Beginners Guide to Airline Sustainability Reporting Handbook

Contents

Introduction

The *Beginners Guide to Airline Sustainability Reporting* is primarily designed to assist airlines in starting to plan and prepare their first sustainability reports. For airlines that are already reporting on a voluntary basis it offers further insights on how sustainability reports might be enhanced for future reporting periods.

Sustainability reporting is an essential means by which airlines can demonstrate their commitment to environmental, social, and economic responsibility. By following this guidance, airlines can create transparent and credible reports that showcase their efforts to mitigate environmental impacts, support their communities, and enhance responsible business practices.

This report focuses on voluntary disclosures. In jurisdictions where mandatory reporting exists, those regulations will detail the set of requirements that airlines need to disclose. Nonetheless, this guide can help to identify additional topics and metrics to report on.

This Guide complements the IATA *Airline Sustainability Reporting Handbook* (ASRH)[1], by providing a simple, iterative approach to developing a sustainability report. It incorporates an overview of the main sustainability reporting initiatives and includes general information on stakeholder engagement and materiality assessment. The Guide also features an initial set of airline-specific environmental, social and governance (ESG) metrics, including suggestions on how to collect and manage the necessary data and information.

It is important to note that the guidance presented here is general in nature and is not specific to individual airlines.

[1] See section 1.5.2 for more details on this publication.

What is sustainability reporting?

Context

Global sustainability objectives, including the United Nations Sustainability Development Goals (UN SDGs)[2] [3],call for action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity. To achieve these goals, the international community must work together, and businesses focus on how to create long-term sustainable value.

Aviation, as a global transport sector, has an important role to play in contributing to these goals. Air transport's unique contribution to sustainable development lies in the bridges it creates between cities and countries, allowing for the flow of goods, people, investment, and ideas. It facilitates tourism and trade, offers critical lifelines to remote communities and small islands, and swift assistance during emergencies such as natural disasters or wars. At the same time, aviation faces sustainability challenges including related to its hard-to-abate nature, and the management of noise and waste.

In this context, airlines may wish to credibly demonstrate their contributions to reaching the global sustainability goals, and their efforts to mitigate their impact on the planet. Sustainability reporting can assist airlines to collect, measure and demonstrate their sustainability performance.

Airlines face several challenges when embarking on their sustainability reporting journey. The first relates to the increasing number and fragmented nature of sustainability reporting frameworks which are yet to benefit from harmonization and standardization. A shortage of human resources needed to monitor and understand the regulatory requirements, as well as gather data from various sources for reporting is often another major challenge for airlines.

Clear and concise practical guidance on how an airline can develop a sustainability reporting structure or how to enhance existing processes does not currently exist; this IATA guidance fills that gap.

Definition and purpose of sustainability reporting

Sustainability reporting is a form of non-financial reporting that enables companies to convey their progress toward goals on a variety of sustainability factors. According to KPMG, in 2022, 79% of the top 100 companies in almost 60 countries reported on sustainability matters[4]. Sustainability reporting can be a significant first step for airlines to demonstrate their commitment to environmental, social, and economic responsibility and implement their sustainability strategy. At the same time, it is a measure upon which the airline will be held to account. One of the key benefits of sustainability reporting is enhancing stakeholder trust and incentivizing businesses to adopt and integrate more sustainable practices. Globally, sustainability reporting is increasingly influencing the decision-making of executive boards, investors, lenders, and the general public.

However, it is important also to acknowledge the limitations of sustainability reporting. Reporting is not an end in itself, simply an instrument to monitor and improve airlines' environmental, social or governance outcomes, contributing to their sustainability objectives. The choice of key performance indicators (KPIs) is critical; for example, are they the correct or priority metrics or are they more a reflection of what is readily measurable rather than addressing more material – but perhaps less tangible and less easily measured – issues?

There is a risk that the list of KPIs becomes the focus of internal attention, to the exclusion of other new or evolving issues and ongoing review and

[2] United Nations Sustainable Development Goals.
[3] Sustainable development goals.
[4] KPMG's 2022 'Survey of Sustainability Reporting'.

assessment is a necessary part of the sustainability process.

Benefits of sustainability reporting

Reporting has an important role to play in the sustainability journey of airlines. By reporting on their sustainability performance, airlines can identify (and subsequently act to mitigate) risks, build trust with regulators and other stakeholders, attract, and retain talent, and showcase the sustainability efforts in their corporate positioning and communications. In the long-term, it can help to focus and drive concrete actions towards reaching the sustainability goals. Sustainability reporting might also highlight ways the airline can increase operational or corporate efficiency or save costs, both of which deliver an improved financial performance.

