Engagement

**Sustainable
Development Commission**

Findings from the SD panel debate
Aviation – Second Session

September 2007

Overview

This report summarises SD panel members' views emerging from the second session of the SDC's consultation on aviation. Questions were based on responses from the first session[1] and aimed to seek members' views on:

- Specific aviation policies that had already been identified in session one
- Approaches to developing a coherent, strategic approach to aviation policy
- How to frame the debate around aviation in order to gain political space
- To get feedback on a broader engagement process.

We have not aimed for a consensus or majority panel view in our analysis, but rather to demonstrate the range of insights offered. Responses should be read in full to gain a detailed picture of members' views.[2] The responses, final report, appendices, and session one results are being used to inform our current work programme on aviation.

This report is divided into four sections, reflecting the four questions asked. Each section begins with a summary (in orange) of the background information provided to members. The responses to each question are then collated under headings, with members' quotes used to illustrate the main themes.

Panel members will be able to view all responses and answer a set of evaluation questions in the third session from 24 September to 14 October 2007. The responses will be publicly available once the consultation evaluation has been completed.

This consultation process is being facilitated by Dialogue by Design on behalf of the SDC[3].

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[1] An interim report of session one can be found within the consultation website.
[2] We have collated responses to each question for session two into a number of broad groupings. Full responses under each group heading can be viewed on the consultation website
[3] 81 panel members participated in Session two with a total of 265 submissions received as outlined in Appendices 1 and 2

The key messages raised by panel members from session one about the policy proposals have been summarised, as well as any other proposals or actions suggested.

The summary includes strengths and weaknesses as well as any conditions of acceptability panel members suggested. It does not reflect all the specific points from the consultation. Panel members' views can be read in full in 'view groups' within results for session one.

The SDC welcomed panel members' thoughts on specific proposals (especially comments on new proposals raised) or if they could think of anymore new policies they wished to add.

The comments are being used to help the SDC get a broad perspective around each proposal for our forthcoming booklet and for our discussions with government, NGOs and industry.

1. Do you have any further comments on the revised policy proposals and actions?
(73 responses)

Members' responses give further indication of strengths, weaknesses and conditions of acceptability for the individual policy proposals discussed in session one. These additional comments on policies are included in the annexed policy proposal summary.[4]

A couple of issues have emerged as being particularly significant in this session – the use of economic measures, and the role of food and freight - we have highlighted some of the comments below.

Many also comment on issues such as the need for a whole systems approach to aviation policy, the need to place the debate within an international context and the need for clear leadership. These key principles are dealt with in more detail in question two of this report.

Economic measures

One point reiterated by many members from the first session is the feeling that economic measures alone would not work. Members feel that any such measures (both punitive and trading) would have to be transparent and well integrated with other policy measures, such as viable alternatives, re-investment in technology and behaviour change initiatives.

> *"… tax on air travel, in whatever form, would have to be demonstrably used to tackle climate change / alternate transport issues: not just become a part of general taxation."* (ID:1864)

> *"With emissions trading, new technology developments and real behaviour change by industry members will not happen (it may slightly drive up prices but consumers are notoriously price elastic when it comes to transport). So while inclusion in the ETS is a good thing it should not be relied upon and other aspects of technology development or behaviour change are needed."* (ID: 2009)

Many support direct fiscal measures (particularly fuel and environmental tax but also Air Passenger Duty) although some question their effectiveness.

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[4] As outlined in Appendix 4. New comments made this session are shown in italics

" Taxation/environmental taxation: this measure, taken at EU and international levels is potentially the most effective of all listed - this should include not just fuel tax, but all the associated environmental impact costs" (ID: 2129)

"Air Passenger Duty has very little effect on demand because it is so small compared to the total cost of a journey of which the price of the air ticket is only one small component. Setting APD at a level that would make it effective, would also reduce economically necessary travel as well being politically very difficult to introduce" (ID: 2189)

"Air passenger duty would seem to be the best way forward because it is a tax at the point of purchase and it applies to all airlines but the proceeds must be used and seen to be used in a way that's justified and understandable." (ID: 2125)

For broader carbon reduction measures such as personal carbon allowances and emissions trading there is support from many members but opinion is divided about whether it will be possible to implement them successfully.

"I think we need to be careful about emissions trading and offsetting. Public policies to promote such schemes are also creating a set of potentially powerful institutions, such as permit traders and market enforcers… Their interests and sustainability interests need not correspond" (ID:1605)

Food freight

One of the new policy suggestions from session one that provokes a lot of debate is food and freight. Several people note that it is a complex area and voice their concern that policies could severely impact developing countries without necessarily having as great an impact on carbon reduction as first thought.

"…Kenya argues its climate is better suited to growing fruit & veg and this offsets the travel impact compared to EU growers who use energy to force out of season crops…" (ID: 2039)

"The reality is that the majority of fresh produce flown from Africa is held in the belly-hold of passenger flights (60-80%). The allocation of emissions between passengers and freight is not defined and airfreight calculations usually assume all of the plane's emissions are divided proportionally between the cargo only.." (ID: 1566)

"Their argument is that they need our markets to improve the lot of African producers. It would be better if help were given to them to diversify so that they produce goods which do not need to be air freighted." (ID: 2187)

Clearer evidence base

Members comment that the list of proposals provide a useful and comprehensive list of existing and potential ways forward. However, it is made clear that there these should be only used as an outline and much more detailed analysis needs to be undertaken in the following areas:
- Cost-benefit analysis
- Short-term fixes vs long-term sustainable solutions
- Local, national and international implications (including across the Devolved Administrations)
- Role of government, business and individuals
- Mapping along a critical path

In addition, members note that more robust evidence across all strands of sustainability (social, economic, environmental and scientific) is needed to help make the right decisions.

> *"At present, there is a dearth of independent evidence and analysis on this, a lack of awareness and consensus around the analysis that has been conducted, and so a poor foundation for discussing policy options and how they should be prioritised and integrated… Urgent progress is needed to define the 'radiative forcing' factor and identify how it can be applied to GHG emissions calculations in an acceptable manner"* (ID:1633, Q2 & Q1)

> *"…There is a need for a better understanding of the science involved at all levels. At present, there is a danger in becoming engaged in emotive argument rather than objective evaluation..."* (ID: 2200)

Question 2 – Strategic approach

In panel members' feedback from session one, many members strongly recommended taking a strategic, integrated approach to addressing aviation issues, rather than looking at individual proposals in isolation. This will require addressing issues such as:

- outlining/determining clear priorities
- the responsibility to implement proposals and actions – e.g. government, business, individuals
- how to prioritise – e.g. whether to focus on small wins first (such as communications) and gradually introduce tougher measures as necessary, or whether to try for a more immediate fundamental shift
- how to integrate the proposals and help them be seen as part of a broader national carbon reduction strategy
- how to get international buy-in to agreements - e.g. should the UK take the lead and encourage others to follow suit or is there a need for European/worldwide consensus before implementing any initiatives.

This is clearly a very complex issue but we wanted to get members' initial views on how to approach this.

2. Considering the proposals and issues, how could the multiple of individual actions be pulled into one over-arching strategy on aviation and climate change?
(65 responses)

In both questions one and two, many members mentioned similar issues that we have termed 'principles'. Comments suggest that these principles, outlined below, should underline any approach to aviation policy.

A whole-systems, integrated strategy

Many members note the need for government to take a holistic approach to aviation policy, one that recognises the contribution of aviation to sustainable development and aligns it within broader transport, carbon reduction and sustainable development strategies.

