

Airports Commission: Appraisal Framework Consultation

Response from the RSPB

For more information please contact Melanie Coath, Senior Climate Change Policy Officer,
Tel: 01767 693046, e-mail: melanie.coath@rspb.org.uk

Introduction

The RSPB welcomes the opportunity to comment on the draft Appraisal Framework proposed by the Airports Commission. Our approach to the aviation sector is led by two principles: that all development should avoid unacceptable harm to wildlife, and that the UK must continue on the path to meeting its carbon budgets, as legislated for in the Climate Change Act (2008). These principles underpin our response to the Commission's proposals. Below we set out our more detailed comments on those parts of the Framework that are relevant to our work.

Sustainability assessment

We welcome the approach by the Commission to conduct a sustainability assessment for each proposal which is separate from the business case.

Appraisal modules

1. Strategic Fit

In our view, demand predictions should not simply rely on the static models the DfT has produced. Instead the DfT passenger demand models could be augmented in the following ways:

- Scenarios built with macroeconomic projections from different organisations to include:
 - Oil price projections
 - GDP projections
- Probabilities of shocks built into simulation models such as:
 - Recession
 - Oil price spikes
- Other scenarios built on possible shifts in the industry or public policy:

- Changes in climate change policy
- Tightening of aviation emissions targets to include non-CO2 impacts
- More direct flights or stronger hub networks
- Budget airlines expanding into the international market
- Two alliances merge
- An alliance splits
- Increases in aviation taxation (e.g. air passenger duty)

2. Economy impacts

We are sceptical of the predictive capacity of input-output modelling, which is designed to model marginal changes, to model strategic infrastructure change. These models might work very well when estimating what might happen if, for example, widget production increases by 5%. However the point of the connectivity argument is that it forces a step change in that model i.e. that, in this example, a new market supplying components of widgets will open up shifting all of the fundamental industry linkages in the input-output model.

However, we recognise that connectivity has been an important issue in the debate and that the Commission's model is likely to be more realistic than previous estimates.

We would suggest that the modelling produced is tested on historic infrastructure changes as a simple test of its predictive capacity. The method devised to predict connectivity impacts of airport expansion should be tested using data for at least one previous project (such as HS1 and the Channel tunnel) and preferably more. These results can then be compared to the actual results. Care should be taken in the presentation to note the margin of error for all values produced. Models examining connectivity impacts at this scale have failed to find a measurable impact on economic output given the size of the margin of error for economic output estimates. If the result is a figure hidden in the margin of error then the report should simply state that it is unlikely ever to be known whether the expansion has any impact on the wider economy¹. The alternative of presenting the result as a single a big number is misleading to the general public.

3. Local economy impacts

Whilst the "community" section of the report does pay some attention to the stakeholders who will lose out, we believe that analysis should have a prominent place in the local economy section. Given that this is a political decision it would be misleading to present averages that mask decreases in economic welfare for some.

The local economy section does not mention the inclusion of disruption to local residents and businesses during development. There are significant risks that development will

¹ Vickerman, R. (2007) "Recent Evolution of Research into the Wider Economic Benefits of Transport Infrastructure Investments" OECD Joint Transport Research Centre. Discussion Paper No. 2007-9

overrun and so a risk based approach should be taken to considering what impact local communities and commuters will suffer whilst strategically important rail and roads are diverted. Furthermore this would be another place where the aggregates of economic reports might not fully describe the picture for those on the ground. For instance – there is a difference to local people between 100 businesses seeing a 10% drop in income and 1 business losing 100% of income that might not show up in the traditional analyses suggested.

Ecological population models recognise the difference between an individual based simulation and a set of non-linear equations. Traditional Cost Benefit Analysis overly relies on the latter and the difference between losing (or gaining) a livelihood and marginal shifts in income are blurred. The Commission has an important opportunity not just to do a thorough analysis but also to consider new ways to present a socio-economic appraisal. We recognise and appreciate that the Commission has been very thorough to date but we would encourage a comprehensive and innovative approach to the way impacts are analysed and presented to be continued, given the high stakes for the people and places involved.

Presentation of uncertainty & risk, scale & context

Appraisal of environmental policies in the UK have tended to exclude natural science evidence which contains some known unknowns – conversely the unknown unknowns of economic modelling are rarely seen as a barrier to the inclusion of evidence for appraisal. The sometimes heroic assumptions used for economic analysis are reasonable when presented as working guesses to aid decisions but are usually masked in appendices when the headline figures are presented.