Sustainability reporting can help to enhance corporate trust and the reputation of the reporting airline with its stakeholders, notably with the financial community. A growing number of financial institutions place increasing importance on the sustainability performance of airlines, particularly around climate change-related aspects[5]. A number of studies suggest that the disclosure of sustainability information can lower the cost of capital, through higher valuation and lower perceived risk[6] [7] [8] [9]. However, various conditions are necessary for such benefits to be materialized including the visibility of the sustainability performance to the market, ideally through independent sustainability rating agencies. It is important to note that inconsistent and unstandardized sustainability data, among other limitations, can jeopardize these benefits.

Sustainability reporting offers airlines an opportunity to strengthen relationships with their customers, who are demanding greater insights into how an airline manages the risks and opportunities related to material ESG issues. More than one third of respondents to IATA's latest Passenger Survey (November 2023) are aware of the industry's commitment to net zero carbon emissions by 2050. Further, passenger perceptions of sustainability extend beyond just carbon emissions, incorporating issues such as single use plastics (SUP) and gender diversity[10]. Importantly for airlines, these factors influence consumer choices.

Airlines able to demonstrate their sustainability performance are not only enhancing their brand image, but are also able to attract and retain talent, particularly those in the early stages of their careers. Various market surveys[11], show that companies perceived as more sustainable, are more likely to attract top talent because these companies align more closely with prospective employees' values.

Even for those airlines which are not privately owned and where there are no regulatory or financial incentives to publish sustainability reports, the trends towards privatization and increasing public disclosures, accountability and transparency provide a clear impetus to do so.

Figure 1. Six strategic drivers for value creation and sustainability reporting.

[5] Recent initiatives from financial institutions include Aviation Climate-Aligned Finance, IMPACT on Sustainable Aviation, among others.
[6] Fenili, R. (2023) ESG and the pricing of IPOs, does sustainability matter?
[7] Economidou et al. (2022) Is sustainability rating material to the market?
[8] Reber et al. (2020) ESG Disclosure and Idiosyncratic risk in IPO.
[9] Khan Serafeim, Y. (2016) Corporate sustainability, first evidence of materiality.
[10] IATA Environment Survey 2022.
[11] IBM Institute for Business Value (IBV); TalentIms Gen Z in the Workplace, Anthesis Group Importance of Sustainability Credentials study.

Sustainability reporting frameworks and standards

Despite the various benefits of sustainability reporting, it can be a demanding task for an airline to start reporting on its sustainability performance. A range of reporting frameworks and a proliferation of metrics has created a fragmented landscape to navigate. This section considers both mandatory and voluntary reporting frameworks and standards, and the importance of sector-specific metrics.

Regulatory compliance

Requirements for sustainability reporting vary by jurisdiction and the regulatory landscape is quickly evolving. Recent reports show that the number of ESG regulations have almost tripled in the last decade compared to the previous period[12], with analysis finding 600 sustainability reporting requirements globally in 2020[13].

Key regulation types that may require sustainability reporting from airlines include:

- **National and regional legislation and standards**, including the Financial Market Commission (CMF)'s General Standard 461[14] in Chile and the Corporate Sustainability Reporting Directive (CSRD) in the European Union; and
- **Stock Exchange Requirements.** If an airline is listed on several international stock exchanges, it might need to comply with multiple requirements. Examples of such requirements are the Hong Kong Stock Exchange (HKEX)s Environmental, Social and Governance Reporting rules [15] and the Dubai Financial Market (DFM)'s non-financial reporting regulation.[16]

Adding to the cost and complexity, airlines may be subject to multiple regulatory standards or frameworks simultaneously depending on their business model and the territories in which they operate.

Voluntary disclosures

As discussed above, airlines may have compelling reasons to report on their sustainability performance beyond that required by regulation. This raises the question: which voluntary frameworks to use and how to use them? The choice between the different voluntary frameworks, metrics and standards depends largely on an airline's specific goals and stakeholders, with many airlines choosing to adopt a combination of frameworks.

There is a large and growing number of voluntary sustainability reporting frameworks and initiatives. Those most relevant for airlines are listed below. Appendix 1 provides additional detail.

- Global Reporting Initiative (GRI) is a comprehensive and globally recognized sustainability reporting framework. IATA's *Airline Sustainability Reporting Handbook* (ASRH) (see section 1.5.2) is aligned with GRI.
- Sustainability Accounting Standards Board (SASB) is a comprehensive sector-specific metrics framework aimed at supporting the disclosure of relevant sustainability information for investors, including aviation.
- Taskforce on Climate-related Financial Disclosures (TCFD) is a globally recognized climate-related risk disclosure framework with an investor focus.
- Carbon Disclosure Project (CDP) is a platform which facilitates environmental disclosure. Its rating methodology is highly recognized by investors and corporates.
- Greenhouse Gas Protocol (GHGP) is an internationally recognized standard for corporate accounting and reporting emissions that many frameworks and standards (including GRI and TCFD) reference or recommend.

