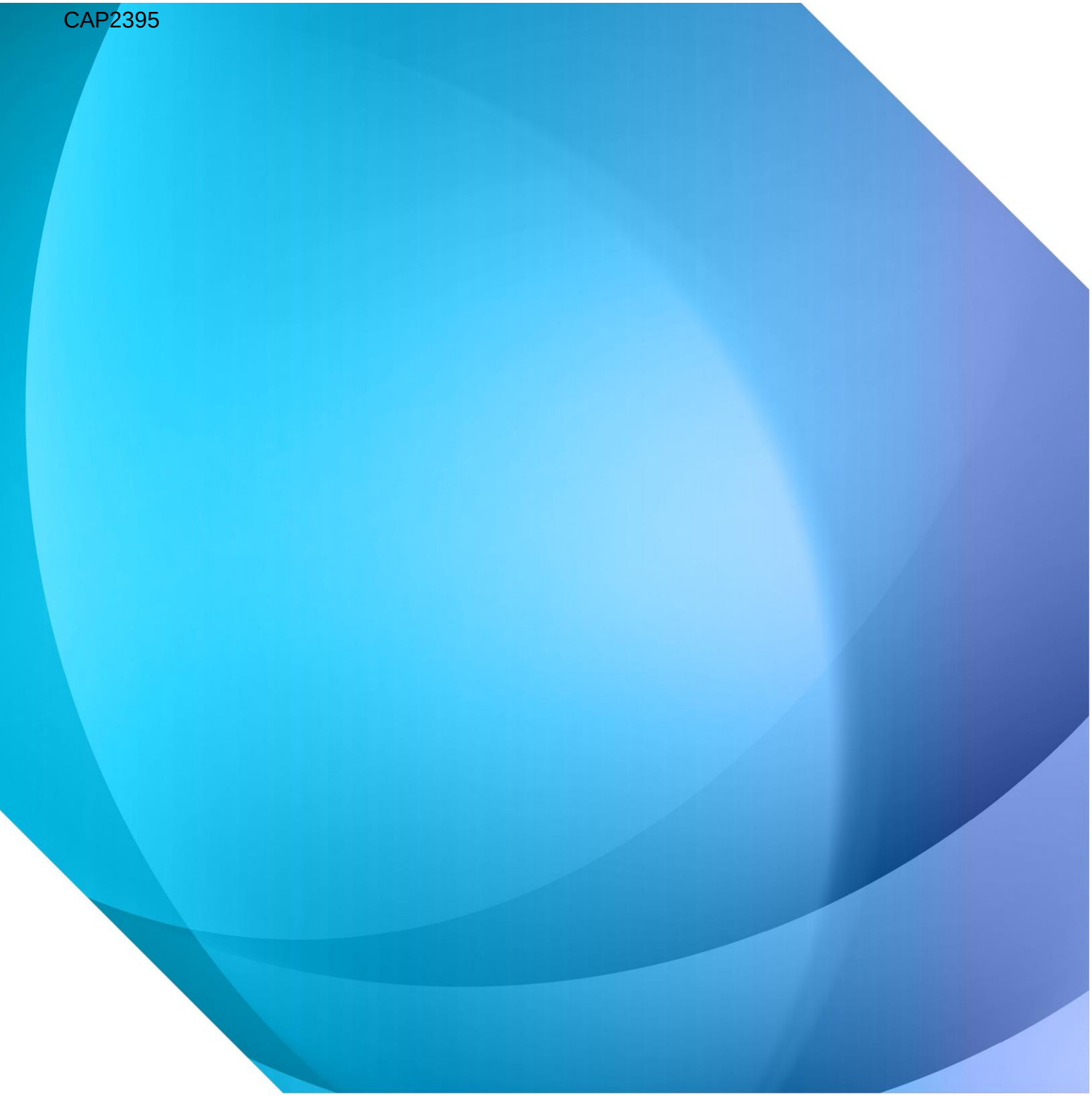
# Consumer Environmental Information: Call for Evidence

CAP2395



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Chapter 1

# Executive summary

## Why we are issuing this Call for Evidence

1.1 This Call for Evidence seeks views from (amongst others):

- the aviation industry;
- consumer groups;
- academics; and
- holders and users of aviation environmental information

on what environmental information should be provided to people when they are looking for and booking flights, and how that information can be presented in a way that is meaningful and enables people to make informed choices about their travel options. For the purposes of this Call for Evidence, environmental information includes the emissions caused by aviation (both $CO_2$ and non-$CO_2$) and how consumer information is and could be provided on those emissions.

1.2 One of the other environmental impacts of aviation is noise, particularly during take-off and landing. This Call for Evidence does not focus on aviation noise, but the CAA has expertise and functions on aviation noise which are set out on our website.[1]

1.3 We committed to consulting on the policy design and implementation of our proposals for sharing environmental information with consumers in our Environmental Sustainability Strategy.[2] We are also supporting the government's Jet Zero Strategy (including working closely with the Department for Transport on this policy).[3] We are seeking information through this Call for Evidence to support that policy design and implementation.

1.4 Our Environmental Sustainability Strategy highlights the significant connectivity, economic and cultural benefits of aviation, but recognises that its environmental impacts must be addressed. A successful aviation sector is an important part of an open, trading United Kingdom but, as the government's Jet Zero Strategy states, the argument is not that aviation is too important to change, but that it's

[1] www.caa.co.uk/Consumers/Environment/Noise/Noise/

[2] CAA's environmental sustainability strategy, May 2022 www.caa.co.uk/media/egul5yds/2360-caa_env-sus-stategy_v6-2-front.pdf

[3] Jet Zero Strategy, July 2022, in particular paragraph 3.59 assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1091834/jet-zero-strategy.pdf

too important not to change. The Jet Zero Strategy is not intended to limit the aviation sector, but instead to future-proof it so that passengers can look forward to more sustainable travel.[4] One way to help address this is by providing reliable and trustworthy information to passengers about the climate impact of aviation so that they can make more informed decisions on their travel options.