> *"The Government needs to take the lead and develop an overall transport (including aviation) strategy. Then it needs to set a good example whilst, in parallel, introducing legislation that implements the strategy… Quick wins must be won but not at the expense of ignoring the bigger picture…"* (ID: 1917)

"The role of air transport in modern UK society has to be recognised [together with] the social and economic benefits that arise from it. The debate to date has been stereotypically 'Single Issue' and fails take account of the role of aviation as opposed to surface modes in a sustainable transport (or mobility) network." (ID: 2229)

Some note that within a national carbon reduction strategy it could be far more achievable to curb emissions in industries other than aviation.

"…It is a waste of money and resources to spend more on saving carbon in a difficult industry (such as aviation) if the same or more carbon can be saved in a relatively easy industry (like electricity generation) - so long as overall the trading limits are set to save enough carbon to fix the climate…" (ID: 1610)

Others feel that a carbon-only focus may not result in sustainable policies.

"Einstein's saying about problems being insoluble with the kind of thinking that caused them is apt. Unsustainability arises from placing important factors outside the 'box' and focusing attention on a few 'clear priorities'. The reductionist approach of seeking solutions for aviation within an aviation box and solutions for climate within a carbon box is a strategic oversight. The result will be policies which are environmentally ineffective or socially/economically damaging (or both!)" (ID: 1802)

Government to lead

Any holistic strategy would then create the structure for coordinated action. Most members expect government to lead on any action but recognise the importance of business and individual responsibility.

"… on the conflicts between Government Depts, i.e Defra and DTI, the Treasury needs to lead, as we have seen with Procurement; Defra banging one drum, but Treasury not backing it up. The Treasury must lead, as all other Depts will then follow." (ID: 1587)

"They should be set within a broad framework to which "all" sign up led by Government and influential voices in civic society - church - trades unions etc. This should set aviation firmly within the need to combat climate change and highlight the need to change the way we live. For a start stop talking about "economic growth" and understand that there can only be "sustainable development" ... This should then lead to a hierarchy of actions - necessitating for example a rewriting of the White Paper into a Carbon Reduction Strategy." (ID: 2190)

"Much that has to be done can only be done internationally. That is the nature of aviation. However where we in UK can take a lead and set an example, we should seek to do so. This certainly means initiatives from the government, but business and individuals can take initiatives too: by stressing and making known the advantages of the alternatives to air travel for instance." (ID: 1864)

"My view is that a simple outcome message is needed, clarity about complementary roles of govt, business and individuals and respective levers for change, honesty about where aviation sits in bigger picture of climate change, short, medium and long-term measures ideally with some big government actions early on i.e. lead by example. Given that individuals apparently most resistant to change re cars and planes, probably need early tough business tax-related measures to kick start, with communications strategy which offers simple messages and tips for individuals" (ID: 2062)

International Context

Members' comments suggest that any approach to aviation should sit within an international context, but that the UK should be willing to take the lead.

> *"Britain is very well placed to take that lead - we have high levels of awareness, lots of expertise and, when all's said and done, we've got the resources to pull it off thanks to all the money we've made from burning fossil fuels for the last 150 years…"* (ID: 1878)

It is suggested that taking the lead could mean instigating discussions and pushing for harder agreements.

> *"A consensus doesn't spontaneously appear by everyone waiting for someone to make the first move. The government is positioning itself as an international leader on the issue of Climate Change; they should lead."* (ID: 1615)

> *"Common co-ordinated approach is imperative globally - through ICAO. The next session of the ICAO assembly in Sept is discussing guidance for a global emissions trading system, UK should strongly push for this as the main realistic measure that can be put in place fast."* (ID: 2129)

There is mixed opinion about whether the UK should act unilaterally; some feel that domestic action is a good way of showing leadership while others feel it could prove more damaging to the UK.

> *"Can't afford to focus on "small wins" first - need to move quickly to measures that will have a substantial effect. Take the EU and international community along with us if we can, but be prepared to give a lead even if this means acting unilaterally. Many measures – e.g. limits on runway growth - don't require international agreement."* (ID: 2206)

> *"We first need to identify and agree the scale of the problem from a factual base and then work out appropriate policies to be applied internationally. Aviation is by definition international. Its operation is governed by hard fought international agreements and treaties. There is every existing incentive both economic and regulatory for the air transport industry to reduce its use of fossil fuel, thus emissions and related impacts. We must not penalise the UK industry unilaterally when it has one of the most modern and efficient fleets in the world."* (ID: 2223)

> *"I think action on domestic travel could offer a good pilot for tackling some of the issues and testing the effectiveness of some of the approaches that could then be offered to the international community."* (ID: 1669)

New leading body

Some suggest that UK leadership should be taken forward by an independent body working with all stakeholders to help deliver policies and action.

> *"I think, first of all a governmental body that deal with aviation associated CO2 emission and other environmental issues needs to be formed. It could be a new organisation specifically established for this or another section in DFT. This department would be responsible in setting up strategies; researching and developing new technologies and approaches, and working with others on this; combining forces with similar departments in other European countries and beyond."* (ID: 1617)

"The most cogent force for change may be an independent (and self-appointed if necessary) panel of high-powered and respected leaders from a range of disciplines - scientists/meterologists, futurists, economists, media, business leaders - who collectively recognise the dangers of climate change and believe that action on air travel (amongst other things) is essential. An international panel would be better, but UK-based if not. Their main role would be first to develop consensus themselves, then to widen this to influential politicians, and ultimately the wider community." (ID: 1842, Q4)

Clarity and explanation

Several members felt that clarity, information and explanation is needed about the range of issues within the debate around climate change and aviation.

"Communications: should be integral to delivery of whole-strategy, rather than an 'easy-win' strand of it. Each action (whether emissions trading, raising technology standards, promoting alternatives) must be well-communicated to all stakeholders (industry, public etc)…" (ID: 2045)

"The first public priority should be providing information and contradicting the misinformation that is prevalent in the media. For this, I suggest a large-scale, well resourced and sustained PR campaign similar to that in the 1980s to raise awareness around HIV/AIDS." (ID: 2185)

"Broader engagement - find a way to close the gap between the science and punter. People vote for what they understand. [Also] a series of major international consultations perhaps - although this again would hardly deliver a quick fix" (ID: 1607)

Although information alone is felt unlikely to change behaviours.

"Do the people that believe that individuals are uninformed or don't understand some need to act, have any evidence? Work I am involved in would suggest that they are wrong - people in fact are saturated with information about climate change and understand how important aviation is (disproportionately so!). I think the problem is more that for many, the flights they do take are linked to holidays or year highlights. Happy to change their light bulbs, recycle more but Morecombe rather than Madrid is a step too far." (ID: 1597, Q3)

Equity

Members suggest that any approach must be fair. Some highlighted the socio-economic impact on those within directly reliant on aviation, both within the UK and other countries.

"Where I feel uninformed is in assessing the true contribution of aviation to social and economic development - acknowledged to be equally important legs of the sustainability "stool". My gut tells me that millions of people now rely on aviation directly or indirectly for their financial stability, and that many economies have been developed or improved by the arrival of air links" (ID: 1643)

"Proceed within an integrated SD context so that the full, sometimes negative. impacts of the measures taken can be assessed e.g. the impact on 3rd world development of any reductions in airfreight of food or long haul tourism etc. Also the impact on employment in industries associated with air travel and aircraft

production. Need for a "just transition" with alternative sources of employment and redeployment and training planned in." (ID: 1731)

Others considered the fairness for all of those within the UK.