[12] The analysis underpinning C&S 2023 report is based on the data sets of1,225 disclosure policies from 133 countries, 44 international and 17 regional organizations.
[13] Van der Lugt et al (2020) Carrots & Sticks. Sustainability Reporting Policy.
[14] Financial Market Commission (CMF)'s General Standard 461
[15] HKEX. Rules and Regulations.
[16] Dubai Financial Market Regulation, Article 76 and Dubai Financial Market ESG reporting Guidance.

Globally, GRI and TCFD are the most widely used frameworks for sustainability reporting[17]. However, some regions prefer to report using SASB, while CDP, as one of largest environmental disclosure systems, is the highest ranked rater by investors and corporates[18].

Importance of airline-specific disclosures

Challenges for airlines

While airlines welcome the move towards transparency and disclosure of sustainability metrics, the sector faces several key challenges, particularly due to the global nature of the air transport business. They include:

- **Confusion and complexity**: Navigating through various reporting obligations and options becomes challenging, especially for airlines operating in multiple jurisdictions.
- **Resource intensiveness**: Adhering to numerous reporting frameworks requires significant financial and labour resources. This can be particularly challenging for smaller airlines that may lack the resources to easily comply with multiple standards.
- **Inconsistency in reporting:** Different frameworks often have distinct requirements and metrics, which can diverge or overlap. This could lead to inconsistencies in reported data.

That said, efforts are underway for sustainability reporting initiatives to align and ensure interoperability globally. The launch of the International Sustainability Standards Board (ISSB) by the International Financial Reporting Standards (IFRS) Foundation is specifically aimed at establishing global sustainability reporting standards. The ISSB's IFRS 1 and IFRS 2 standards[19] were published in June 2023, and they incorporate leading frameworks such as TCFD.

Following the standards launch, the SASB Standards were revised to align with the industry-based guidance accompanying IFRS S2[20]. Additionally, GRI is committed to working together to ensure complementary and interoperable standards with ISSB[21]. However, the specific requirements for airlines and other industries will depend on the decisions made by regulatory authorities in different jurisdictions.

Despite the positive developments, greater cooperation and alignment efforts are needed. Particularly for the aviation sector, the lack of consistent and industry-specific sustainability reporting guidelines complicates this effort. To address these challenges, sector-specific guidance on sustainability reporting becomes necessary.

Airline Sustainability Reporting Handbook (ASRH)

Airlines face similar sustainability challenges and opportunities. The need for a standard approach led to the development of IATA's *Airline Sustainability Reporting Handbook* (ASRH). The ASRH provides a framework of industry-related topics and indicators upon which to report, aligned with GRI, and intended to reduce reporting burden.

The ASRH is based on background research and industry inputs (survey and workshops) on the major industry trends and the key material topics that airlines were monitoring and reporting. That said, the ASRH is not exhaustive and does not include all the specific metrics that airlines are reporting. More information on the ASRH can be found at this link.

IATA ESG Metrics for Airlines

IATA's ESG metrics guidance was produced to help airlines overcome their reporting challenges. Its aim is to provide coherent, consistent, and comparable airline-specific ESG metrics that are quantitative in nature.

[17] KPMG 2022 'Survey of Sustainability Reporting".
[18] Rate the raters report (2023).
[19] IFRS 1 refers General Disclosures and IFRS2 to Climate-related Disclosures, part of the International Sustainability Standards Board (ISSB) exposure drafts.
[20] SASB Standards - Download SASB Standards.
[21] GRI (2023) Progress towards a strengthened sustainability reporting system.

It was developed at the request of IATA member airlines and in collaboration with the IATA Sustainable Finance Taskforce. The Taskforce was created as a joint working group with members from the Sustainability and Environment Advisory Council (SEAC)[22] and the Industry Financial Advisory Council (IFAC)[23].

Methodology

To determine the most frequently reported ESG metrics, a review of 31 publicly available airline sustainability reports (representing 30% of global traffic) was undertaken with more than 70 different metrics assessed. The preliminary list of ESG metrics was reduced by including only those reported by 61% or more of the selected airlines, with these then being discussed and reviewed by airlines. These key metrics reflect the results of individual airline materiality assessments and are dynamic in nature. This underlines the need for ongoing review as the regulatory and sustainable finance landscapes evolve.

