

**WWF-UK***Registered office*Panda House, Weyside Park
Godalming, Surrey, GU7 1XR

Tel: +44 (0)1483 426444

Fax: +44 (0)1483 426409

info@wwf.org.uk

wwf.org.uk

DISCUSSION PAPER 02: AVIATION CONNECTIVITY AND THE ECONOMY

Response submitted by WWF-UK to the Airports Commission

April 2013

Introduction

WWF-UK is keen to engage with the Airports Commission, providing evidence to help the Commission assess whether additional UK airport capacity is needed and has already provided a response to discussion paper 1 regarding aviation demand forecasting. We have worked extensively on aviation policy for over five years with a focus on the climate impact of this sector and the need to keep aviation growth within the environmental limits recommended by the Committee on Climate Change. WWF's aviation policy work also extends to the EU ETS and ICAO so we are well aware of the interconnectedness of UK aviation policy to regional and international frameworks.

Among NGOs, WWF-UK has particular expertise in alternatives to travel. We have conducted two major research exercises with FTSE 500 companies which have identified a permanent shift away from Business as Usual, pre-recession levels of flying in favour of lower carbon alternatives such as rail and videoconferencing¹. WWF-UK also runs the One in Five Challenge, which was commended in the DfT's Aviation Policy Framework (Section 2.43). This scheme challenges organisations to cut their flights by 20% within five years and has achieved remarkable results. We believe this work demonstrates that UK plc does not need more airport capacity to remain profitable and competitive.

WWF-UK, together with RSPB and HACAN, has already sent the Commission a draft copy of a new report by CE Delft on Aviation Policy Development which provides the economic criteria we hope will be used in project appraisal. It is also relevant to this discussion paper on connectivity, as it concludes that there is no proof that greater connectivity guarantees economic growth, especially in cities like London that are already well connected. This report was successfully launched at the House of Commons on 22 April².

¹ Travelling light: why the UK's biggest companies are seeking alternatives to flying. WWF-UK, 2008; and Moving on: why flying less means more for business. WWF-UK, 2011.

² The final report can be found here:

http://assets.wwf.org.uk/downloads/economics_of_airport_expansion_march_2013.pdf

**INVESTORS
IN PEOPLE**President: His Royal Highness,
The Prince of Wales KG, KT, GCB, OM
Chair: Ed Smith
Chief Executive: David NussbaumWWF-UK a charity registered in England and Wales number 1081247 and in
Scotland number SC039593, a company limited by guarantee registered in
England number 4016725. VAT number 733 761821
100% recycled paper

We have provided all relevant evidence to this response and have sought to answer most questions posed. Over the course of this inquiry, we would be pleased to provide further written submissions and oral evidence to the Committee as we have done for the Transport Select Committee (on airport capacity) and the Energy and Climate Change Committee (on the inclusion of international aviation and shipping emissions in the Climate Change Act).

Response

Do you agree with the definition of connectivity presented in the paper? What other factors, if any, should we take into account and how do they impact connectivity?

Whilst the paper focuses on defining aviation connectivity³, and the factors that can influence this, WWF would encourage the Commission to set this within the context of a broader definition of connectivity. This should encompass all transport modes and transport replacement options such as video conferencing. Considering all ways in which the UK is linked and stays connected to other destinations will be crucial when making decisions regarding our future global transportation needs.

Do you agree with the assessment we have made of the UKs' current aviation connectivity?

We fully agree with the general conclusion that *"The UK aviation market appears to offer a high level of connectivity, enabling people and businesses to travel efficiently and link effectively to a wide range of markets"*⁴.