"A Personal Carbon Allowance should be the aim of the strategy. … it's the most equitable way to do this in the UK and … the UK has a responsibility to lead the way on this issue … Perhaps the emphasis should be the equitable quality of this strategy. We're in this together ...." (ID: 1604)

Question 3 – Framing the debate

Although the sustainable development movement and many politicians now take it for granted that the case for action on climate change is clear, a significant part of the population does not. For any strategic approach to work, political space will have to be created for the actions to be implemented (or even considered), especially actions that directly affect the public, such as personal carbon allowances. These sentiments were brought out in many of members' responses to session one.

A forthcoming report carried out by IPPR on behalf of the SDC shows that political space is often closed down by certain interest groups and the media. Recent examples of this are the Association of British Drivers online anti-road-pricing petition which dominated the news for several weeks and media hostility to environmental taxation following the Stern review.

The report also highlights that political space can be created through a combination of strong credible leadership and the correct framing of the issue. For example, in presenting the London congestion charge Ken Livingstone framed the issue as a choice between the charge (as the only viable solution) or letting congestion get worse and worse. He was careful to frame the congestion charge as something he was reluctant to do (to avoid the impression it was simply about additional revenue), but that was a necessary measure to avoid chaos (NB - he did not focus on the environmental impact).

In this context we would like to explore how any discussions on aviation could be framed to create political space and if (and how) the urgency of the need to address climate change is the correct framing of the issue to allow government to act. It may be necessary to focus on specific issues around climate change or it may be that climate change is too big and disconnected, and other issues relating to flying matter more to people. It may also be necessary to consider different frames for different groups.

3. How would you frame the aviation debate to help open up political space for action?
(66 responses)

Framing the debate around climate change

For many climate change is seen as the obvious frame. Members put forward a number of ways to approach aviation within the climate change debate:
- scientific fact and information that is agreed and dictates the need for action
- the international context and impact of climate change
- changing the perception of flying from socially desirable to a polluting luxury
- focusing on the ethical and moral dimensions; that we have a responsibility to act
- outlining the implications for UK now and for the healthy future of our children
- not to target 'the man in the street's freedom' but frame as a collective societal action

"The key framing measure is for the Government and other opinion-formers to consistently present the need for urgent and deep action to curb climate change as the biggest challenge which we face - public opinion is changing fast in a positive direction and Govt must lead not follow…" (ID: 2093)

Flying/climate change frame is too narrow

Many members agree that focusing on aviation alone would not be the correct way forward.

"Clarify the links between the rather abstract concepts of 'climate change' and 'global warming'; our lifestyles, which include frequent flying; the extreme and unusual weather patterns we are experiencing, and the risks of damage to life and property, the rising costs of food, et cetera. The debate needs to be broader than aviation alone" (ID: 2185)

However, a few feel that even climate change is too narrow a frame for truly sustainable solutions and that any debate must tackle all sustainable development issues.

"There is I believe a strong argument for an organising metaconcept. However there are two problems with framing climate change as the central metaconcept. Firstly the aviation industry's argument that it is a minor contributor to global warming. Secondly there still appears to be a misconception at government level that when people are aware of the problem it does mean that they will act for its resolution… What is missing form this type of analysis is the focus on sustainable development as a process of governance that entails social economic and natural conceptions of sustainability and the need for personal and community empowerment" (ID: 2113)

There is a suggestion that if handled correctly, aviation could be used to open up a wider debate.

"Given the current high profile around climate change I feel that climate change and aviation should be the hook for what will need to be a wider debate about the transport sector in general... The debate will have to be kept this wide to prevent the political space being closed down by issues raised in session 1 …such as discrimination against one sector, Other people have freedom to fly why shouldn't I?, aviation is essential for economic growth, improvements in technology will save us" (ID:1759)

Different frames

Many suggest that different frames should be used to target different people or travel needs.

"Certainly need to frame differently for different groups. A health-pollution-active lives kind of message might be more appealing than a technical aviation type message - and build on some other messages, particularly if they relate to future health and quality of life for children. Right now, given extremes of summer weather across world, an environmental refugee message could strike a chord" (ID: 2062)

"There is no single 'correct' or 'best' framing. Framings that work for an environmentalist do not do so for others. We need research that understands the framings that will work for the significant proportion of the population currently flying excessively. The other thing to consider in framings is which specific flying behaviours they are addressing: 'binge flying' to weekend destinations; business travel; long-haul holidays; and so on.

Congestion as a framing may deter weekend breaks, for example, but not so much an annual holiday flight where delays impact less (1605)

Focus on the positives…

Several note that any engagement process should be about positive change rather than restriction.

"Folk need to be encouraged and shown that the environment can be protected without taking all the fun and progress out of life! Don't decry fast cars and motor racing - embrace the notion and seek ways of continuing in an environmentally friendly way (bio ethanol Formula 1 for example) Aviation could go the same way - talk about efficiency gains and new means of propulsion rather than branding all families that travel abroad as worse than holocaust deniers…" (ID: 1723, Q4)

"Debate must be framed to show the economic and social advantages of taking action as well as environmental gains. For example the benefit per pound invested in alternatives to air travel infrastructure as compared to investing in airports etc" (ID:2065)

…and the negatives

Others suggest framing the debate around the downsides of flying: However many felt that these negative aspects of aviation should only be illustrated in conjunction with positive alternatives.

"I don't think people should be shy about framing the aviation debate within the context of climate change, and the Ken Livingstone analogy given above is a good one. However, there may well be room to frame the debate in numerous ways, e.g. the current criticism of the BAA experience is a good way into a conversation about the overall stress of the flying experience, and (linked to this) time wasted. Taking domestic breaks, using video conferencing and high speed rail can all be given as ways to save time and reduce hassle / stress(and sometimes money) - so it can become a quality of life argument as well." (ID: 1711)

"For leisure travel the debate could be framed in the context of the current uncomfortable process of flying - congested airports and growing hazards. Also the high temperatures being experienced in the Mediterranean area as a result of global warming. So while the experience is becoming much less "glamorous" might be good time to both point up the links with CO2/GHG and to offer more "sustainable" and comfortable tourist destinations/ modes of transport. (ID: 1731)

Political action

The need for consistent, credible leadership is seen as key for opening up political space for action by many members.

"The arguments are already there - the problem is that the Government, whilst voicing them, then takes actions which are completely contrary. The message is therefore confused and no clear guidance is given. The issue of climate change is not too big for people to understand , what is needed is firm leadership. Already the debate is opening up with the possibility of an election." (ID: 2190)

Some specific measures are suggested to help open political space.

"A huge effort is required either by the political leaders, or by some independent agency (such as the SDC), to agree some cross party concordat that takes climate change (and aviation) out of the political boxing ring. This could be done in stages -

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a cross party commission that first looked again at the issue, then developed a strategy that all parties were prepared to endorse." (ID: 1842)

The media

There is mixed opinion on the media's current representation of the climate change agenda and whether it is helping open up political space.

"I think recent media coverage of climate change and, in particular, reports on aviation's impact on the environment has already brought the issue to the front of people's minds. The news bulletins all seem to be covering the topic in great depth and in a serious way and so are framing the debate in a helpful manner." (ID: 1722)

"Responsible media should be called into leadership too - editorials preach on climate change while adverts next to them promote flight special offers." (ID: 2129)

There are a few suggestions about what the government can do to help bring the media on board.

"Somehow you have to further engage with the media...Lead media corporations need to sign up for the policy framework or strategy, so they are part of the process" (ID: 1587)

"We need to provide a choice of ways to act and allow the media circus to be about which of the two approaches is the worst / best. Feed Blair's 'Feral Beasts' but let them fight about wholemeal bread verses wholegrain cereal for breakfast rather than poptarts vs cocopops (!)" (ID: 1737)

Finally, it is pointed out that any framing should help open up a debate rather than close it down.