IATA reviewed 26 existing and proposed ESG regulations, reporting frameworks and best practices, sustainability rating and procurement platforms, and banking and other initiatives (see further detail in Appendix 2). This provided assurance that the list of proposed ESG metrics was consistent with the requirements of the multiple ESG frameworks impacting aviation.

To ensure the reasonableness and practicality of the proposed ESG metrics, feedback was sought from IATA airline members on the Sustainable Finance Taskforce, SEAC, and IFAC. The consultation process also included engagement with non-IATA members and other relevant aviation stakeholders.

Content of guidance

The ESG guidance, presented in Appendix 3, defines a core set of metrics and disclosures that could be used by airlines to align their ESG reporting with industry best practice. This includes a set of 31 ESG metrics, including 12 core metrics[24] and 19 so-called 'core+' metrics[25]. The metrics are deliberately based on existing standards, initiatives, and frameworks, as well as sustainability reporting by airlines, to bring greater transparency and consistency to the reporting of ESG metrics in aviation.

Not all airlines will be able to disclose all core metrics in their reporting. For example, there may be cases where disclosure of the metrics is not possible due to limitations, such as confidentiality agreements, jurisdictional prohibitions, data availability, geographic characteristics, or a lack of materiality. While the disclosures are encouraged to ensure common and coherent ESG metrics reporting, airlines will also apply their own guidelines to inform their voluntary disclosures.

How to use ASRH and ESG metrics guidance

- Use the ASRH and the IATA ESG metrics guidance (Appendix 3) as a starting point to specify material topics for your airline and decide on what to disclose on ESG-related issues.
  - ASRH can be used for guidance on sustainability reporting in line with GRI.
  - Proposed ESG metrics complement airlines' own materiality assessments and additional metrics in relation to quantitative metrics, which are industry best practices.
- Disclose core ESG metrics at the earliest opportunity, if not already doing so.
- Use the IATA ESG metrics as a best practice guide when answering requests from stakeholders.

[22] The Sustainability and Environment Advisory Council (SEAC) advises the IATA Board and Director General on matters related to the sustainable development of aviation and its interface with the environment
[23] The Industry Financial Advisory Council (IFAC) shall act as advisor to the IATA Board of Governors, the Director General, other Advisory Councils, IATA management and other relevant IATA bodies on matters concerning industry financial services and standards, and related policy aspects
[24] A set of established quantitative metrics and disclosures that are reported by most airlines or feasible to obtain for most airlines.
[25] A set of quantitative metrics and disclosures that are less well-established and reported by a smaller number of airlines, or that can be more challenging to obtain for an airline.

Airline sustainability reporting

This section provides a step-by-step approach for airlines that are new to sustainability reporting. It draws upon material developed by IATA to identify the key airline-related topics and metrics and offers a proposed structure upon which to base the sustainability report. For airlines that are already reporting on a voluntary basis it offers guidance on how sustainability reports might be enhanced for future reporting periods.

Starting point

For a reporting process to be successful, it is crucial to have commitment from the top management (C-suite) to define roles and responsibilities and ensure appropriate resources have been made available. Once the decision to produce a sustainability report has been made, the following simplified steps should be followed:

1. **Identify your audience.** Understanding the primary readers (stakeholders) of the report will help to identify the topics and metrics that need to be included and set the framework for the report itself.

2. **Determine key topics to report on.** Use the IATA Airline Sustainability Reporting Handbook to determine a list of material topics for your airline (Appendix 4) and the IATA ESG metrics in Appendix 3 to identify the most relevant indicators.

3. **Perform a gap assessment on data.** Based on the topics and metrics identified, evaluate the availability and quality of the data and information that the airline already has, identifying the different teams that are responsible for its collection and whether the data can be collected in time to produce the report. If data are missing, establish a plan to collect it for inclusion in the following reporting period.

4. **Collect information.** Establish processes to gather the information and define the methodology used to construct the metrics. Note that all data should relate to the relevant fiscal year. It is recommended that the metrics are (or are able to be) externally and independently verified and the methodology needs to incorporate reference documents to demonstrate the origins of each data set.

5. **Structure the report.** Define the content taking into consideration the stakeholders identified in Step 1, and the broad narrative that supports the metrics which were selected. This should also include discussion of the overall corporate sustainability strategy (or programs), goals and progress, and metrics. The airline can include programs that are already underway (e.g., energy efficiency initiatives) as some might be overlooked and not necessarily considered as part of an overall sustainability strategy. Transparency is a critical element of sustainability reporting; this might mean identifying setbacks and areas for improvement, as well as 'successes'.

