Kyoto Protocol's implementing mechanisms. In the meantime a charge on aircraft movements to reflect environmental impacts would send an important signal to travellers about the environmental implications of flying, and the revenue generated should be used to develop more environmentally benign transport modes.

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