1.5 We carried out deliberative consumer research in 2021 which supported our view that consumers want more environmental information that they can trust about the impact of their flights on the environment.[5] We know that there are many organisations, including airlines, international trade associations and internet flight search engines, working on different ways of providing such environmental information. However, there does not appear to be a standard approach to what information is provided or how it is presented. Passengers can find several different calculations of how much emissions a flight might produce (and their individual share of that total), with little or no explanation of why a flight on one airline appears to have a significantly different climate impact than another on the same route. There is also little explanation of what the information means in practice. Most organisations present the information as "x kg $CO_2$ per person per flight" but there is no comparator information to put this into context. This means that people cannot make fully informed decisions on their travel options or on whether they can take additional measures (such as offsetting) to reduce the impact of their flight. This increases the risk that people will not trust the information and so ignore it.

1.6 Our objective is to ensure that people can find reliable information, at the point of looking for and booking flights, using a standard approach and data, in a format that is understandable, contextualised and accessible, which will give them the confidence to make decisions on whether and how they travel. This Call for Evidence is the first step in achieving this goal. We are seeking evidence in relation to the presentation and content of consumer environmental information, and the methodologies used for calculating the impact of a flight, to get a comprehensive picture of what information is available, how it is analysed and presented, and what improvements can be made to this provision. We are also interested in any insights on consumers' preferences and feedback on this issue, and what people are using environmental information for. In addition, we are seeking responses on how to ensure information is available and accessible to all including people who use tools such a screen reader or magnifier or who may not have access to the internet. Using this evidence, we will consider whether we should:

[4] Jet Zero Strategy, July 2022 (foreword and executive summary) assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1091834/jet-zero-strategy.pdf

[5] We know this from our consumer research (see para 3.22 of this document)

1) recommend an existing methodology;

2) develop a standard methodology ourselves; or

3) propose standard requirements for organisations to agree to use for their own methodologies.

We may also propose guidelines for the presentation of consumer environmental information by airlines, travel agents, flight comparison websites, trade associations and other providers of consumer environmental information.

1.7 We currently do not consider that we should be *publishing* consumer environmental information ourselves as it is likely to be more useful if readily available when a consumer is looking for or booking flights. However we want to work towards a standard methodology (and potential presentation format) for airlines and other publishers of aviation consumer environmental information.

Chapter 2

# Call for Evidence

## What we are seeking and from whom

2.1 We already have evidence that consumers want more information on the environmental impact of aviation and particularly on the impact of their own travel choices.[6] Provision of this information alone will not deliver the decarbonisation of the aviation sector,[7] but we consider that there is an important role for consumers in regard to the choices they make and that good data enables more sustainable choices. In addition, influencing consumers is one of the key policy measures of the Jet Zero Strategy (which this Call for Evidence supports).[8]

2.2 We are seeking evidence to assist our understanding of the issues relating to the provision of consumer environmental information, what information is already available, what methodology is most comprehensive, and the best format, time and location to present consumer environmental information to ensure maximum usefulness to consumers when they make travel booking decisions.

2.3 It can be seen from Appendix A that there are already a range of ways to calculate and present consumer environmental information. We consider that methodologies which factor in (at a minimum) the emissions attributable to different aircraft types, fuels, average load factors and routes are likely to provide more accurate, more individualised and therefore more useful information for consumers.

2.4 Anyone may respond to this Call for Evidence. Those who have an interest may include:

- the aviation industry including airlines, airports, travel companies and industry bodies;
- the aviation fuel industry;
- aircraft manufacturers;
- consumer organisations;
- environmental organisations;

[6] See Chapter 3

[7] Introduction to the ICAO Basket of Measures to Mitigate Climate Change, 2019: www.icao.int/environmental-protection/Documents/EnvironmentalReports/2019/ENVReport2019_pg111-115.pdf

[8] assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1095952/jet-zero-strategy.pdf paragraph 3.54

- academics and thinktanks with an interest in this area;
- government bodies, particularly those with an interest in the environment, transport or consumers;
- the General Aviation sector.
- organisations that hold or process relevant information; and
- in particular, we are keen to receive information from organisations who hold, use or seek information in relation to the impact of aviation on the environment. This includes $CO_2$ and non-$CO_2$ emissions.

Individuals are welcome to respond, but may prefer to respond to the subsequent consultation on proposals which this Call for Evidence will inform. The consultation is currently planned for later in 2023. We will set out further details on our website on this consultation when available.[9]

## Call for Evidence questions

2.5 We are looking for information on the presentation, standardisation (of both methodology and presentation) and availability of consumer environmental information in the following key areas. To submit your responses to these questions online please use the online survey available on: consultations.caa.co.uk/

### Consumer environmental information

1. What are your views on existing examples of aviation consumer environmental information (for example those listed in Appendix A)?
2. Please list/identify examples of existing schemes for the provision of aviation consumer environmental information beyond those listed in Appendix A

### Presentation of information to consumers

3. What are the key requirements for the presentation of:
   a) accurate,
   b) understandable,
   c) standardised,
   d) comparable
   e) accessible and
   f) useful consumer environmental information?

4. What consumer environmental information should be presented to consumers?

5. When should consumer environmental information be presented to consumers? (For example on the results page when searching for a flight, on a boarding

[9] www.caa.co.uk/consumers/environment/environment/

pass or after a flight)

6. How should consumer environmental information be presented? For example is kg/$CO_2$ per journey appropriate and / or should consumer environmental information be presented as a comparison with other transport modes or other equivalent activities?

7. Please list/identify examples of consumer environmental information in other sectors which enable complex information to be provided in an accurate, understandable, standardised, comparable, accessible and useful way.

## Consumer protection

8. How should we (the CAA) use our existing powers to protect consumers from misleading environmental information?[10]
9. Please list/identify examples of regulatory regimes in other sectors that work well to protect consumers from misleading environmental information.
10. How should the provision of consumer environmental information be monitored?

## Potential and existing methodologies for the provision of consumer environmental information

11. If you have an existing relevant methodology for calculating emissions from a journey:

    a. please describe it and the reasoning behind it, including details of the types of information you include in the methodology and the assumptions you make.

    b. If your organisation has made a conscious choice not to include certain types of potentially relevant information in your methodology yet, please set out the reasons why.

    c. If potentially relevant information may be included in your methodology in the future, please describe the information and any necessary background to its potential inclusion.

12. If you haven't developed a methodology, what would you expect to see in a methodology (for example different aircraft types, fuels, average load factors, the airline's overall fleet, and routes including generalised indicators relating to destination / origin airports)?