6. **Review and approval.** Consider having the report reviewed by the communications team and legal department and then approved by top management. It is important to note that the increasing scrutiny of green claims by consumer associations and others means that airlines need to be prepared to support statements with verified data, collected in accordance with a prescribed methodology.

7. **Publication.** Decide whether you want to have a stand-alone report, embedded in the annual report or develop an integrated report. Make the report engaging and share it with the targeted audiences.

8. **Continuous improvement approach.** Review the report, taking into consideration the feedback received from different stakeholder groups, and make the necessary amendments for the next reporting period (e.g., including revised material topics and new KPIs). Consider setting up milestones to demonstrate progress and address improvements and setbacks.

Reporting structure

Although the content of a sustainability report may vary between airlines, there are a number of key elements which should be included. The selected sections listed below provide a non-comprehensive initial approach to developing a report outline.

Table 1. Proposed simplified reporting structure.

Selected sections	Proposed content
CEO letter/statement	Reinforce the airline's commitment to sustainability and establish the tone of the report, including highlights of the year and future developments.
Description of the organization	Information on the airline (mission, values), including operations (products and services), business strategy, value generation model, etc.
Highlights	Present the main achievements of the year and report progress on goals and targets. Information can include achievements, milestones, awards, and recognition.
Sustainability Strategy	Describe the strategy mentioning priority issues, how they are being managed and the related corporate governance structure. This section could be composed of strategic objectives and commitments and may be embedded in the business strategy.
ESG / specific topics	Separate theme sections on ESG or on specific material topics. For both cases, each subsection should include why the topic is relevant, how is being managed, related policies, implemented programs, particular targets, and metrics.
Other disclosures	For example, including templates with answers to other selected frameworks (as those mentioned in Section 1.4.2 or Appendix 1) or other commitments (e.g., United Nations Global Compact[26] or contribution to the Sustainable Development Goals[27]).
Appendices	Other relevant information on the methodological approach to the report, risk management, KPIs and metrics explanations, external audit/ verification statements, etc.

[26] United Nations Global Compact.
[27] United Nations Sustainable Development Goals.

Moving forward

To enhance the sustainability report developed in accordance with the recommendations provided in sections 2.1 and 2.2, additional methodological approaches can be included. The materiality assessment and the stakeholder engagement processes are commonly required by most widely used frameworks (e.g., GRI) and current regulations (e.g., CSRD). Having a proper data management system will help with data assurance and external verification, facilitating data gathering for future reporting processes.

Materiality assessment

Materiality is the filter for the inclusion of specific information in sustainability reports. It enables the identification and understanding of the significance of a particular issue or metric and its relevance for stakeholders. This is information which can influence the decision making of stakeholders regarding the airline and determines the scope of sustainability reporting and shape of an airline's sustainability strategy.

The most common approach to materiality is **single materiality**, which refers to the topics that important for an airline's financial performance (also called financial materiality, impacts inwards or the outside-in approach). It allows for the identification and management of risks and opportunities which can impact the airline's financial value and provides information usually targeted for investors, lenders and other creditors.

Recent regulatory approaches[28] are extending the concept to **double materiality**, which includes the impact of the airline has on any dimension of sustainability (social, environmental and governance) and which is directly caused by the airline or that the airline contributed to. This approach is also called impact materiality, impacts outwards or the inside-out approach. Usually, this information is meant for multiple types of stakeholders.

Double materiality allows for a more complete picture of sustainability performance and a better management of potential and future risks, as both approaches and their interdependencies need to be considered. In this case, a topic would be considered material if it is relevant from *either* a financial or an impact perspective.

A proposed methodology to assess materiality is set out below. It is necessary to record the process adopted, as this needs to be included in the sustainability report and will provide a consistent basis for updates.

1. **List potential topics**. Define a broad list of sustainability issues that can impact or could be impacted by the airline. For this information about the airline, such as size and location, geographical areas of operation and value chain, need to be considered.

   To set a preliminary list of topics, an airline can review:

   - Relevant standards and frameworks (see section 1.4).
   - Airline sectoral approaches already developed by IATA, like the ASRH and ESG metrics (See section 1.5.2 and Appendix 3).
   - Any published material from other companies (airlines or other) that might have similar impact in the environment and society.
   - Input from stakeholders (internal and external) and risk assessments (including dynamic topics such as activism and regulations).