These guidelines have concentrated on methods – however we strongly recommend that the Commission carefully considers presentation of summaries and headline figures. The British public is unused to hearing margins of error so the Commission should think carefully how to present the uncertainty and risks of its predictions.

In addition – scale is vital – a prediction of billions of pounds of connectivity benefits might sound exciting to the public & politicians but we need to know that in truth we may never be able to prove that impact as it sits well within the margin of error for national GDP.

Careful use of language, visuals and press releases will all be more important than the specific methods used to make what will remain highly expensive and educated guesses.

7. Biodiversity

At the Nagoya UN Biodiversity Summit in October 2010 a global agreement was reached to take urgent and effective action to halt the alarming global declines in biodiversity. The UK

Government is a signatory to this and has published a Natural Environment White Paper² where it has stated that it wants this to be the first generation to leave the natural environment of England in a better state than that in which it was inherited. In order to achieve this the UK Government has developed a Biodiversity Strategy which provides a national framework for action by 2020:

'To halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people'.³

The RSPB would like to see a sustainable aviation strategy that fits within the framework of this Biodiversity Strategy and demonstrates how it can prevent overall biodiversity loss. While aviation has social and economic benefits, it can and does have adverse effects on the environment, at both a local and global level.

Assessment principles

We believe it is essential that any assessment is undertaken using best practice national guidance such as the National Planning Policy Framework (NPPF). In particular Section 109 of the NPPF which states that development should minimise *'impacts on biodiversity and providing net gains in biodiversity where possible'*. This is stronger than the current wording in paragraph 7.1 of the biodiversity section which mentions that development in phase 2 should *'aim to avoid harm to biodiversity'* which therefore should be changed.

In line with the NPPF, the assessment should use the mitigation hierarchy which would involve providing clear strategies for avoiding impacts initially and only where impacts cannot be avoided mitigating to minimise the impacts. Compensation measures to address residual adverse impacts should only be considered as a last resort where it is clear the need for the proposal outweighs the need to conserve biodiversity.

By their very nature airports will have significant environmental impacts and this is why they are included in "Schedule 1 development" of the Town and Country Planning Environmental Impact Assessment Regulations 2011. Therefore we consider the phrase *'to some extent'* in paragraph 7.2 is rather vague and should be removed.

Sites of biodiversity interest

We welcome that the first assessment will identify a full range of designated sites including Special Areas of Conservation, Special Protection Areas and Ramsar sites down to sites of local interest. The reference to sites identified as compensatory measures should be corrected to remove reference to them as "mitigation" as this is incorrect. We suggest the following revised wording in line with the NPPF:

² HM Government (2011) The Natural Choice: securing the value of nature

³ Defra (2011) Biodiversity 2020: A strategy for England's wildlife and ecosystem services

“sites identified, or required, as compensatory measures for adverse effects on candidate or designated SACs, SPAs and Ramsar sites.”

Impacts to biodiversity features

We would expect any assessment to include habitat loss and fragmentation as a result of direct land take for the airport and connecting infrastructure. We suggest the reference in para 7.19 to the “ecological impacts of bird strike” should be changed to refer to the impacts on biodiversity of bird strike risk management, including the likely need to change land/sea use in and around any airport to counter the risk of bird strike. We welcome reference to other indirect impacts on biodiversity from noise and air pollution and recommend that the impacts of light pollution be added to this list of potential impacts. Moreover, we regard climate change as the greatest long-term threat to biodiversity and we have provided detailed comments on this.

Datasets

We support the use of datasets from JNCC, Magic, Natural England, but we would also expect consideration of biological records and Wetland Bird Survey alerts and new data collected for the specific site.

Ecosystem Services

The RSPB supports the use of the ecosystem services approach as a useful framework. However, it needs to be recognised that this is a relatively new approach and caution needs to be used. One issue that should be dealt with carefully is where a project could lead to irreversible damage to an ecosystem and the high levels of uncertainty surrounding ecosystem functioning.

There is a high degree of uncertainty in creating compensatory habitat. It needs to be recognised that while the objective in providing compensatory habitat should be that it is of equal quality and functionality, it cannot be assumed this will be the case for all habitats and species. This is because ecosystems are especially complex, possess variations in stability and resilience, and have response thresholds that are hard to perceive or understand fully. Also our understanding of ecosystems functions is limited. Therefore a precautionary approach should be adopted in any assessment.

There is some equivocation in the framework regarding valuation. 7.24 suggest that a full cost benefit analysis is unlikely to be carried out and instead a headline overview of impacts at a high level is more likely. On the other hand section 7.30 suggests that ecosystem service costs and benefits can be monetised. This uncertainty leaves a lot of room for the final work to include some relatively poor and half complete analysis.