13. How should we (the CAA) take non-$CO_2$ emissions and their effects into account?

[10] For an overview of our consumer protection powers and our role and duties in relation to the environment please see www.caa.co.uk/our-work/about-us/enforcement-of-consumer-law/ and www.caa.co.uk/Consumers/Environment/Environment/

### Data

14. Which existing standardised datasets do you think could be repurposed (with the necessary safeguards) to provide environmental consumer information? For example, the International Civil Aviation Organization (ICAO) Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) $CO_2$ Estimation and Reporting Tool.

15. Should there be a mandatory requirement for airlines to provide relevant environmental data to the CAA and if so how should this be aligned with existing requirements?

### Relevant research

16. The CAA published research on what consumers want from consumer environmental information in 2021.[11] Have you undertaken similar or related relevant research which you can share with us?

### Potential pitfalls and any other additional information

17. What do you think are the potential pitfalls relating to the provision of consumer environmental information?

18. What strategies should we consider to mitigate potential negative consequences?

19. Is there anything else that you think we should be aware of in relation to the provision of consumer environmental information, beyond the areas mentioned above?

## How to respond to this Call for Evidence

2.6 We have published the above questions on the Citizen Space pages of the CAA website.[12] You can also provide responses to environment@caa.co.uk. When you respond, please provide your name, email address, name of organisation or that you are responding as an individual, type of organisation, country and whether your response is confidential. If you provide a confidential response, please also provide a non-confidential response that can be published on our website.

### Confidentiality and data protection

2.7 As stated above, we will publish the non-confidential versions on our website with any personal data removed. Information provided in response to this consultation, including personal information, may be subject to publication or

[11] Britain Thinks – CAA Environmental Information Provision, April 2021 publicapps.caa.co.uk/docs/33/CAP2205%20-%20CAA_Environmental%20Information%20Provision_Final%20Report_070421.pdf

[12] consultations.caa.co.uk/

disclosure in accordance with the Freedom of Information Act 2000 (FOIA) or the Environmental Information Regulations 2004.

2.8 If you want information that you provide to be treated as confidential, please be aware that, under the FOIA, there is a statutory code of practice with which public authorities must comply and which deals, amongst other things, with obligations of confidentiality.

2.9 In view of this it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information, we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the CAA.

2.10 The CAA will process your personal data in accordance with relevant data protection law.

Chapter 3

# Our role, context, risks and opportunities and next steps

## Our core functions and their relation to the environment and consumer environmental information

3.1 As the UK's aviation regulator[13] we work so that:

- the aviation industry meets the highest safety standards;
- consumers have choice in regards to aviation purchasing decisions, value for money, are protected and treated fairly when they fly;
- through efficient use of airspace, the environmental impact of aviation on local communities is effectively managed and $CO_2$ emissions are reduced;
- the aviation industry manages security risks effectively.

3.2 In addition, we have roles and duties in relation to the environment around aviation noise, climate change, air quality and biodiversity.[14]

3.3 We have a duty to provide information and advice we consider appropriate for the purpose of assisting passengers to compare airlines and airports.[15] We are required to have due regard to Public Sector Equality Duties for the development and implementation of policies.[16] In relation to environmental information, we must publish, or arrange for the publication of, such information and advice we consider appropriate about the environmental effects (including on human health and safety) of civil aviation in the UK as well as measures taken or proposed to be taken with a view to reducing, controlling or mitigating the adverse environmental effects of civil aviation in the UK.[17] As a public authority, if requested under the Environmental Information Regulations 2004 we need to provide environmental information we hold unless one of the statutory exceptions applies and it is in the public interest to not provide this information.[18]

3.4 Our strategic intent in relation to the environmental impact of aviation is to work together across the aviation and aerospace system to improve environmental

[13] More information about our responsibilities can be found here: www.caa.co.uk/our-work/about-us/our-role/

[14] An overview of our role in relation to aviation and the environment is set out here: www.caa.co.uk/consumers/environment/environment/

[15] Civil Aviation Act 2012, section 83 (1) www.legislation.gov.uk/ukpga/2012/19/part/2/crossheading/provision-of-information-about-aviation/enacted

[16] Equality Act 2010, Section 149 www.legislation.gov.uk/ukpga/2010/15/section/149

[17] Civil Aviation Act 2012, section 84 www.legislation.gov.uk/ukpga/2012/19/part/2/crossheading/provision-of-information-about-aviation/enacted

[18] www.caa.co.uk/our-work/information-requests/freedom-of-information/

performance.[19] Aviation delivers significant connectivity, economic and cultural benefits both nationally and internationally. At the same time, aviation has a significant environmental impact which contributes to the threat to our planet from climate change.[20] The whole aviation industry must rise to the challenge to play a full part in mitigating this threat, while retaining its vital role connecting people and businesses around the world.

3.5 As set out in our Environmental Sustainability Strategy[21] and the UK Government's Jet Zero Strategy,[22] we have a leading role to play in the provision of environmental information to aviation consumers. We recognise that the aviation industry and other stakeholders have undertaken significant work to support and provide environmental information to aviation consumers. Our role could be to develop standards or guidelines (alone or with others) for the provision of environmental information to aviation consumers rather than providing that information directly, however we recognise that the application of narrow standards or guidelines may be difficult given that aviation is an international sector.

### The importance of providing environmental information to aviation consumers

3.6 In 2021 we commissioned Britain Thinks to undertake deliberative consumer research[23] to understand the feasibility and utility of sharing carbon emissions information with consumers and to explore attitudes and wants in relation to aviation environmental information.[24] We also undertake an annual survey of UK consumers' behaviour and attitudes towards commercial aviation.[25] We set out the key findings of these pieces of research below at paragraph 3.22.

3.7 It is clear from both these pieces of research that a growing proportion of consumers are concerned about the environmental impact of flying and would welcome more information on the comparable environmental impact of their travel choices.