2. **Prioritization of topics**. Each of the material topics listed should then be assessed, considering the relevance and importance to stakeholders and the impact on the business. The airline must establish a scale to rate and prioritize each and determine a threshold that will identify the topics on which to report. For

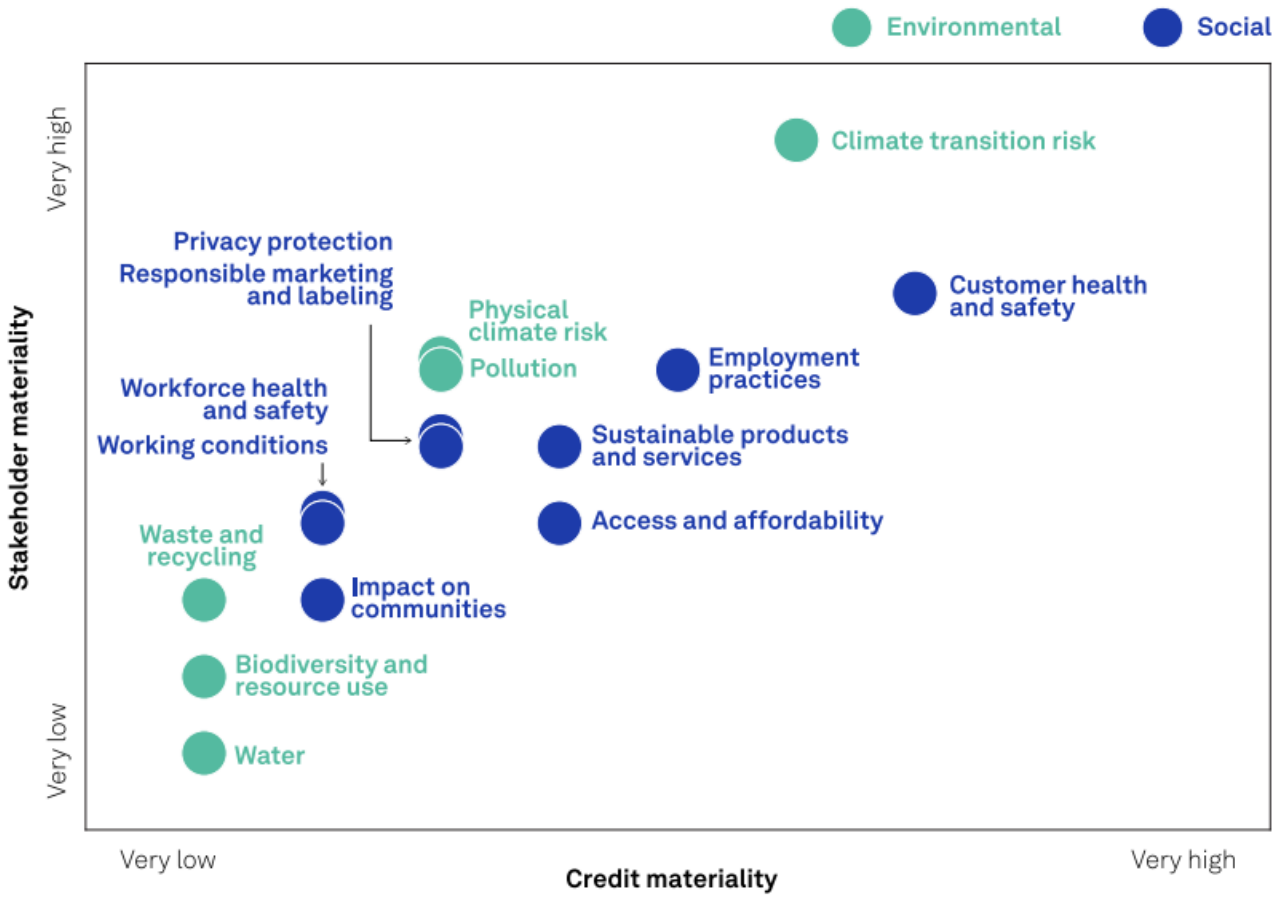
[28] European Union's Sustainable Finance Disclosure Regulation, European Union Green Taxonomy and Guidelines on Reporting Climate-Related Information.

each stakeholder, the relative importance of each topic can be understood through public statements, surveys, workshops or other communication channels. In assessing the business impact, the financial implications of risks and opportunities, including possible mitigation and remediation costs must be considered. These topics should then be compiled in a materiality matrix (see Figure 2).

3. **Alignment with management.** The materiality matrix should be reviewed by the top management and incorporate any comments and changes. From this analysis, a list of priority topics can be identified.

4. **Strategic implications.** With the final list of topics prioritized, a strategy can then be designed to determine how each will be addressed and which metrics will be considered (for a template on reporting on a material topic see Appendix 5.1).

Figure 2. ESG materiality map for the airlines sector.



Source: S&P Global Ratings, 2022. ESG Materiality Map Airlines.