Given that the focus of the Commission's paper is to explore how aviation connectivity of the UK may contribute to the economy as a whole and that a key contributor to this is how well connected the UK is to important business destinations, we would also draw the Commission's attention to the research conducted by AirportWatch in 2011⁵. This compared the connectivity to key business destinations in a total of 27 cities in the United States, Canada, Japan, South Korea, the Gulf States, China, India, Brazil, Indonesia and South Africa from the four hub airports of Heathrow, Charles de Gaulle, Schiphol and Frankfurt. This was done by counting the number of planes to each of the main business destinations during one week in the month of July⁶ and showed that overall Heathrow was streets ahead of its competitors in Europe in terms of its inter-connectivity to key business centres of the world.

More specifically the results showed that:

- Heathrow had 990 departure flights to the cities identified. This is more than the combined total of flights from Charles de Gaulle (484) and Frankfurt (450), its two closest rivals;
- Out of the 27 key business destinations identified Heathrow had considerably more flights to 20 of these. Of the cities to which it did not have more flights five were in Asia. Overall, though Heathrow had more flights to Asia than any other hub airport – 281 compared to Charles De Gaulle which had 176 and Frankfurt which had 148.

³ "the ability and ease with which passengers and/or freight can reach a given destination by air" - Paragraph 1.1, page 4.

⁴ Paragraph 2.14, page 10.

⁵ International Air Connectivity for Business – how well connected are UK airports to the world's main business destinations? AirportWatch. 2011. Available here:

http://www.aef.org.uk/downloads/Business_Connectivity_Report_August2011.pdf

⁶ Note that as July is a major holiday month the business traffic would likely have been less than the annual average.

- Heathrow had over 350 flights per week to American cities and 176 to the Gulf State cities putting it in a class of its own regarding its inter-connectivity to key business centres in these countries compared to its European rivals. It also the best connected to key business destinations in India (Delhi and Mumbai) and South Africa (Cape Town and Johannesburg).

What factors do you think contribute to the fact that the UK is directly better connected to some regions of the world than others?

The UK's historical colonial connections and the establishment of the British Commonwealth have clearly had an important role to play in facilitating the UK's current excellent connectivity. Furthermore our geographic position in the North Atlantic have enabled us to act at the European gateway to (and from) North America.

Given connectivity trends in the UK versus other European countries, how much scope is there for route network available to UK residents to radically change over the coming years?

Short haul domestic and intra-European flights currently utilize a large proportion of European airport capacity. Given the development of the European rail network in recent years this implies that there is substantial potential for modal shift from plane to train to current short-haul destinations. AirportWatch note that this could potentially free up capacity for business destinations further afield whilst reducing overall demand for air travel⁷. Indeed research undertaken for WWF-UK by Critical Research in 2011 regarding changes to business travel and meeting practices within large UK companies during the recession showed that improvements to the UK and European train network had already contributed to a modal shift from plane to train. Of those companies which had cut their flying 85% did not intend to return to 'business as usual' levels of flying post the recession⁸.

The likely change in the UK's hub status could also potentially free up capacity for more point to point connections to key long haul destinations in emerging economies. Please see our response to the next question for more detail.

To what extent do you consider indirect connectivity to be an important part of presenting an accurate picture of the UK's nature of connectivity?

Clearly indirect connectivity and how this might change should be considered when presenting an accurate picture of the UK's nature of aviation connectivity. However, it should be noted that connecting passengers account for a relatively small proportion of the total. For example the CAA passenger survey reports show that connecting passengers at English airports accounted for 17% of the total number of passengers in 2010 and 2011⁹. Indeed, the importance of the UK's hub status with regards to maintaining our excellent connections with the world's business centres in particular should not be over-stated. AirportWatch note that *"because London is so popular as a destination for business people, and is so well connected to other business*

⁷ International Air Connectivity for Business – how well connected are UK airports to the world's main business destinations? AirportWatch. 2011. Available here:

http://www.aef.org.uk/downloads/Business_Connectivity_Report_August2011.pdf

⁸ Moving on: why flying less means more for business. WWF, 2011.