[19] CAA's environmental sustainability strategy, May 2022 www.caa.co.uk/media/egul5yds/2360-caa_env-sus-stategy_v6-2-front.pdf

[20] www.aef.org.uk/what-we-do/climate/

[21] CAA's environmental sustainability strategy, May 2022 www.caa.co.uk/media/egul5yds/2360-caa_env-sus-stategy_v6-2-front.pdf

[22] Jet Zero Strategy, July 2022 assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1091834/jet-zero-strategy.pdf

[23] Deliberative research is a technique which seeks participants' views after they have had time to review and consider the issues. www.djsresearch.co.uk/glossary/item/Deliberative-Market-Research

[24] Britain Thinks – CAA Environmental Information Provision, April 2021 publicapps.caa.co.uk/docs/33/CAP2205%20-%20CAA_Environmental%20Information%20Provision_Final%20Report_070421.pdf

[25] www.caa.co.uk/Data-and-analysis/UK-aviation-market/Consumer-research/Analysis-reports/UK-Aviation-Consumer-Survey/

### The intended outcome of our Call for Evidence

3.8 We are taking forward the findings from the Britain Thinks research into this Call for Evidence in order to have as complete a picture as possible of the availability, accuracy and usefulness of relevant aviation environmental information, as well as inviting submissions on the best ways to present that information and the potential role for the CAA in ensuring the accuracy, standardisation, comparability and availability of that information.

3.9 Our intentions include ensuring that consumer environmental information is accurate, understandable, standardised, comparable, useful, accessible and available at the point of booking. This is in order to highlight options with lower climate impacts to encourage more sustainable consumer choices (including for business travel). It is difficult to find standardised information about comparable climate impacts of different flight or transport modes as there are several ways that information is presented in the market currently. It is our view that the area of the provision of environmental consumer information is likely to grow. With several different options from different providers, there is a risk that consumers find it hard to compare or trust emissions data on their flight/travel options. It is important that the information available is accurate both on the absolute emissions of a particular flight and on relative emissions compared to other flights/airlines/transport modes[26] because if the information is not accurate it risks misleading and confusing consumers.[27]

3.10 We also want to raise awareness with consumers about the investments that airlines and airports are making in lower carbon fuel / equipment / infrastructure with the aim of encouraging further investment in the reduction of climate impacts.

## The context to this work

### UK aviation emissions

3.11 UK aviation emissions more than doubled from 1990–2019.[28] Between 2010 and 2019, aviation emissions increased by 10%. Increased demand for international flights was partially offset by falling demand for domestic flights, increased load factors, shorter average flight distances and some efficiency improvements.[29] At current rates, aviation is expected to become one of the largest residual emitting sectors by 2050.[30] Therefore it is important that aviation takes action now to reduce its impact. The UK's Jet Zero Strategy sets out an emissions reduction

[26] Absolute values tell you how much something is, relative values compare that number in relation to other numbers.

[27] International Council on Clean Transportation, 20 October 2021 theicct.org/scanning-the-sky-for-lite-flights/

[28] assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957687/2019_Final_emissions_statistics_one_page_summary.pdf

[29] www.theccc.org.uk/wp-content/uploads/2020/12/Sector-summary-Aviation.pdf

[30] assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1095952/jet-zero-strategy.pdf

trajectory to 2050 with in-sector interim targets of 35.4 $MtCO_2e$ in 2030, 28.4 $MtCO_2e$ in 2040 and 19.3 $MtCO_2e$ in 2050.[31]

3.12 Covid-19 impacted aviation during 2020-2022[32] and may continue to impact demand for air travel over the next few years, alongside changes to working practices and reduction in business travel, high fuel prices, inflationary pressures and the rising cost of living. In the longer term, we anticipate that demand will grow and continued growth will mean that airlines will have to work harder to reduce emissions further against the 2019 baseline.

3.13 Our research[33] shows that consumer sentiment on the environment in relation to travel choices has changed and that there is potential to harness the contribution that better-informed consumers could bring to reducing the impact of climate change.

3.14 We are conscious that we need to consider what, where and when consumer environmental information is needed and wanted by consumers, rather than telling them what we think they need. As such we have undertaken consumer research as set out below, have sought the views of (and will continue to engage with) our Consumer Panel[34] who will help to shape the scope of the project as it develops and are invited to respond to this Call for Evidence. We will also engage with consumer representatives and welcome submissions from individual consumers particularly in relation to our future proposals which we currently plan to consult on later in 2023.

## Global landscape

3.15 In October 2022, state members of ICAO adopted a long-term goal of net-zero carbon emissions for aviation by 2050.[35] The majority of countries have signed up CORSIA on a voluntary basis. CORSIA is a carbon offsetting and reduction scheme which aims to complement other elements of emissions reductions measures by offsetting the amount of $CO_2$ emissions that cannot be reduced by technological and operational improvements and sustainable aviation fuel with emissions units from the carbon market.[36]

3.16 More than 70 countries, including China, the United States and the member states of the European Union have set a net zero target, covering about 76% of

[31] assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1095952/jet-zero-strategy.pdf, page 15

[32] For example: www.gov.uk/government/statistics/statistics-relating-to-passenger-arrivals-since-the-covid-19-outbreak-may-2022/statistics-relating-to-passenger-arrivals-in-the-united-kingdom-since-the-covid-19-outbreak-may-2022#:~:text=These%20data%20show%20that%20in,close%20to%20pre%2Dpandemic%20levels.

[33] See para 3.22 of this document

[34] www.caa.co.uk/our-work/about-us/caa-consumer-panel/

[35] news.un.org/en/story/2022/10/1129367

[36] www.icao.int/environmental-protection/CORSIA/Pages/default.aspx

global emissions.[37] Over 1,200 companies have set a net zero target, and more than 1000 cities, over 1000 educational institutions and over 400 financial institutions have joined the Race to Zero, pledging to halve global emissions by 2030.[38]

3.17 In November 2021, the Glasgow Climate Pact was signed, and the Paris Rulebook was agreed at the COP26 international climate conference.[39] The Glasgow Climate Pact sets out what needs to be done to tackle climate change but does not stipulate what each country must do and is not legally binding.[40] ICAO formulates policies, develops and updates Standards and Recommended Practices (SARPs) on aircraft emissions, and conducts outreach activities with a view to minimizing the adverse effects of international civil aviation on the climate.[41]

3.18 In 2021 the International Air Transport Association (IATA) approved a resolution for the global air transport industry to achieve net zero carbon emissions by 2050.[42]

### International legislation and policy

3.19 In Appendix B we set out examples of work being undertaken by international aviation bodies in relation to climate change and whether consumer information provision is included in that work. In summary, this includes:

- International Civil Aviation Organisation (ICAO)'s carbon emissions calculator
- International Air Transport Association (IATA)'s Recommended Practice Per-Passenger $CO_2$ Calculation Methodology
- Airports Council International (ACI)'s Airport Carbon Accreditation programme
- the European Commission's work on green claims and emissions calculations

[37] China's net zero target is 2060. commonslibrary.parliament.uk/global-net-zero-commitments/

[38] www.un.org/en/climatechange/net-zero-coalition#:~:text=More%20than%2070%20countries%2C%20including,about%2076%25%20of%20global%20emissions.