Stakeholder engagement

A **stakeholder** is a person, group or organization that can either impact or be impacted by the airline's decision-making and operations. Stakeholders can be internal or external to the organization.

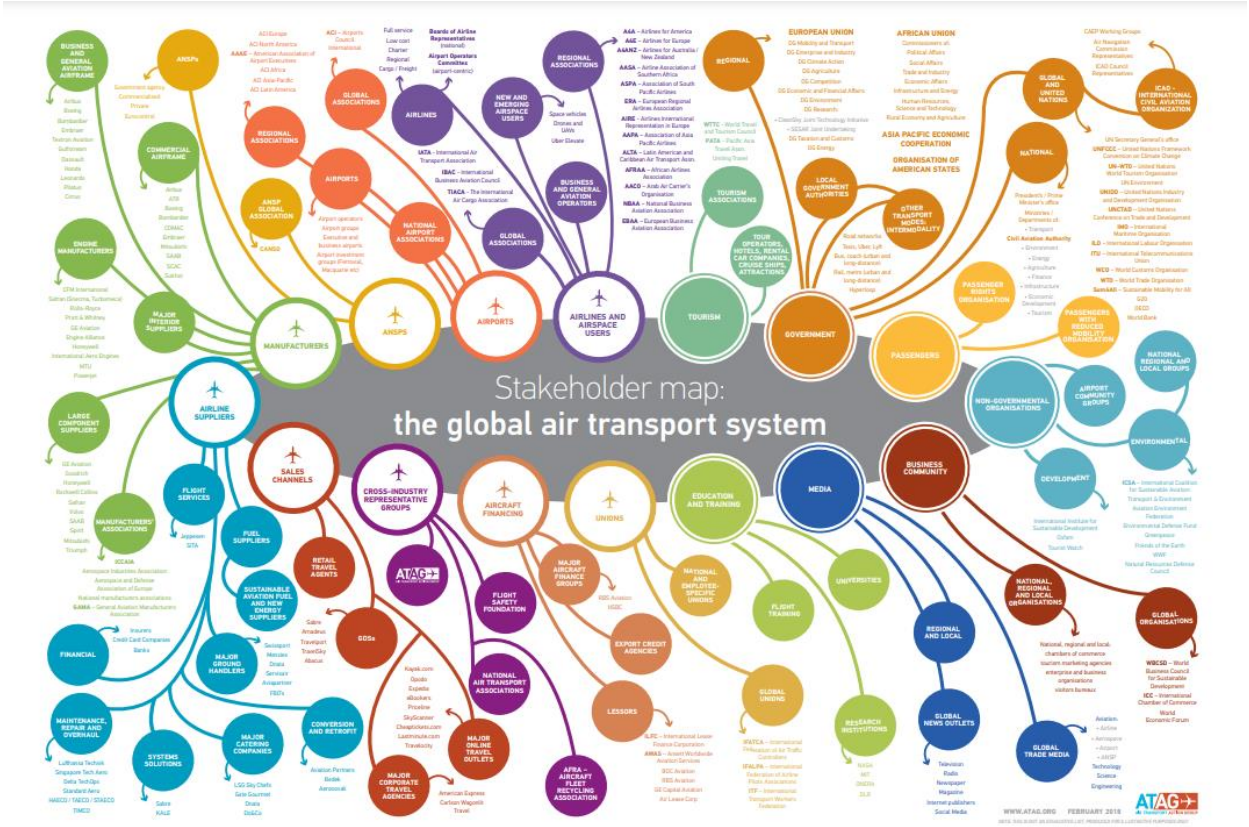
The list of stakeholders can include customers, suppliers, competitors, partners, industry associations, NGOs, governments, regulators, investors, top management and/or functional leads, employees, local communities, subcontractors and the media.

Stakeholder engagement is the process the airline uses to understand the views and opinions of different stakeholder groups on how the airline is performing on various topics (sustainability, in this case) and to provide input on the issues that matter to them. This process is central to any materiality assessment, as it helps to determine which topics are most relevant and should be included in the sustainability reporting.

A general stakeholder engagement process can follow these steps:

1. **Identify stakeholders.** Determine the groups that most regularly engage with the airline, those that are part of the operations and value chain, and those who might have an impact in the business.
2. **Prioritize key stakeholders.** Develop a mechanism to prioritize key stakeholders based on their influence or how involved they are in the airline's strategy and operations.
3. **Determine engagement channels.** It is important to consider a tailored approach for each group defined above, as some stakeholders might require specific channels of communication (e.g., surveys, interviews, workshops, reports) and the frequency of outreach.
4. **Understand their needs.** Track the issues raised by key stakeholders and how these are being addressed.
5. **Communicate outcomes and receive feedback.** The airline needs to ensure that the expectations and interests of the different groups are being addressed and that relevant input is integrated into the strategy and the reports.
6. **Undertake periodic review.** Remember that this is an iterative process as stakeholder engagement should be dynamic. Reassess the prioritization, address possible new topics and check that engagement channels work properly.