"*Anything that can find common ground between apparently different groups is the way to erode the impact of single interest groups"* (ID: 1726)

"If sustainability means anything it is to re-structure the way we live, travel and do business, and the public needs to be clear that re-thinking aviation is not easy, but necessary nonetheless; most importantly that the public are included and that there is no one pre-determined outcome of any public consultation process" (ID: 1576)

Question 4 – Broader engagement

We are aware that there are many initiatives looking at aviation and that there are a wide range of perspectives on the best way forward, which has been reinforced by your responses.

We are interested in exploring whether, by framing the issue correctly, stakeholders with opposing views could come together to agree a common set of problems and potential solutions. This consultation will form an integral part of scoping how to do this.

We would be interested if panel members had any thoughts on how we should best approach a broader engagement process on aviation. Issues you may like to think about include
- How to get sceptics on board
- Who would be a credible and charismatic leader of a national debate on aviation
- What issues the SDC should focus on

- Any examples you have from your own experience of successfully moving a debate forward.

4. Do you have any suggestions for how to reach and engage with the diverse range of interests in a dialogue on aviation?
(61 responses)

Level of Debate

There was enthusiasm for a full engagement process at the highest level.

"SDC is in a very good position here, being close to government and so getting industry interests, but also being quite vocal in the past which may appeal to environmental NGOs too." (ID: 2233)

"The SDC has very limited scope to influence public opinion at large directly. Its main role must be to influence Government to find equitable and consumer-friendly ways of constraining growth in flying" (ID: 2206)

"SDC is right to try to add clarity to the evidence base and communication of the salient issues to opinion leaders. This is a good focus. Can it also try to do something about the DfT vs Defra schism?" (ID: 1633)

Whether it be at a public or stakeholder level, members suggest that all aspects of the aviation debate need to be understood and the debate needs to go wider.

"Allow it to have a multiple focus. Allow the engagement process to encompass how to identify and use the best possible scientific advice, on the economic benefits of technological innovation, of the idea of shared social responsibility towards future (and, importantly, CURRENT) generations, and of the value of public involvement, citizenship and democracy to achieve important national and international social benchmarks" (ID: 1600)

Starting base

Some members mention the need for some foundation to the engagement process. This would involve having some baseline evidence that can be agreed on and can help all parties agree on the problem.

"The first step to getting sceptics (who can be from both sides!) 'in the room' is to establish a commonly agreed information base - i.e. what needs to be looked at, what information is agreed to be available on each issue and what possible meanings that information offers about future choices (not one meaning but several). It would also have to be agreed that this can never be 100% convincing or correct because, in aviation as much as anything, someone can always suggest yet more factors that should be considered. There is therefore a need to agree on optimisation - that a certain level of information is 'enough' from which debate can start. It is doubtful if the SDC alone would be judged to be a neutral arbiter on this; others from all 'sides' would need to work together on the information base." (ID: 1726)

Sceptics

Sceptics are generally viewed as those within the aviation industry, wider business circles and the general public who are perceived to have the most to lose from any changes to the

nation's flying habits. A few note that environmental groups can also be sceptical of trying to achieve 'a middle ground'.

> *"Although growing faster than some others, it is still a relatively small contributor to global warming; so acknowledge that to the sceptics and do not let this look like a vendetta against aviation in general"* (ID: 1864)

To help get sceptics on board, members suggest framing any debate around their needs.

> *"The best way to get the climate change sceptics on board is to look at the consumption of non-renewable resources and the current dependence on imported fossil fuel. There is close alignment between reducing carbon emissions and reducing dependence on imports. Most of the population will only change their lifestyle if it makes economic sense at a personal level to do so. This applies to all energy usage not just the aviation part of transport…"* (ID: 1917)

A couple of members even suggest that sceptics should be encouraged to take the lead.

> *"The image of the sceptics is that they have their head in the sand or believe improvements in technology will deliver everything - this may be a harsh view and it would be useful to place a greater onus on them (i.e. the industry) to come up with robust proposals of hitting certain emission targets without the government taking the legislative action they may find onerous. These proposals need to be evaluated rigorously, but worth exploring."* (ID: 1669)

Key Individuals

Panel members have identified specific individuals they believe could play a key role in giving support and leadership for a dialogue on aviation. The most commonly referenced (although not unilaterally supported) is Richard Branson.

> *"Richard Branson is an essential part of the 'public debate' on aviation"* (ID: 2009)

> *"The general population will distrust business leaders involved in aviation. Charismatic as Richard Branson is, this is not the topic for him to lead!"* (ID: 1643)

Others refer to environmental leaders (e.g. Jonathon Porritt) but many feel that more surprising choices could help open up the debate further, whether it be 'poachers turned gamekeeper' (e.g. Branson, Michael O'Leary) or involvement of businesses with a completely different angle (e.g. BT).

> *"Use trojan horses - non-usual suspects - combine top down charismatic players from all fields - comedian, sports people, business people, personalities, soaps, and bottom up - huge potential in the community and community sector networks…"* (ID: 1813)

Many also feel that any debate may benefit from different leaders for different aspects of a debate rather than a single figure-head.

> *"Would it be possible to get several credible and charismatic leaders working together to take this forward, one which is economics, one environmentally, one socially aware. Maybe Rod Eddington, Michael Palin...."* (ID: 2233)

Despite mentions of various individuals, there is some strong feeling that focus on any individual could easily derail process and take away objectivity of debate.

"I have to confess that in an area where I believe that what is needed is a balanced and rational approach towards informing people then I am against a charismatic approach as this then tends to focus on the individual, their personality and their view of the world rather than on the underlying case, and the associated science. What perhaps is needed is a means of establishing a robust base of credibility within which people can operate and that their is care taken to ensure that people are not being talked at (a typical political failing in this area) or patronised for an apparent lack of understanding" (ID: 2200)

Conclusions

Throughout all the questions in the second session there are some key themes emerging that will help the SDC across its aviation work programme:

Transport policy options

- The set of specific aviation policy options mapped out in session one, and then re-considered in this session, offers a range of potential ways to help reduce carbon emissions within the aviation sector, along with the potential strengths and weaknesses of the options. These will be examined further in our transport work.

- However, there is a need to step back and look at aviation through a broad SD lens *before* thinking how specific aviation policies should work together.

- Any policy options should be based on sound evidence.

Underlying principles for developing a policy approach

- Members have given us some clear guidance on the key principles which should underpin any policy approach such as leadership, equity and the UK's role internationally.

- We will look at both specific policy suggestions and underlying principles when developing our conditions to government on any way forward.

Engagement

- A strong, on-going engagement process could prove an effective way of developing sustainable policy options. The panel's views will feed into the SDC's proposed engagement programme on aviation.

- There are many steers given on how to frame the debate, particularly around climate change. We will explore the panel's ideas further - both around climate change frames and the alternatives.

Aviation booklet

- There is a need for clear and accurate information to be agreed and presented to both key stakeholders and a wider public audience . Having taken on board panel members' comments, it is clear the SDC needs to revise the format and content of our booklet and get some agreement over the evidence base between stakeholders. This may be a product of the first stage of an on-going engagement process with government, NGOs and industry stakeholders.