⁹ CAA Passenger Survey Report 2010 (<http://www.caa.co.uk/docs/81/2010CAAPaxSurveyReport.pdf>) covered Birmingham, Doncaster, East Midlands, Gatwick, Heathrow, Humberside, Leeds Bradford, Liverpool, London City, Luton, Manchester and Stansted. CAA Passenger Survey Report 2011 (<http://www.caa.co.uk/docs/81/2011CAAPaxSurveyReport.pdf>) covered Birmingham, East Midlands, Gatwick, Heathrow, Luton, Manchester and Stansted.

destinations, it does not need an ever-growing number of transfer passengers to make it profitable for the airlines to run an attractive number of flights to key business destinations”¹⁰.

A report by Birmingham airport further notes that there is now a trend towards more point-to-point services within the aviation sector and that the UK should take into account this shift if its aviation industry is to remain flexible and resilient in the future¹¹.

In light of these points WWF hence believes that the competitive approach embraced to date in maintaining the UK’s importance as an international hub by vying for more transfer passengers than its competitors is no longer appropriate. It is more important to protect the UK’s excellent connectivity rather than its hub status. Indeed it is inevitable that UK aviation will lose some international market share as a hub due to its geographic position in relation to the global economic shift towards China and India which has already given rise to the establishment of mega hubs in Dubai and Beijing. As noted in the discussion paper “*transfer traffic wishing to travel from Central Europe to Asia would be required to travel for several hours in the wrong direction in order to transfer at a UK airport*”¹².

Instead we advocate that the UK should seek to specialise by:

- functioning as an interchange to those hubs offering the best links to emerging markets, such as Dubai and China. Maximising such hub-to-hub or point-to-hub links will act to increase UK connectivity to secondary destinations where there would otherwise be insufficient local demand to make these routes economically viable;
- increasing direct routes and frequency to major business centres in key emerging markets, such as Brazil, Indonesia and mainland China, which are currently underserved by UK airports but where there is already significant UK trade and interest. As noted in our response to the previous question this could be further facilitated by a modal shift from plane to train to some short haul domestic and intra-European destinations which could free up capacity for these long haul routes;
- continuing to exploit its current strengths (both geographically and historically) as the European gateway to North America, as well as offering the best connectivity to ex-colonies such as India, Hong Kong and South Africa.

To what extent do you agree with evidence that aviation connectivity supports the UK’s economic growth through facilitating each (1)-(5)? To what degree can causality between connectivity and (1)-(5) be established? Are there any particular research methods that we should be looking at and why?

As acknowledged by the discussion paper and previously referred to – the UK aviation market already offers a high level of connectivity. With regards to whether this facilitates economic growth overall however, the latest report by CE Delft commissioned by WWF, RSPB and HACAN concluded that the economic benefits of connectivity are not founded on solid evidence and there is no proof that extra connectivity results in economic growth¹³. Indeed the available empirical evidence indicates that increasing connectivity is less beneficial for developed countries than for emerging economies. The link between connectivity and economic growth is especially tenuous for large cities like London that are already well-connected . CE Delft also

¹⁰ International Air Connectivity for Business – how well connected are UK airports to the world’s main business destinations? AirportWatch. 2011.

¹¹ Don’t put all your eggs in one basket – A challenge to aviation orthodoxy. Birmingham Airport, 2012.

¹² Paragraph 2.10, page 9.

¹³ The Economics of Airport Expansion. CE Delft, 2013.

found that industry-funded studies¹⁴ that claim a causal relationship between expansion and growth have serious methodological shortcomings. A recent position paper from Prime Economics also disproves the link between connectivity and economic growth by demonstrating similar rates of GDP growth in France, the Netherlands and UK, despite the former two countries having invested far more in airport expansion over the last decade¹⁵.

In light of this, WWF considers that assertions that greater connectivity will guarantee UK economic growth, through airport expansion, should be treated with scepticism.

