

Climate change  
Weatherwatch

## Jets v the jet stream

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Monday 28 March 2016  
21.30 BST



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This Boeing 767 could find itself flying into stronger headwinds. Photograph: Vasco Garcia/EPA

Flights from Britain to the US could take longer in future because of climate change. The jet stream is expected to become more powerful as the climate warms, and that means flights to America battling against fiercer headwinds.

Flights from New York to London, on the other hand, will probably speed up as they ride on the faster jet stream, although this won't balance the slower flights and a round trip will still be longer. That means more fuel used by the aircraft, more air pollution and possibly higher fares, according to researchers at the University of Reading in a study published in the journal "Environmental Research Letters".



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And the effect of a powerful jet stream was brought home in a remarkable flight in January last year, when a British Airways flight from New York to London reached 745mph, near supersonic speed, by riding on an exceptionally fast jet stream of around 250mph.

Airlines face other troubles as the climate warms. Planes taking off in hot weather need to reach higher speeds, because warm air is less dense than cold air. That means aircraft having to travel lighter, with fewer passengers or less cargo. Since 1980, the number of flights forced to cut their loads increased at four airports studied in the US, as average temperatures rose at each location.

Alternatively, aircraft will have to use more fuel, but either way it's likely to mean higher fares. The only other options are more take-offs at night, early mornings or evenings when it's usually cooler, or building longer runways, none of which is good news.

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CanadaChuck 2h ago

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What we know for sure is:

1. There will be near 2x as many kms flown in 2030 as there are today.
2. Aircraft will still be using aviation fuel, no green fuel with a turbine on top.
3. Plane fares will be considerably higher than today, likely more than double.
4. Many will be complaining about the emissions caused by air travel.

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JohnTMaher 7h ago

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Or ground all airplanes and use sailboats.

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beliefvscepticvfact → JohnTMaher 5h ago

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Not sure what to make of this comment, are you being ironic or kind of playing the devils advocate? Taking the comment literally, then you have just created mission impossible and you know it. Order every nation in the world to ground all planes, tomorrow? Well, we live in a cooperative world don't we, a world that has abandoned all forms of selfishness. You know that it would take an awful lot of time and preferably starting with the largest nations in the developed world. We don't have an awful lot of time and the world as is can't/will not afford even a little time. But then time is not really an issue any more, since we've already waited too long. It is something I accept as a fact, but to soothe the world there's always belief and belief brings hope, alas without the word false attached.

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