Appendix 1 – List of 81 panel members who participated in session two

Mr	Ben	Agbasi
Ms	Diane	Alderdice
Mr	Charles	Allison
Mr	David	Allwood
Mr	Jonathan	Bailey
Dr	John	Barry
Mr	Paul	Baruya
Ms	Kate	Beckmann
Mr	Jeff	Bishop
Mr	Derek	Boden
Ms	Liz	Bogie
Mr	Paul	Bollum
Prof	David	Bradley
Ms	Manda	Brookman
Mr	Nick	Brown
Mr	Jon	Cape
Ms	Lynne	Ceeney
Mr	Danny	Chivers
Miss	Ellie	Cooper
Dr	Donald	Curtis
Mrs	Geraldine	Delaney
Mr	Andrew	Dixey
Mr	Dominic	Doble
Prof	Andrew	Dobson
Mr	Chris	Dunabin
Ms	Joyce	Edmond-Smith
Dr	Geraint	Ellis
Dr	Val	Ellis
Mr	Martin	Evans
Mr	Stephen	Farrant
Mrs	Anna	Fielder
Mr	John	Forster
Mr	Nick	Forwood
Mrs	Lesley	Franklin
Dr	Julia	Garritt
Mr	Gordon	Gibson
Dr	Penny	Gray
Ms	Briony	Greenhill
Mr	James	Greyson
Mr	Brian	Hanna
Dr	Richard	Harding

Mrs	Linda	Harwood
Mr	Jonathan	Hodrien
Mr	Nigel	Hollett
Ms	Fiona	Hoppe
Mr	Chris	Hunt
Mr	Philip	Insall
Mr	Andrew	Jeffrey
Mr	Adrian	Jevans
Dr	Kathryn	Jones
Mrs	Irene	Kempton
Dr	Hermione	Lovel
Revd	Donald	Macdonald
Dr	Greg	Masden
Mr	Gordon	Masterton
Ms	Catherine	Max
Mr	Michael	McKinley
Ms	Jane	Morris
Dr	Nick	Murry
Mr	Frank	Pearson
Mr	Neil	Peters
Mr	Matt	Phillips
Mr	Lawrence	Price
Ms	Alison	Pridmore
Mr	Robert	Pringle
Miss	Jolanda	Putri
Ms	Amanda	Roll Pickering
Ms	Mary	Roslin
Mr	David	Rutherford
Dr	Philip	Sargent
Mr	Tony	Shallcross
Ms	Penny	Shepherd
Cllr	Allan	Siao Ming Witherick
Dr	Adrian	Smith
Mr	Stan	Terry
Ms	Heather	Thompson
Dr	Camilla	Toulmin
Ms	Julie	Winnard
Mrs	Jane	Woolmer
Dr	Aled	Wynne
Mr	Andy	Wynne

Chart 1: Number of members who participated in session two broken down by main interest

Food and Farming 3%
Other 5%
Health 7%
Energy 7%
Services and Industry 10%
Transport 13%
Communications 13%
Housing, Society and Community 24%
Environment 18%
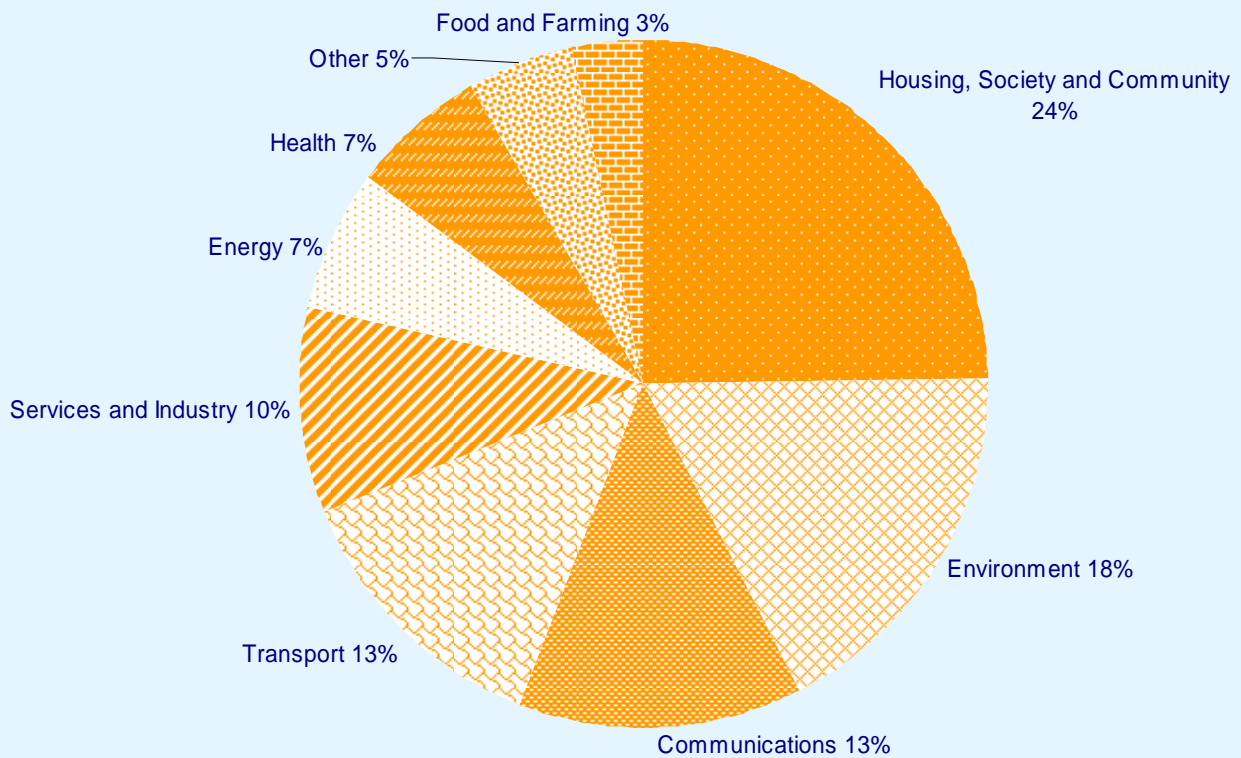
Chart 2: Number of members who participated in session one broken down by geographic region