With specific regards to the degree to which aviation connectivity facilitate (1) to (5) and whether aviation connectivity constraints may act as a barrier to growth we would note the following:

- **Trade in services** - In WWF's experience¹⁶ of working with companies to reduce their business travel, we have found that professional and financial services companies are among the biggest users of video conferencing to replace flying. Perhaps this is because flying can represent a very high percentage of corporate carbon, often 50% or more, as well as being a significant operating expenditure so there is a strong incentive to reduce unnecessary flying. Once contracts are agreed and business relationships are established face-to-face, it is very common for such companies to hold routine client and internal meetings using conferencing technologies, frequently replacing the need for long-haul flights. We do not therefore believe that this sector would find connectivity constraints to be a barrier to growth.
- **Trade in goods** – Importantly it should be noted that UK trade in goods with the emerging economies of Brazil, China, India, Russia, South Korea, Turkey, Indonesia and Mexico, is predominately maritime. The lack of direct flights to some destinations in these countries appears to have little impact on trade intensity. For example CE Delft found that UK exports to these countries equal or outcompete European competitors, even where they have direct flights to the market but we do not¹⁷.
- **Tourism** – Long haul tourism in particular is reliant on aviation connectivity although this can be provided through indirect as well as direct flights. Indeed, Virgin Atlantic has recently said that passengers prefer breaking their journeys when taking a longer flight.¹⁸ The concern that the UK will miss out on growing inbound tourism from emerging economies unless it has greater connectivity also seems unfounded as tourism levels from India, South Africa and China to the UK have all been growing in recent years. Although countries like France attract a much higher level of Chinese tourism than the UK, in WWF's opinion this is more likely to be due to cultural preferences and fewer problems going through immigration than UK airport capacity constraints.
- **Business investment and innovation** – London's superior connectivity is already an important factor in attracting and keeping international headquarters and foreign investment in the UK. According to a recent study by Cushman & Wakefield, referenced in a

¹⁴ For CE Delft critiques of Oxford Economics *The Value of Aviation Connectivity to the UK*, Frontier Economics *Connecting for Growth*, British Chamber of Commerce *Economic Benefits of Hub Airports* and others, please see wwf.org.uk/airporteconomics

¹⁵ <http://www.primeeconomics.org/wp-content/uploads/2012/09/Heathrow-3rd-runway-03092012.pdf>

¹⁶ Please see wwf.org.uk/oneinfivechallenge and wwf.org.uk/travellinglight for further information about WWF's programme to reduce business flying and case studies of services companies who have cut their flights in favour of lower carbon means of staying connected

¹⁷ The Economics of Airport Expansion. CE Delft, 2013.

¹⁸ <http://www.rediff.com/business/report/new-daily-delhi-new-york-flights-from-october/20120808.htm>

report by AirportWatch¹⁹, London's excellent transport links to the rest of the world make it Europe's premiere business city. The report also found that air quality and traffic congestion are considered more serious drawbacks to international business than any lack of airport capacity. It concludes that London is unlikely to lose its top spot, even if no new airport capacity is added.

- **Long term productivity impacts** – As noted in the discussion paper “*long-run productivity effects are harder to identify and value, and attributing any such benefits specifically to aviation connectivity or any other factor may not be feasible*”. WWF can, nonetheless, offer anecdotal evidence that a reduction in business travel, when this is replaced with alternatives such as videoconferencing, may lead to an increase in staff productivity. For example of the 158 companies interviewed on behalf of WWF-UK by Critical Research in 2011 regarding changes to business travel and meeting practices within large UK companies during the recession – 58% observed that reducing flying had led to greater staff productivity²⁰.

Are there other channels through which aviation connectivity might facilitate economic growth? What are they, and what evidence is there to support this?

We have nothing further to add.

How effective do you consider that the aviation connectivity of the UK may facilitate economic growth now and in the future? What risks and opportunities does this present?

Please see our response to the previous question regarding economic growth.

How important do you consider connectivity for each of (1)-(5)?