The framework should decide what it wants to achieve. If this is a high level description of the impacts without significant valuation work then it should stick to that. Alternatively if costs and benefits will be valued then the Commission should commit itself to detailed evaluation. This is particularly important for the Thames Estuary where no benefit transfer value would be sufficient to capture the impacts for such a unique site. The destruction of the Thames Estuary would require separate primary data collection on the non-use value of the estuary. Alternatively a high level descriptive evaluation might simply point to other major disasters in protected areas (e.g. the Exxon Valdez oil spill) to describe the relative size of the impact which destruction of a wild habitat on this scale might have.

Doing something in between dependent upon what is gleaned from site to site is likely to lead to a fudge with poor figures which are not easy to compare between sites or in terms of the net impact of any expansion.

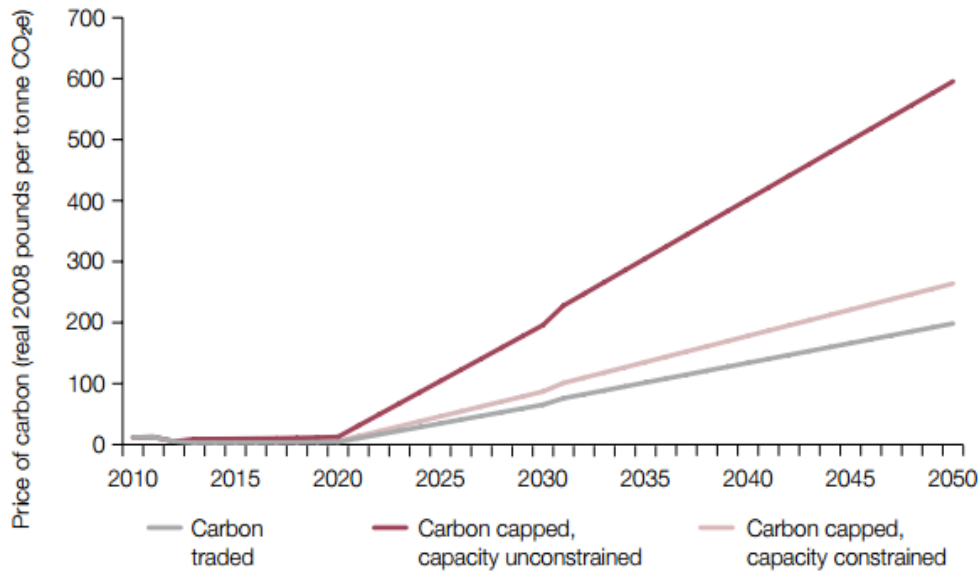
8. Carbon

The RSPB is disappointed that the Commission appears to consider that the case for expanding capacity in the context of climate change has been made in its Interim Report. Significant assumptions are made in the modelling and around the regulatory context necessary to achieve the target of no more than 37.5MtCO₂ from aircraft departing the UK in 2050. More detail on our concerns is set out below.

➤ Alternative scenarios needed to examine what happens if we fail to achieve extremely high carbon prices in 2050

The Commission assumes that the Government will set regulatory controls to ensure a traded carbon price of £600 per tonne by 2050 (see Figure 5.1 below, copied from the technical appendix) or equivalent regulatory impact. This is three times larger than the price required in the constrained scenario and more than 100 times the current traded price. Noting the equivocation of European and British parliaments on setting high carbon prices when they are considered to threaten economic competitiveness, it is clearly unrealistic to believe that such regulatory control will automatically be forthcoming. It is unfortunate that the Commission's analysis here is buried in a technical appendix since it exposes the heroic nature of the assumption necessary for the Government and industry to claim we can expand aviation capacity and still meet our carbon emissions commitments.

Figure 5.1: Carbon prices under different constraint scenarios



There are a number of further assumptions in the Commission’s modelling that we believe are flawed and we set out these concerns below.

➤ **Non-CO₂ impacts should not be ignored from quantitative assessments**

The Commission summarises the potential impacts and uncertainties in our current knowledge of the collective global warming impact of different aviation emissions. While there is clearly further research needed to refine our ability to quantify these impacts, the RSPB believes that this is not a reason for ignoring their impact. At the very least, the analysis could be improved if it included a scenario in which these emissions were accounted for.