Northern Ireland 6%
International 1%
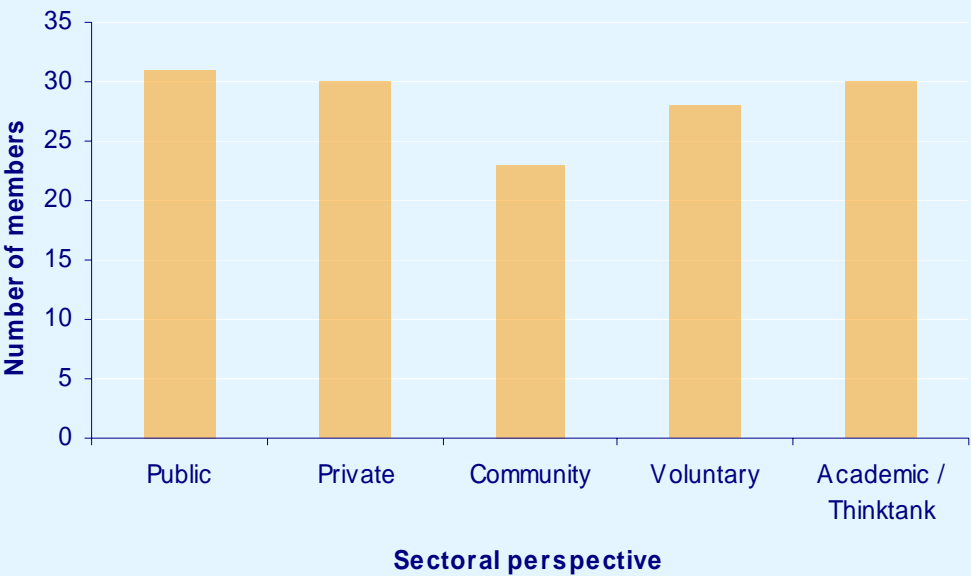Wales 8%
Scotland 14%
England 71%
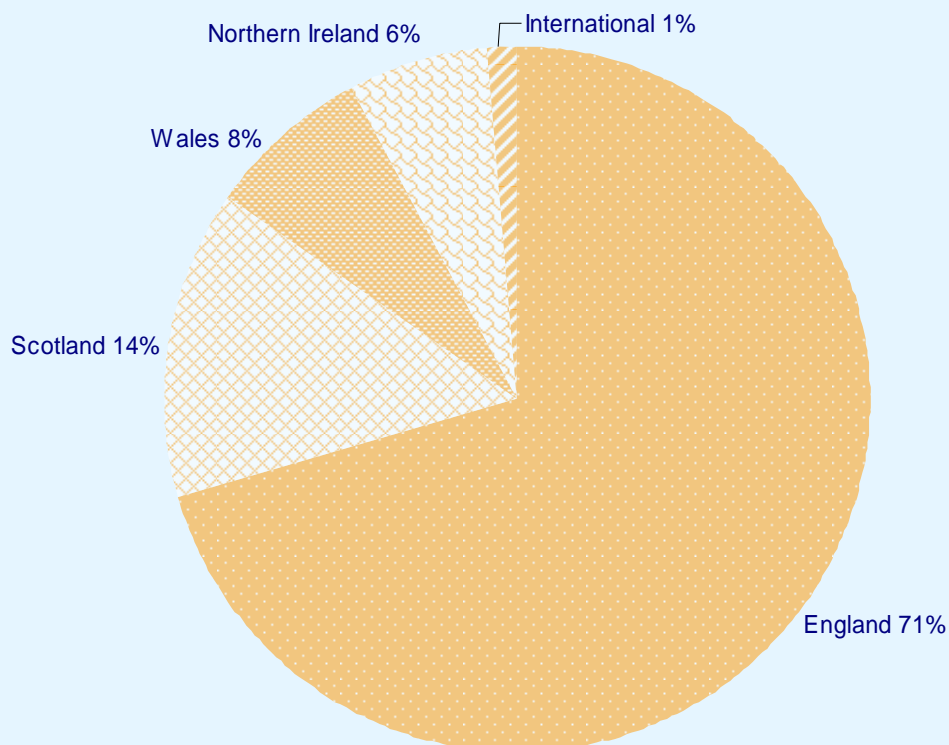
Chart 3: Number of members who participated in session one broken down by sectoral perspective

Appendix 3 – List of group headings by question

Question 1 – Do you have any further comments on the revised policy proposals and actions?

Group heading	Number of comments
Comments about air passenger duty	7
Comments about an integrated approach	9
Comments about aviation in global context	8
Comments about behaviour change	9
Comments about carbon trading / climate change	3
Comments about constraining growth / reducing capacity	9
Comments about efficiency of aircrafts / airport operations	3
Comments about emissions trading	8
Comments about flying less or not at all	8
Comments about food / freight miles	11
Comments about government review / studies / involvement	10
Comments about improving communication / awareness	12
Comments about investing in alternatives / biofuels	16
Comments about labelling	2
Comments about long-haul flights	2
Comments about offsetting	12
Comments about personal carbon allowances	8
Comments about radiative forcing	2
Comments about regulations	1
Comments about social / cultural aspects / implications	8
Comments about taxing / user pays	20
Comments about technology	9
Comments about the content / format of proposals / materials	24
Comments about the supply chain / economic benefits	2
Comments about UK travel industry / tourism	6
Comments related to composition of Panel	1
No further comments	11
Reference suggested	6

Question 2 – Considering the proposals and issues how could the multiple of individual actions be pulled into one over-arching strategy on aviation and climate change?

Group heading	Number of comments
Comments about content / format of document / materials	5
Constrain growth	6
Economic analysis of aviation and alternatives	4
Give more choice / make it more manageable for change to happen	8
Government / UK need to lead	23
Integrate within overall climate change context	20
Integrate within overall transport policy	12
Need public involvement / communication	15
Need real incentives	6
Not sure	1
Providing alternative choices	7
Reference suggested	2
Strategic global / international context	33

Group heading	Number of comments
Work with all stakeholders	21

Question 3 – How would you frame the aviation debate to help open up political space for action?

Group heading	Number of comments
Comments about format / presentation of document / materials	1
Consider negative aspects of aviation	22
Consistent / credible leadership	6
Frame equality of impact	1
Frame in wider carbon / climate change debate	9
Frame in wider transport debate	8
Frame public involvement and communication	45
Frame with focus on sustainable development	4
Frame within global / international context	7
Involve key stakeholders	10
Look at moral issues	4
Need government / political leadership	13
Not sure	1
Promote alternatives	14
Reference suggested	6
See response to previous question	2

Question 4 – Do you have any suggestions for how to reach and engage with the diverse range of interests in a dialogue on aviation?

Group heading	Number of comments
Comments about format / presentation of document / materials	4
Deal with sceptics / get them on board	24
Develop / debate legislation / policy	3
Encourage behaviour change	3
Examine taxing	4
Focus on all elements of sustainable development	5
Focus on climate change	5
Focus on consumption of non-renewable resources	1
Improve technology / operating procedures	6
Involve / challenge aviations companies / organisations	6
Involve / use media	6
Involve businesses / bodies with influential fellowship	9
Need celebrity support / leadership	3
Need political / government support / leadership	8
Need specific individuals to give support / leadership	24
Need to identify / involve interested parties / key people	22
No suggestions	1
Reference suggested	12
Re-present issues in a fresh and engaging way	2
See response to previous questions	2
Should not have usual suspect / business leaders to give leadership	6
Understand all aspects of the debate	30

The key messages have been summarised from session one and two for all the policy proposals given on aviation. The summary includes strengths and weaknesses as well as any conditions of acceptability suggested. It does not reflect all the specific points from the consultation; panel members' views can be read in full in 'view groups' on the consultation website.

Any new comments made in session two are shown in italics. The comments are being used to help the SDC get a broad perspective around each proposal for ongoing transport policy work but are not representative of our position.

Current Policies and Actions

	Strengths/Conditions of Acceptability	Weaknesses:
Emissions Trading	• Emissions trading combines environmental effectiveness with economic efficiency • For significant carbon reductions to be achieved, action at a greater than the UK level is necessary. If successful, the EU scheme could become a model for worldwide aviation emissions trading • It may stimulate more research and development in the aviation industry • Emissions Trading applies to other sectors and should apply to aviation too • Economically viable and would encourage innovation within the industry • Can work at international political level but implementation in UK only is not economically viable. For best effect needs to be cross Europe and beyond • Needs to be set at correct initial level and get progressively tighter (like the GCI model 'Contraction and Convergence') • Needs robust monitoring • It is real and effects genuine reductions.	• No full account can be made of aviation's non-carbon impacts, because of scientific uncertainty • The carbon reduction impact will depend on the cap set and how the emission allowances are distributed amongst participants, but could have minimal impact if set at wrong level • Limited impact on the cost of tickets now may result in further lock-in to aviation 'dependent' lifestyles, through for example, the purchase of second homes • The Environmental Audit Committee have criticised EUETS scheme and could mean no justification for assuming it will work for aviation • Doesn't necessarily drive emissions down or link responsibility to demand • the "best case" EUETS trading scenario would only reduce airline ticket sales from 465 million to 455 million in 2030 (http://www.dft.gov.uk) • Very bureaucratic, may cause a comparative economic problem for traders in the EU compared with outside • Could drive the demand for credits higher and therefore cost. This could end up with wider society paying more for aviation to offset emissions • *More research needed on impact of cost (cf ICF report for European Commission)* • *Need to assess socio-economic impact* • *Could create a set of potentially powerful institutions, such as permit traders and market enforcers whose interests and sustainability interests may not correspond* • *Less efficient companies will pick up*