See our answers to the connectivity question above.

Are there other relevant policy issues which should be taken into account?

Yes. Decisions regarding future airport capacity need to be set within the environmental limits to aviation growth recommended by the Committee on Climate Change in their 2009 report *Meeting the UK Aviation Target*. This clearly states that unconstrained expansion of airports is not consistent with the Climate Change Act and our legally binding climate targets. Although international aviation emissions are not yet formally included in the UK Climate Change Act, with this decision delayed until 2016, there is a presumption of inclusion as the Government has accepted that there are to be no changes in existing carbon budgets, which consider international aviation emissions to be within the trajectory for achieving the national 2050 target.

The best basis for planning future capacity, both in the CCC's and WWF's opinion, is to allow for a 60% increase in passenger demand and a 55% increase in Air Traffic Movements (ATMs) to 2050, compared to 2005 levels. This can be achieved with existing airport capacity (see our

¹⁹ <http://www.airportwatch.org.uk/wp-content/uploads/London-Top-City-for-Business-but-too-Dirty-and-Noisy.pdf>

²⁰ Moving on: why flying less means more for business. WWF-UK, 2011; www.wwf.org.uk/movingon

response to the final question) thereby ensuring that aviation emissions do not exceed 37.5 MtCO₂ or 25% of the 2050 carbon budget²¹.

What is the best approach to measuring the UK's aviation connectivity?

We have no views on the best way to 'measure' connectivity. However, we strongly believe that connectivity should include all forms of transport as well as conferencing technologies to replace the need to fly. Connectivity should not be the preserve of aviation alone. There is also a quality versus quantity argument here too. The number of destinations reached may not be a sufficient measure of 'connectivity' from a business perspective if many of these are to destinations with little economic importance.

Connectivity depends on many factors, such as number and frequency of flights and time and cost of travelling passengers. Do you consider any of these factors to be of particular relevance to facilitating any of (1)-(5)?

Our connectivity views for (1)-(5) have already been expressed above.

We have outlined a few different measures of connectivity in the paper. What alternative measuring approaches that we have not mentioned should we take into account?

See above.

What kinds of impacts do you consider capacity constraints to have on the frequency and number of destinations served by the UK? And, if any, are any particular kinds of routes or destinations likely to be more affected than others?

The latest CE Delft report states that in the medium term capacity constraints may cause congestion both on the ground and in the air. In the long term an increase in the number of flights and/or the addition of a new destination at a capacity constrained airport would have to be balanced by commensurate reduction in the number of existing flights/destinations covered. However, the report notes that "The relationship between airport capacity and connectivity.....is complex". For example in a situation where a network was optimised but operating under a capacity constraint, the additional flights enabled by allowing the airport to expand "*would have lower economic benefits than the other flights*"²². Please see our response to the following question regarding how we best consider capacity constraints can best be overcome.

To what extent do you consider that the need for additional connectivity may support the argument that additional capacity may be required?

Firstly, as noted in responses to previous questions, connectivity can be achieved in different ways, through the use of different transport modes and via the adoption of alternatives to travel such as video conferencing. Hence, a need for additional connectivity does not necessarily translate into the need for additional aviation connectivity.

Secondly, as previously stated the UK, and London in particular, is already streets ahead of its continental competitors in terms of aviation connectivity to key markets. Therefore, whilst we appreciate that there may be an argument for facilitating some additional aviation connectivity, particularly to emerging markets, we would question the need for there to be a substantial

²¹ Available UK airport capacity under a 2050 CO₂ target for the aviation sector. An AEF report for WWF-UK, July 2012. Available here:

http://assets.wwf.org.uk/downloads/airport_capacity_report_july_2011.pdf

²² The Economics of Airport Expansion. CE Delft, 2013.

increase in the UK's aviation connectivity (particularly if the reason for this is to facilitate economic growth (see response to previous questions)).