[39] The Paris Rulebook provides guidelines on how the Paris Agreement is delivered. ukcop26.org/cop26-keeps-1-5c-alive-and-finalises-paris-agreement/

[40] commonslibrary.parliament.uk/what-were-the-outcomes-of-cop26/#:~:text=The%20COP26%20international%20climate%20conference,degrees%20of%20warming%20within%20reach.

[41] www.icao.int/environmental-protection/pages/climate-change.aspx

[42] www.iata.org/en/pressroom/2021-releases/2021-10-04-03/

- European Aviation Safety Agency (EASA)'s Environmental Label Programme
- Eurocontrol's work on $CO_2$ emissions and the availability of Sustainable Aviation Fuel
- European Civil Aviation Conference (ECAC)'s work on sustainable aviation

### Currently available consumer environmental information

3.20 We are aware that some organisations are already developing their own methodologies and publishing consumer environmental information on the environmental impacts of flying. Some organisations have partnered together to produce consumer environmental information.

3.21 Appendix A provides examples of some currently available aviation consumer environmental information.

### UK landscape - CAA consumer research

3.22 In 2021 we commissioned Britain Thinks to undertake deliberative consumer research to understand the feasibility and utility of sharing carbon emissions information with consumers and to explore consumer attitudes and wants in relation to aviation environmental information.[43] (We note that this research is reflective of when it was undertaken. The research is now over a year old and views may have changed, for example in response to the rising cost of living in the UK.) We also undertake an annual survey of UK consumers' behaviour and attitudes towards commercial aviation.[44] We set out the key findings of these pieces of research below.

3.23 The Britain Thinks research included 38 participants who engaged online in two 90-minute focus groups and on an online community platform. Participants were recruited by professional market research recruiters to ensure a sample that reflects the diversity of the UK.

3.24 This was followed by a quantitative survey with 2,000 nationally representative members of the public to quantify findings and a co-creation session with the participants who were most engaged so that views could be heard first hand. The key findings from this research were:

(1) Concern about the environment is the new norm, however for many consumers this doesn't translate into action and there is a wide spectrum of environmental behaviours including relying on symbols as shortcuts

[43] Britain Thinks – CAA Environmental Information Provision, April 2021 publicapps.caa.co.uk/docs/33/CAP2205%20-%20CAA_Environmental%20Information%20Provision_Final%20Report_070421.pdf

[44] www.caa.co.uk/Data-and-analysis/UK-aviation-market/Consumer-research/Analysis-reports/UK-Aviation-Consumer-Survey/

(recycling or energy efficiency labels), buying fast fashion from “conscious” ranges, buying from brands that “clearly stand for good”.[45]

(2) Most participants were looking for easy to understand information to identify more sustainable choices in their day-to-day lives (such as logos and symbols) – with a much smaller number engaged in deeper fact finding and trade-offs.

(3) Despite general concern about the environment, only a few participants were actively considering the environment in their own decisions about flying. Whilst most had a broad perception of the aviation sector being ‘bad’ for the environment, many participants lacked a meaningful understanding of their individual impact and so weren't motivated to consider it.

(4) Participants also tended to be in a different mindset compared to other purchase decisions when booking leisure flights. The process involves more emotion, such as excitement and anticipation, which displaces environmental considerations.

(5) Even though most participants had not sought out emissions information on their flights, they thought that this kind of information should be universally provided across all sectors. At the most basic level, consumers want environmental information to become available and normalised, with the freedom to choose whether to act on it or not.

(6) Throughout the research process, participants identified various ‘rules’ for information design, including the need for standardisation, ensuring it is easily accessible as part of the booking journey, ensuring it is easy to understand for a layperson and that it has some level of third-party vetting.

(7) Participants tended to see this information as having two core purposes:

- To inform the public about the relative environmental impacts of flying;
- To increase airlines’ accountability for aviation impacts and encourage them to reduce emissions.

(8) Emissions information might change behaviour amongst those already motivated and might nudge others to consider environmental impacts. However, flying behaviours are strongly ingrained so any immediate effect from information alone is likely to be small. Once their flight priorities are accounted for (for example destination, date, price) consumers can use environmental information to choose between final options.

[45] publicapps.caa.co.uk/docs/33/CAP2205%20-%20CAA_Environmental%20Information%20Provision_Final%20Report_070421.pdf page 18

3.25 Despite the potential initial impact on consumer behaviour being unclear, we consider that it is important to provide consumer environmental information to support behaviour change and help drive further improvements in aviation industry performance in order to meet Jet Zero ambitions.[46] Up to a third of emissions reductions up to 2035 across the whole economy are estimated to require consumer behaviour change.[47] Changes to consumer behaviour may potentially start small, but as has been seen in Sweden with the flygskam or "flight shame" movement, public awareness of the climate impacts of aviation can impact consumer choices.[48] When taking this work forwards, we will need to consider the best way to measure the impacts of providing environmental information to consumers.

3.26 We also undertake an annual survey of UK consumers' behaviour and attitudes towards commercial aviation.[49] Key findings in autumn 2021 of Wave 10 of that research[50] which will inform our approach to the provision of consumer environmental information more broadly are:

- 41% of respondents agree or strongly agree that they think about the impact of flying on the environment when considering travelling by air, which is nearly double the figure recorded in March 2016 (21%).
- 39% of respondents agree or strongly agree that they would pay more for flight tickets to reduce the environmental and / or noise impact of flying, which is nearly double the figure recorded in March 2017 (22%).

3.27 It is clear from both these pieces of research that a growing proportion of consumers are concerned about the environmental impact of flying and would welcome more information on the comparable environmental impact of their travel choices.

### UK landscape – examples of other relevant consumer research

3.28 We are aware of other relevant consumer research but are interested in hearing about further relevant research beyond the following:

[46] This Call for Evidence forms part of the work set out in the government's Jet Zero Strategy as highlighted in paragraph 1.3 above.