	Strengths/Conditions of Acceptability	Weaknesses:
		the burden of penalty costs and be less able to improve their performance
Technology	• Saves carbon and also reduces fuel costs • Innovation in the UK aviation research and development sector could result in significant benefits to the economy. Use market mechanisms to promote innovation (variable taxes, tax breaks for low emitters, patent protection, preferred airport access for greener companies) • Research fuels, including hydrogen power, red diesel and biofuels • Setting technological standards to be met e.g. every 10 years • Divert military technology funds to environmental technology • Invest more in emissions capture research • Innovative materials, seating design, winglets • *Need regulatory pressure from government to enforce improvements and innovation in technology* • *Need to invest much more in rail/road technology as well as aviation technology*	• Current estimated carbon savings of between 1% - 2% per annum will be exceeded by passenger demand of around 4% per annum. • Even if a radical technological change were to occur, aircraft have a life span of twenty plus years, and so the replacement of the fleet would take a long time. • Only part of the answer/short term • Should naturally happen anyway • Danger of relying on technological breakthroughs that may not happen • Use of alternative fuels such as biofuel raises wider sustainable development concerns • *Technical/distribution issues re biofuel* • *Effect on arable land of biofuel vs food production. Effect on developing countries and biodiversity* • *Demand for new technology may outstrip supply (100% avo-biofuel impossible*
Air Passenger Duty	• Can play a role in ensuring that passengers understand and acknowledge the environmental costs of their action. Estimated to save 0.3 million tonnes of carbon by 2010/2011 • Duty should be graded according to size/efficiency/whether alternatives are available to incentivise higher load factors • Should incorporate freight • *Duties/incentives on alternative forms of transport* • *APD revenue must be used in acceptable transparent manner* • *travel to "sustainable destinations" included in an offsetting scheme - i.e. say 50%+ of tourism businesses were involved in a GTBS scheme, APD or equiv charge was reduced by % of business*	• Research suggests that passengers, currently, have a limited understanding of the aviation tax system. • Some airlines have responded to the APD increase, and the potential reduction in demand, by offering still cheaper tickets. • Effective targeted taxes rather than APD may be more influential on people's travel behaviour • *APD mainly inhibits lower income families* • *Unpopular and seen as stealth tax Should include APD in actual cost* • *Questions about current impact of APD on demand and aviation industry. Too small to put people off*
Offsetting	• Helps to raise awareness of the issues, and enables consumers to feel like they are making a difference • Like emissions trading, it operates in an economically efficient way by delivering low	• Is more 'conscience-offsetting' than carbon offsetting • Concerns about certain offset projects, particularly tree planting. • Unreliable and an evasion of problem

	Strengths/Conditions of Acceptability	Weaknesses:
	cost carbon reductions, even if these are in other countries • Should apply across all sectors, not just aviation • Should be opt-out system rather than opt in (and possibly off-set should double emission) • Would work better with rigorous auditing system (EU wide) • Industry should offset instead of individual • Targeted carbon offsetting where the consumer adopts alternative behaviours (eg. buying food locally and trading food miles for travel miles) • Local rather than distant schemes, run by independent organisations, may be more tangible to consumer (e.g. local home insulation) • *Developing countries could benefit significantly* • *Could be useful as part of a communications strategy rather than standalone policy*	rather than solution. A 'scam' • To work needs to offset in same timescale as carbon expenditure • Current offsets too cheap • *Previously, no requirement for providers to abide by internationally agreed quality assurance standards, which means that practices vary. However there is now the Gold Standard and the Voluntary Carbon Standard and imminent Defra's Code of Best Practice for the industry*
Fly less or not at all	• If changes are large scale they can have a significant impact. Changing behaviour also sends signals to those that provide goods or services and may prompt further action • Should be the end goal of all other proposals • Only possible if make flying harder for people (e.g get rid of airmiles) • Focus where there is alternatives (e.g. internal UK journeys) • Flying should be banned (except for medical, meteorological, and ecological survey purposes) • Target business flights as this would be more publicly acceptable • *Scrapping airmiles/frequent flyer could help*	• Difficulty in changing people's aspirations. A combination of approaches, including governments, industry and consumers may be more effective in the long run. Individuals may feel that they are acting alone • Unrealistic until government and business lead by example • *Huge economic implications and turns aviation into a scapegoat*

Future Policies and Actions

	Strengths/Conditions of Acceptability	Weaknesses:
Gov't review and studies	• Would help clarify the role of aviation in a carbon constrained world. Could help inform climate change policy development in the UK and abroad.	• Complex and potentially controversial – not all countries have agreed climate change targets. There may be a reluctance to concentrate on one sector.

	Strengths/Conditions of Acceptability	Weaknesses:
	• Would have to be at European level	• Would not force and could potentially delay necessary action
	• Should be right across transport sector, not just aviation	
	• There is a need for people to understand the science enough to make choices and decisions individually, corporately or nationally	
	• Studies needed to show whether local areas benefit or not from new airports	
	• *Should be part of the government's role as showing strong leadership*	
	• *In particular more research is needed on the impact of radiative forcing*	
Invest in alternatives	• Rail transport produces less carbon per passenger kilometre travelled than short haul air transport	• The high cost of the introduction of a rail scheme and the disruption caused by the building of new lines.
	• Aviation taxes and planned airport investment could be transferred to alternatives	• Rail alternative only likely to influence domestic or very short haul.
	• Learn from other countries. Better rail/road/air interchanges (e.g. Schipol in Holland)	• If rail takes considerably longer will people see it as alternative?
	• Video Conferencing can result in carbon reduction, and also has additional benefits to businesses. For example, it is cheaper to video-conference than fly, and saves employees' time too	• One barrier for uptake of video-conferencing is that face to face contact, particularly for initial meetings, is seen as essential to developing relationships and sealing deals
	• Developing different models of business practice	• Video-conferencing won't affect leisure flights (although technology like Skype may have some impact)
	• Investment in new rolling stock and signalling systems could make a significant difference	
	• Investment in changing people's aspirations also needed	
	• *Simplification and reduction of rail fares, change of pricing signals*	
	• *Government support for video-conferencing – e.g. tax breaks and technology grants. Organisations like SDC to also use and promote*	
	• *Introduction of better coach network to hard-to-reach destinations and coach only motorway lanes*	
	• *Clear matrix needed to compare carbon emissions of air/road/rail/water options*	
Personal Carbon Allowance	• Fairer for all, and could be fiscally progressive, as those who currently emit more carbon (and tend to be richer) will have to buy allowances from those that emit less carbon (and who tend to be poorer)	• It may be difficult to gain public and political acceptability for such a scheme.
		• There may be concerns over certain groups who would be disadvantaged by such a scheme e.g. those with