Thirdly, WWF does not believe that such an increase in aviation connectivity requires additional airport capacity. Indeed table 1 below shows that today there is a significant amount of existing spare airport capacity, even when the environmental limits recommended by the CCC are taken into account²³. Even in the South East, this analysis shows that there is less than a one percent shortfall in runway capacity so long as the trend towards larger planes and higher passenger loading continues.

Table1: Maximum available ATMs vs ATMs associated with CCC recommendations for 2050²⁴

Region	2009 ATMs	Max mppa in 2050 under CCC emissions cap	Average passengers per ATM (2009)	ATMs Associated with CCC emissions cap in 2050	Maximum Available ATMs	Under / over provision
Scotland	319,639	36.8	67.8	542,773	867,200	324,427
Wales	20,537	5.1	79.37	64,256	170,000	105,744
Northern Ireland	83,229	11.3	86.15	131,167	240,000	108,833
North of England	328,459	75.5	106.56	708,521	1,300,918	592,397
Midlands	154,356	22.6	89.14	253,534	389,119	135,585
South West	98,277	11.3	80.08	141,109	635,000	493,891
South East (adjusted)	1,081,606	202.1	198 / 123 *	1,349,000	1,346,000	-3,000
Total	2,086,103	364.7	105.28	3,190,360	4,948,237	1,757,877

Indeed there is already clear evidence that it is possible to increase flights to emerging markets using spare airport capacity today. For example Gatwick and Birmingham airports have added/are in the process of adding more routes to China, Korea and Vietnam²⁵. New routes from Heathrow to China, Sri Lanka and Mexico have also been added in recent months²⁶. Recent passenger figures at Heathrow and Gatwick also show a significant increase in flights to emerging markets²⁷, without any increase in airport capacity.

There are several measures the Government could take to further facilitate the better use of this existing capacity which would help enable additional connectivity including the addition of new routes to emerging markets. They include:

- reforming slot allocation;
- renegotiating bilateral treaties with key destinations such as China;
- moving flights with lower economic benefit and fewer transfers passengers to less congested airports;

²³ Note that although Heathrow is 'full' in terms of runway capacity under present usage it can still accommodate an extra 20 million passengers in its terminals and increase passenger loading on departing flights which are currently only around 74% full.

²⁴ Available UK airport capacity under a 2050 CO₂ target for the aviation sector. An AEF report for WWF-UK, July 2012.

²⁵ <http://www.gatwickairport.com/business/media-centre/press-releases/air-china-to-launch-gatwick-beijing-services-in-2012/>

²⁶ [http://mediacentre.heathrowairport.com/Press-releases/Heathrow-welcomes-new-route-for-Aeromexico-](http://mediacentre.heathrowairport.com/Press-releases/Heathrow-welcomes-new-route-for-Aeromexico-33d.aspx)

[33d.aspx; http://www.heathrowairport.com/plan-and-book-your-trip/latest-destinations;](http://www.heathrowairport.com/plan-and-book-your-trip/latest-destinations)
http://www.britishairways.com/travel/new-routes/public/en_gb

²⁷ <http://www.abtn.co.uk/news/1117950-asian-routes-boost-heathrow-and-gatwick>

- the greater use of larger planes such as the A380 (which according to BAA forecasts will increase the average loading at Heathrow from 143 to 198 passengers²⁸); and
- higher passenger loading. For example departing flights from Heathrow are currently only 74% full (which is lower than Paris, Frankfurt or Amsterdam)²⁹.

Contact	Jean Leston, Senior Transport Policy Advisor, WWF-UK
Email/Tel	jleston@wwf.org.uk
Date	April 2013

1961-2011: 50 years of conservation. WWF works in over a hundred countries to protect the natural world, tackle climate change and promote sustainable consumption.

²⁸ http://www.lbhf.gov.uk/Images/ERSP_Interim_Master_Plan_Report_tcm21-39448.pdf

²⁹ [ref. new CE Delft report].