[47] House of Lords, Environment and Climate Change Committee, In our hands, behaviour change for climate and environmental goals, 12 October 2022, page 3 committees.parliament.uk/publications/30146/documents/174873/default/

[48] hallbar.org/2022/06/swedens-flygskam-or-flight-shame-movement-is-still-strong-with-jagstannarpamarken-or-istayontheground/

[49] www.caa.co.uk/Data-and-analysis/UK-aviation-market/Consumer-research/Analysis-reports/UK-Aviation-Consumer-Survey/

[50] publicapps.caa.co.uk/docs/33/CAA%20Consumer%20Survey%20Wave%2010%20Autumn%202021%20Environment%20Report.pdf

(1) DfT travel tracker[51]

(2) BEIS's public attitudes tracker[52]

(3) NatCen – public attitudes to climate change[53]

(4) NATS - Annual Study of attitudes to flying 2021[54]

### UK landscape – consumer environmental information in other sectors

3.29 There are a range of environmental labels for consumers in the UK including labels for food, timber, vehicles, white goods, paint, textiles and whether a product is recyclable.[55]

### Regulatory landscape on environmental claims

3.30 The Competition and Markets Authority (CMA) publishes guidance on compliance with consumer protection law in relation to green claims for goods and services. Claims must:

- be truthful and accurate;
- be clear and unambiguous;
- be fair and meaningful;
- be substantiated;
- consider the full lifecycle of the product or service; and
- must not omit or hide important relevant information.[56]

3.31 The Advertising Standards Authority (ASA) has stated that it could consider misleading claims on the environment and the encouragement of consumer behaviour that could lead to harmful pollution or excessive waste in future investigations following the Committee of Advertising Practice (CAP) guidance on the environment.[57]

3.32 The International Organisation for Standardisation (ISO) has produced standards for environmental labels which provides businesses, consumers and regulators

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[51] assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1080053/all-change-travel-tracker-wave-6-report.pdf

[52] www.gov.uk/government/statistics/beis-public-attitudes-tracker-summer-2022 and assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1105384/BEIS_PAT_Summer_2022_Net_Zero___Climate_Change.pdf

[53] natcen.ac.uk/our-research/research/public-attitudes-to-climate-change-in-great-britain-before-and-since-covid-19/

[54] www.nats.aero/features/aviation-index-2021/

[55] www.rbkc.gov.uk/pdf/Defra-shoppers-guide.pdf

[56] www.gov.uk/government/publications/green-claims-code-making-environmental-claims/environmental-claims-on-goods-and-services

[57] www.asa.org.uk/news/environmental-claims-the-advertising-codes-and-you.html and www.asa.org.uk/type/non_broadcast/code_section/11.html

with an internationally recognised and agreed set of benchmarks for environmental labels, claims and declarations.[58]

3.33 We will seek to take CMA, ASA and ISO guidance into account in the development of any potential best practice guidance on aviation environmental consumer information to ensure that when aviation environmental consumer information is provided it is accurate, understandable, standardised, comparable, useful, accessible and available at the point of looking for and booking flights.

## Main issues, risks and opportunities

3.34 The main issues in this area are that there are a number of existing and developing approaches to providing consumer environmental information, and that adding our work into a developing and complex area may add yet another layer of complexity.

3.35 A risk is that any information provided is not useful to consumers and adds extra complexity to any travel booking decision without encouraging the positive changes to consumer purchase behaviour that we would wish to see.

3.36 The opportunity of this work is that we can support and enable genuinely useful consumer environmental information, the provision of which avoids greenwashing, enables consumers to make more environmentally sustainable decisions and encourages airlines and the aviation industry to invest further in sustainable aviation.

## Suggested approach

3.37 Our suggested approach is to use the evidence collected to develop best practice guidance in relation to both a methodology and how information is presented to consumers for airlines based in the UK. We would aim to expand this to all airlines operating in the UK. We will engage with other aviation organisations internationally (and other relevant stakeholders) to ensure that anything that we develop is complementary to any work happening in parallel.

## Next steps

3.38 We plan to engage with a wide range of stakeholders as listed above at paragraph 2.4 during the Call for Evidence period. We meet regularly with a range of stakeholders and will discuss this subject as part of those meetings, but would also be happy to organise other meetings or stakeholder workshops if required. If this would be of interest to you, please contact environment@caa.co.uk.

[58] www.iso.org/files/live/sites/isoorg/files/store/en/PUB100323.pdf

3.39 Following receipt of Call for Evidence responses, we will publish the non-confidential versions on our website with any personal data removed. The Call for Evidence responses and engagement will help shape our future work in this area.

3.40 We currently aim to publish a consultation on this subject later in 2023.

**APPENDIX A**

# Examples of aviation consumer environmental information

| Organisation | Information available[59] |
|---|---|
| Travalyst[60] a non-for-profit sustainable travel organisation, and its coalition of seven brands – Skyscanner,[61] Google,[62] Booking.com,[63] Trip.com Group,[64] TripAdvisor,[65] Expedia Group[66] and Visa[67] have a shared framework to collect and display flight emissions data. | The following factors are taken into account: origin and destination; aircraft types; cabin class and seat configuration; load factor (estimate).[68] |
| Airlines | For example, Wizz Air publishes its average $CO_2$ emissions per passenger km in its annual report, [69] easyJet[70] and British Airways[71] have published information on their work on sustainability. |
| Aviation Impact Accelerator (AIA) is a project led by the Cambridge Institute for Sustainability Leadership alongside the University of Cambridge's Whittle Laboratory. It is an international group of practitioners and academics that develops | The Resource to Climate Comparison Evaluator can be used to directly compare alternative aviation fuels based on their climate impact, resource requirement and costs.[73] |

[59] Information in this table is based on the organisations' websites as at summer/autumn 2022. It may not be up to date and should not be relied on. Please refer to each organisation for the latest information.

[60] travalyst.org/aviation/

[61] www.skyscanner.com/tips-and-inspiration/how-you-can-make-greener-choices-with-skyscanner

[62] support.google.com/travel/answer/9671620?hl=en-GB

[63] www.sustainability.booking.com/climate-action

[64] www.trip.com/trip-page/carbon-offsetting-your-flights.html?source=online&locale=en-xx.