Recent advances in the science of aviation’s non-CO₂ impacts supports the previous Government’s practice of using a multiplier for non-CO₂ impacts based on the radiative forcing index (RFI) of 1.9 drawn from the IPCC’s Assessment Report⁴. This would mean that the impact of aviation’s contribution to the UK’s emissions is closer to 12% than the 6% quoted at the start of the Commission’s paper. The RSPB’s view is that while use of a fixed RFI is imperfect given the different lifetimes of aviation’s CO₂ and non-CO₂ impacts, a much greater distortion is created by failing to account for these gases altogether. Furthermore, we expect the science to continue to develop in this area, and it should become sufficiently robust to include these effects within the UK’s carbon budgets within a decade. This will almost certainly require the aviation target to be tightened if other sectors are not able to make greater reductions. Such an outcome should be factored into the Commission’s thinking.

⁴Section 5.2.1, http://www.ipcc.ch/publications_and_data/ar4/wg3/en/ch5s5-2.html

➤ **The emissions trajectory and impacts of aviation emissions on other sectors is critical**

Allowing aviation to grow at levels suggested by the Commission places a huge decarbonisation burden on the rest of the economy. Cuts of 85% are extremely stringent and it is questionable why one section of the economy should be allowed to continue to expand its emissions when other sectors have to incur the cost of making significant cuts. In particular, the economy as a whole is required under the Kyoto Protocol to reduce emissions against 1990 levels whereas the aviation sector is required to reduce only to the higher levels in 2005.

The RSPB is also concerned that there is no roadmap provided in the Commission's analysis for returning aviation emissions to 2005 levels by 2050. There is also no assessment of the impact of the additional emissions above 2005 levels that are released in the period to 2050 and their impact on UK carbon budgets and the effort that other sectors have to contribute to the emissions reductions needed over this period. This trajectory is critical given that around a third of the carbon dioxide emitted will still be in the atmosphere a century from now and around 20% remains in the atmosphere for 1000 years⁵.

➤ **A positive outcome in international negotiations is highly uncertain**

The Commission acknowledges in its Interim Report that the international negotiations on a framework to control aviation greenhouse gas emissions are ongoing, but significant challenges remain and the ultimate form of such a scheme remains unclear. The Commission also states that it will "keep its assessment of need under review ... particularly in light of any new developments arising from international negotiations on the control of carbon emissions from aviation". The RSPB believes it is essential that the Commission factors in a potentially negative outcome from the talks and uses this to review whether, in this context, it is possible to accommodate the carbon emissions from constructing and operating new airport capacity.

While we very much hope that a global deal under ICAO is achievable, we are not optimistic given that a significant number of major countries – Russia not least – oppose the very idea of a global market based mechanism. Many others in the talks are holding out for exemptions including: developing countries, those that argue that they rely on aviation for their economy or which have a very small aviation industry. With so many countries wanting to halt or weaken the negotiations, it will be very challenging to design a global market-based mechanism that has both broad political acceptability and environmental integrity. The RSPB's view is that it is therefore, regrettably, unlikely that a meaningful agreement will emerge from this very political process and that this needs to be factored into the Commission's thinking from the outset.

⁵<http://www.acamedia.info/sciences/sciliterature/globalw/residence.htm>.

Furthermore, the Commission assumes that the CO₂ emissions from flights to and from the UK will be covered by the EU ETS before a global carbon market is established and until at least 2020. However, the EU ETS is unlikely to exist in its current form with either a continuation of the ongoing “stop the clock” halt on the ETS or a limited version of ETS where only emissions in EU airspace are included. Neither of these takes account of emissions in the way that the Commission anticipates and therefore this should be reflected in the way the Commission recommends carbon emissions are accounted from the sector.

➤ **Alternatives to flying have not been fully considered**

Given the urgency of the climate problem, we believe it is incumbent on the Commission to make recommendations beyond capacity provision on addressing demand. While we welcome the Commission’s acknowledgement of the work WWF has done to seek solutions to demand management we are sorry that no recommendations are made for this approach to be explored seriously by Government.

➤ **Further work is needed on the carbon implications of expanding capacity and the regulatory and fiscal measures necessary to achieve the carbon reductions**

We welcome the carbon scenarios analysis outlined in the Commission’s Interim Report. We believe further work would be helpful in assessing more fully the likely resulting emissions and the regulatory regimes required under each of the 3 options. Thus far, the RSPB considers the carbon-capped capacity constrained scenario is the most appropriate real-world assessment for carbon emissions but given the concerns highlighted above we would like to see further analysis including of scenarios less reliant on unrealistic or unreflective assumptions.