	Strengths/Conditions of Acceptability	Weaknesses:
	• As a trading scheme it should be economically efficient, meaning lower cost carbon reductions for the economy as a whole • Need cross-party support and careful framing to get public acceptance • Could have voluntary/pilot schemes • Could help encourage people to take action in other areas of their life (e.g. home insulation) • International not UK wide scheme would be even fairer to developing countries • Makes individual responsible • Cap and trade with individuals vs Cap and invest in alternatives • Link to plane efficiency (would encourage industry innovation) • Separate business and individual PCA • If businesses were to fly above their carbon allowance they would have to pay into a fund which would compensate developing countries for the reduction in tourism • *Could integrate into ID card system (though strong concerns that system would result in eco-surveillance)* • *Carbon allowance could be linked to council tax banding and managed through a betfair-style person-2-person trading website*	families in other countries, N.I residents • Could promote a 'right to pollute' certain amount and legitimise over-consumption of rich • Very hard to administer - open to misuse and fraud • Would be better to tax the emission at point of purchase • *Personal restrictions could potentially effect individual well-being* • *Merely limits total pollution and doesn't address necessary lifestyle changes required*
Further Tax	• Effective taxation may have significant impacts, especially at the international level. EU and international agreements required • Level playing field as current absence of an aviation fuel tax amounts to a hidden subsidy to the aviation industry. Tax for aviation fuel etc. needs to be in line with rail/road alternatives • More transparent taxes needed. For taxation to be believable and supported it should be hypothecated to carbon saving / technology/ transport alternatives • Tax fuel on flights rather than passengers is more viable • A tax credit system for individuals • VAT exemption for some (e.g. Northern Ireland) • Political will needed to change Chicago Convention	• Politically difficult, and potentially unpopular. Need for engagement with a number of countries – airlines may otherwise fuel up in countries where kerosene is tax-free • Taxation is not as economically efficient as trading • Fuel tax has little impact since fuel is quite a small proportion (<20%)of industry costs. • Would only work under progressive general taxation system

	Strengths/Conditions of Acceptability	Weaknesses:
	• *Not just fuel tax, but tax all the associated environmental impact costs, including audited offsetting. Shifting taxes from labour to environmental is a fairer societal measure (than PCAs), as people can make choices re what they spend their money on.*	
Communications & Education	• Would help to raise public awareness of aviation's impact on climate change. Labelling, on fridges and new cars is already in place - the aviation sector could perhaps build on this experience • 'Sex up' UK holidays • Food miles on supermarket products • Common standard needs to be agreed across all goods and services to give comparators • Labelling needs to be airline and class specific • League tables of companies performance. • National awards and honours for companies and/or individuals • Have to help people make positive choices not make them feel bad or incapable of making a difference • Honest and clear public engagement programme about decisions we face • *Due to urgency of action Comms used to explain tough decision taken rather than used to win hearts and minds* • *Health arguments against aviation need to be communicated* • *Ban needed on all carbon-heavy advertising (e.g. flights AND cars)* • *Better understanding of the science by the public (and officials) to help make informed rational rather than emotional decisions* • *Need to focus on negative experience of flying (airport waits, poor food etc)* • *Gvt needs to learn from private sector (e.g. reward cards)* • *Celebrities and CEOs held more accountable in press and media*	• Health warning may not have any impact. Unlike cigarettes do not see direct impact of actions on climate change • Raising awareness does not necessarily translate into action • Some may feel it 'picks' on the aviation sector – labelling would need to be introduced in all other sectors too

Additional Policies and Actions suggested

	Strengths/Conditions of Acceptability	Weaknesses:
Food & freight	• A national and international focus on local sustainable food systems as a way of reducing dependency on imported	• *Trade of horticultural produce from Africa supports over one million livelihoods and has a declared value of*

	Strengths/Conditions of Acceptability	Weaknesses:
	• foodstuffs • Air freight needs a hefty environmental tax and compulsory, prominent labelling • *Need to help developing countries produce more imperishable goods that can be exported by land/sea rather than air* • *Need tax relief for vital supplies and fair trade goods*	*£200 million. Airfreight emissions generated from this trade are only 0.1% of total UK GHG emissions.* • *Right to emit of developing countries could be affected* • *Full SD assessment needed as evidence that intensive EU farming is less sustainable than imported naturally farmed Kenyan goods* • *60-80% of freight is taken in air passenger belly-hold rather than dedicated air freight*
Examine aircraft/ airport operations	• Efficient air transport management could instantly reduce the emissions by 10-20% (e.g. eliminating stacking, towing to takeoff point on runway) • Optimise routing of travel • Explore slow/fast lanes for airplanes for more efficient fuel use • Review of luggage and weight allowances/cost per passenger • Aim to reduce indirect emissions at airports (e.g. better rail links, sustainable buildings, solar powered airports, land-based electricity supply until moment of takeoff as now being done for ships in port) • Penalties for flying half-empty planes • Commercial separation between the flight handling side of airports and the retailing side would remove the incentive for retailing (duty-free) to cross-subsidise flying	
Land or Rail miles	• Would work like air miles and incentivise land travel over air travel • *Companies need to be encouraged to offer environmental prizes in promotions instead of free flights*	• *Unlikely to attract new customers to rail travel*
Constrain Growth	• Only way to reduce emissions • Need to replace current aviation white paper • Airport expansion does not fit with Government's national carbon reduction • Need to frame national debate and Planning White Paper around carbon reduction strategy • *Need to have flight quota for remaining flights to ensure it was fair*	• In the short term, measures such as delays in granting airport planning approvals could exacerbate emissions, as greater air traffic delays are built into the system at congested airports. • *Equity issues for different areas (e.g N.I/remote Scotland) and countries who rely on tourism (New Zealand)* • *Impact on economy*
Low Emission Zone	• Achieved by applying a higher airplane handling or fuel tax at airports for airlines landing in the UK. Would encourage the flying of cleaner technology planes over the	

	Strengths/Conditions of Acceptability	Weaknesses:
	UK/Europe	
Ban older, less efficient aircraft	• Take dirtiest aircraft out of the market • Would reduce overcapacity, which would drive up prices and may stifle some demand as a result • Legislation that old planes must be recycled rather than sold on	• Danger less efficient planes would be sold to other markets (i.e. developing countries) • *Carbon cost in disposal and replacement of older models with modern ones*
Change the way we live and people's aspirations	• Promote policies to improve our own homes, communities and working lives so less need to escape • Promote need for 'Responsible Citizen' • Make flying uncool, like smoking • Redefine notion of national progress and freedom • Change the economic paradigm from linear to circular, ie resource-making rather than waste making • Reinforce link between climate change and aviation amongst public • Promote the idea of slow travel - will require changes elsewhere in the way we run the economy to allow people to work fewer hours and take more time off • *Reduced consumption*	
No fly weeks/ months	• Could reduce emissions by 12% • Good for health/wellbeing of workers • Business and individuals could manage around it if globally agreed	• Could put people out of work unless govt funds a paid holiday system
Examine conflicts within Gov't, business	• Identify who is responsible for what emissions • Force the airlines and government to come up with their strategies to make flying carbon neutral by e.g. 2020 • Push for more international agreement, e.g within Kyoto • More joined up Gvt approach rather than current conflicting objectives (e.g. between Defra and DfT)	

	Strengths/Conditions of Acceptability	Weaknesses:
Make UK tourism more attractive	• More media coverage and promotion of UK holidays • Invest more money in tourism services (currently their funding is being cut) to promote holidaying in the UK • Make it cheaper to holiday in the UK than abroad • Fiscal incentives for those providing eco-holiday accommodation in the UK • *Over-capacity of UK travel industry needs to be addressed* • *Need to tax foreign holiday homes above declared rental income*	• The importance of tourism to the world economy • *Research shows that British families believe UK holidays to be poor quality and value and not family friendly. In addition the weather is less amenable than abroad* • *Could UK infrastructure cope with increase in UK tourism? (e.g congestion, patio-heaters, increase in anti-social behaviour)*