[65] www.tripadvisor.co.uk/blog/travalyst-the-next-step-in-our-commitment-to-driving-positive-change-in-travel-uk/

[66] travalyst.org/news/travalyst-expands-global-sustainable-travel-coalition-to-include-expedia-group/ and www.expediagroup.com/investors/news-and-events/financial-releases/news/news-details/2022/Expedia-Groups-Annual-Global-Impact-Report-Reveals-Positive-Momentum-and-Commitment-to-a-More-Inclusive-and-Responsible-Travel-Industry/default.aspx

[67] usa.visa.com/visa-everywhere/blog/bdp/2019/09/05/visa-helps-launch-1567660100025.html

[68] travalyst.org/aviation/

[69] wizzair.com/static/docs/default-source/downloadable-documents/corporate-website-transfer-documents/annual-reports/wizz_air-annual-report-and-accounts-f22_final---pwc-confirmed_061d7bd2.pdf p 22

[70] www.easyjet.com/en/sustainability

[71] www.britishairways.com/en-gb/information/about-ba/ba-better-world/planet

[73] recce.aiatools.org/

| Organisation | Information available[59] |
|---|---|
| interactive, evidence-based models, simulations and visualisations.[72] | |
| IBA[74] | IBA produces a Carbon Emissions Index which tracks monthly $CO_2$ emissions efficiency using grams of $CO_2$ per available seat kilometre.[75] |
| ICAO carbon emissions calculator[76] | The ICAO Carbon Emissions Calculator requires that the user input the airports of origin and destination for a direct through flight. This is then compared with the published scheduled flights to obtain the aircraft types used to serve the two airports concerned and the number of departures per aircraft. Each aircraft is then mapped into one of the 312 equivalent aircraft types in order to calculate the fuel consumption for the trip based on the great circle distance between the airports involved in the journey. The passenger load factors, and passenger to cargo ratios, obtained from traffic and operational data collected by ICAO, are then applied to obtain the proportion of total fuel used which can be attributed to the passengers carried. The system then calculates the average fuel consumption for the journey weighted by the frequency of departure of each equivalent aircraft type. This is then divided by the total number of economy class equivalent passengers, giving an average fuel burn per economy class passenger. The result is then multiplied by 3.16 in order to obtain the amount of $CO_2$ footprint attributed to each passenger travelling between those two airports.[77] 3.16 is a constant which represents the number of tonnes of $CO_2$ produced by burning a tonne of aviation fuel. ICAO does not include a Radiative Forcing Index multiplier. |

[72] www.cisl.cam.ac.uk/centres/centre-for-policy-and-industrial-transformation/aviation-impact-accelerator-aia and www.aiazero.org/

[74] www.iba.aero/about-iba/

[75] www.iba.aero/iba-insight/cec-index/

[76] www.icao.int/environmental-protection/Carbonoffset/Pages/default.aspx

[77] www.icao.int/environmental-protection/CarbonOffset/Documents/Methodology%20ICAO%20Carbon%20Calculator_v11-2018.pdf

| Organisation | Information available[59] |
|---|---|
| Lite flights[78] | Lite flights rank direct flights above multi leg journeys as direct flights will almost always emit less $CO_2$ over a given distance than a multi leg route. It only covers economy flights as business or first class flights increase the carbon footprint of individual passengers. The $CO_2$ indicated for the search results are based on: the direct $CO_2$ produced by the aircraft's engines multiplied by the indirect climate impact (Radiative Forcing Index). The journey is then ranked against an ideal aircraft – either the Airbus A321 Neo or the Airbus A350-1000 depending on journey length.[79] |
| IATA[80] | IATA's methodology includes recorded fuel consumption on a per-flight basis, aircraft type-specific calculation, non-revenue passengers and non-revenue cargo. It does not include no-show passengers, upstream $CO_2$ emissions, non-$CO_2$ and non-aircraft emissions or a Radiative Forcing Index multiplier.[81] |
| Cirium[82] | Cirium's methodology includes aircraft and engine specifications, airline schedules and actual flight operations to create an overview of the emissions footprint.[83] |
| EASA[84] | EASA are developing three labels: a flight label, an airline label, and an aircraft label.[85] The flight labelling system aims to provide transparency on the environmental footprint through a distinct score based on $CO_2$ emissions per passenger and flight, |

[78] lite.flights/

[79] lite.flights/docs/overview

[80] www.iata.org/en/programs/environment/passenger-emissions-methodology/

[81] www.iata.org/en/programs/environment/passenger-emissions-methodology/ IATA's methodology is available for download from this site after registration.

[82] www.cirium.com/thoughtcloud/cirium-becoming-the-standard-for-airline-co2-emissions-reporting/)

[83] www.cirium.com/thoughtcloud/cirium-becoming-the-standard-for-airline-co2-emissions-reporting/

[84] www.easa.europa.eu/newsroom-and-events/events/environmental-label-programme-%E2%80%93-stakeholders-workshop

[85] www.easa.europa.eu/light/topics/easas-sustainable-aviation-programme

| Organisation | Information available[59] |
|---|---|
| | which is discounted by SAF emissions reductions and relies on actual fuel burn data.[86] |
| Aviation Environment Federation[87] | The AEF has produced illustrative calculations of the total climate impact of a selection of different types of flight on a per passenger basis. The AEF used ICAO's Carbon Calculator and a Radiative Forcing Index multiplier of 1.9 to demonstrate the total climatic impact of the flight.[88] |

[86] European Aviation Environmental Report, September 2022, page 63, www.easa.europa.eu/eco/sites/default/files/2022-09/220723_EASA%20EAER%202022.pdf

[87] www.aef.org.uk/what-we-do/climate/

[88] AEF, Raising the public visibility of aviation emissions, August 2019, www.aef.org.uk/uploads/2022/05/AEF-Report-Raising-the-Visibility-5-Sept-2019.pdf

**APPENDIX B**

# Examples of international aviation environmental activity

| Organisation | Scheme or programme | Provision of environmental information |
|---|---|---|
| International Civil Aviation Organisation (ICAO) | ICAO formulates policies, develops and updates Standards and Recommended Practices (SARPs) on aircraft emissions and conducts outreach activities. ICAO cooperates with other United Nations bodies and International organisations. In October 2022, state members of ICAO adopted a long-term goal of net-zero carbon emissions for aviation by 2050.[89] | ICAO publishes a carbon emissions calculator as well as other environmental tools.[90] ICAO publishes several tracker tools to track in-sector $CO_2$ emissions reductions.[91] |
| International Air Transport Association (IATA) | In 2021, IATA and its members committed to make flying net zero by 2050 through a combination of Sustainable Aviation Fuel (SAF), new technology, infrastructure and operational efficiencies, offsets and carbon capture.[92] | IATA has developed a Recommended Practice Per-Passenger $CO_2$ Calculation Methodology.[93] |
| Airports Council International (ACI) | Following a study of airports' carbon goals, the ACI created a long-term carbon goal for the global airport sector.[94] ACI World has an Environment Standing Committee to ensure new policies, initiatives and | ACI manages the Airport Carbon Accreditation programme[95] which is a global carbon management certification programme for airports. The level of accreditation of airports is available online.[96] |

[89] news.un.org/en/story/2022/10/1129367

[90] www.icao.int/ENVIRONMENTAL-PROTECTION/CarbonOffset/Pages/default.aspx and www.icao.int/environmental-protection/pages/tools.aspx

[91] www.icao.int/environmental-protection/SAC/Pages/GCSA%20main%20page.aspx

[92] www.iata.org/en/programs/environment/flynetzero/

[93] www.iata.org/en/programs/environment/passenger-emissions-methodology/

[94] aci.aero/advocacy/environment/

[95] www.airportcarbonaccreditation.org/about/what-is-it.html

[96] airportco2.org/

| Organisation | Scheme or programme | Provision of environmental information |
|---|---|---|
| | best practices are shared with airport members worldwide. | |
| European Union (EU) | In 2021 the European Commission adopted a series of legislative proposals setting out how it intends to achieve climate neutrality in the EU by 2050.[97] This includes the revision of the EU ETS,[98] Effort Sharing Regulation, transport and land use legislation. | The European Commission has an initiative on ensuring 'green claims' are substantiated against a standard methodology as well as work on ensuring claims on the environmental performance of companies and products are reliable, comparable and verifiable across the EU.[99]<br><br>The European Commission are currently consulting on its CountEmissions EU initiative which sets out a common framework to calculate and report transport-related greenhouse gas emissions.[100] |
| European Aviation Safety Agency (EASA) | EASA carries out aircraft certification (including for emission levels) and publishes ICAO's Aircraft Engine Emissions Databank. EASA undertakes environmental studies such as on sustainable aviation fuels and publishes a regular "European Aviation Environmental Report" directed to all stakeholders. | EASA is developing an Environmental Label Programme as part of its Sustainable Aviation Programme with the objective of reducing aviation's environmental footprint by facilitating more sustainable choices.[101] |
| Eurocontrol | Eurocontrol aims to optimise air traffic management and the wider aviation sector via a pan-European stakeholder collaborative approach. | Eurocontrol publishes data on its website including distribution of $CO_2$ emissions for some European member |

[97] ec.europa.eu/clima/eu-action/transport-emissions/reducing-emissions-aviation_en

[98] Aviation in EU Emissions Trading System. Under the EU ETS, all airlines operating in Europe, European and non-European alike, are required to monitor, report and verify their emissions, and to surrender allowances against those emissions. They receive tradeable allowances covering a certain level of emissions from their flights per year.

[99] ec.europa.eu/environment/eussd/smgp/initiative_on_green_claims.htm

[100] ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13217-Count-your-transport-emissions-CountEmissions-EU_en

[101] www.easa.europa.eu/light/topics/easas-sustainable-aviation-programme#:~:text=Empowering%20Passengers%20%2D%20EASA's%20Environmental%20Label%20Programme&text=Sustainable%20growth%20and%20'green%20recovery,in%20a%20more%20sustainable%20way.

| Organisation | Scheme or programme | Provision of environmental information |
|---|---|---|
| | Amongst other work in relation to sustainability and the environment Eurocontrol collects and harmonises data for ETS and CORSIA (see paragraph 3.15). In addition, it has produced several modelling tools including tools for airport local air quality studies, integrated aircraft noise and emissions and an advanced emissions model as well as studies on climate change risks for European aviation.[102] | states and the availability of SAF at airports in Europe (including the UK).[103] |
| European Civil Aviation Conference (ECAC) | The Environment is one of ECAC's key priorities as it considers that the environmental impacts of the aviation sector must be mitigated if aviation is to continue to be successful as an important facilitator of sustainable development.[104] | ECAC publishes its magazine ECAC News online which includes a 2021 edition focussing on sustainable aviation.[105] |

[102] www.eurocontrol.int/aviation-sustainability

[103] www.eurocontrol.int/aviation-sustainability

[104] www.ecac-ceac.org/index.php/activities/environment

[105] www.ecac-ceac.org/index.php/activities/environment and www.ecac-ceac.org/images/news/ecac-news/ECAC-News_72_Sustainable_Aviation.pdf

**APPENDIX C**

# Abbreviations list

| | | | |
|---|---|---|---|
| **ACI** | Airports Council International | **GA** | General Aviation |
| **AIA** | Aviation Impact Accelerator | **GHG** | Greenhouse Gas |
| **AEF** | Aviation Environment Federation | **IATA** | International Air Transport Association |
| **ASA** | Advertising Standards Authority | **ICAO** | International Civil Aviation Organization |
| **CAA** | Civil Aviation Authority | **ISO** | International Organisation for Standardisation |
| **CAP** | Committee of Advertising Practice | **JZC** | Jet Zero Council |
| **$CO_2$** | Carbon Dioxide | **Non-$CO_2$** | Non-$CO_2$ greenhouse gases, such as methane, nitrous oxide and fluorinated gases. |
| **CORSIA** | Carbon Offsetting and Reduction Scheme for International Aviation | **NOx** | Nitrogen Oxides |
| **CMA** | Competition and Markets Authority | **NZS** | Net Zero Strategy |
| **EASA** | European Aviation Safety Agency | **SAF** | Sustainable Aviation Fuel |
| **ECAC** | European Civil Aviation Conference | **SARPs** | ICAO's Standards and Recommended Practices |
| **EU** | European Union | **ZEF** | Zero Emission Flight |
| **EU ETS** | European Union Emissions Trading Scheme | | |