Figure 3. Global air transport stakeholders map.



Source: ATAG, 2018.

Data management

Data management refers to the collection, storage and processing of data. Airlines need to ensure the accuracy, consistency, and transparency of the data used for sustainability reporting because frameworks and regulations are including requirements for levels of ESG assurance. Data may have to be justified or even externally verified at a later date.

Once it is clear which metrics will be reported, is important to set processes and a methodological approach for the collection of the data needed, as this will serve for consistency with future reporting exercises and for considerations of changes for year-on-year comparisons.

The airline should aim for high quality and first-hand (primary) data, engaging with the different divisions in the organization that are responsible for the data which underpin the metrics to be reported. For data requirements involving third parties (supply chain) the same approach can be utilized. The use of a reporting infrastructure, such as specialized software, can also be considered and used as a tool for independent verification.

The data must be periodically reviewed and translated into action, as the primary input for target setting and then using it as performance and progress indicators.

Green claims

There is increasing scrutiny about what airlines say and do, especially in relation to climate-related claims. A number of airlines and other corporates have faced legal action due to (allegedly) misleading environmental and sustainability claims. As a consequence, it is even more critical that airlines pay attention to how any such statements can be demonstrated and communicated.

Airlines should be mindful of the narrative presented in their reports, including only statements that can be verified and validated by data. In addition, airlines must also consider the use of images, pictures and colors, making sure that they appropriately represent the environmental or sustainability practice that is being discussed.

Recommendations

Sustainability reporting is a powerful tool for airlines to showcase their commitment to sustainable practices and transparency. By adopting the principles outlined in this Guide, airlines can enhance their reputation and build trust with stakeholders. Implementing and building upon the various initiatives will contribute to a more sustainable aviation industry. Embracing sustainability is not only crucial for the planet and society but it can also be a strategic advantage for airlines in an increasingly environmentally and socially conscious world.

The following recommendations are intended for airlines that are starting their reporting journey, although any airline can benefit from this information.

- Prior to starting the report, ensure that there is top management engagement and commitment. This will help to ensure appropriate allocation of resources and will facilitate data collection processes.
- Begin integrating sustainability into the business strategy and decision-making processes, analyzing existing KPIs and programs and finding interconnections with the different material topics across the organization.
- Start simple and include only metrics that have robust data and information, to ensure data accuracy, consistency, and transparency. Improve this level of reporting over time.
- Establish goals and targets that serve as internal benchmarks for improvement. When reporting on the progress on these goals and targets, include both achievements and setbacks into the narrative.
- Work towards achieving external assurance (independent verification) of the data, as this improves the credibility of the report.
- View sustainability reporting as an opportunity for ongoing improvement and innovation. Review periodically stakeholder engagement and materiality assessment processes, assessing the achievements against sustainability objectives and including new KPIs when and as appropriate.
- Sustainability statements should be supported or verified by objective measurements and data.
- Monitor emerging national and international sustainability reporting regulations and initiatives. This will not only ensure any published report is compliant with relevant requirements but also provide scope to anticipate and prepare for future developments.
- Consider developing an integrated report or including the ESG sections into the annual report.

Appendices

Appendix 1. Sustainability reporting frameworks and initiatives

Table 2. Selected widely recognized sustainability reporting frameworks relevant for airlines.

Framework name	Main topics and metrics	Used/required by	Advantages for airlines	How to use in sustainability report
GRI	Economic & ESG metrics	Multiple[29]	Comprehensive Globally recognized	Materiality Assessment Reporting of metrics (see section 2 on ESG / specific topics)
SASB	Sector-specific ESG metrics [30]	Financiers	Sector-specific metrics including aviation Investor focus	Materiality Assessment Reporting of sector-specific metrics (see section 2 on Other Disclosures)
TCFD	Climate risks exposure	Financiers	Forward-looking Both climate adaptation and transition focus	Reporting of climate risks and opportunities (see section 2 on Other Disclosures)
CDP	Climate change metrics	Financiers	Largest environmental disclosure system Highly rated rater	Reporting of climate change related metrics (see section 2 on Other Disclosures) Rating Methodology

Global Reporting Initiative (GRI)

The GRI is relevant to airlines because of its comprehensive nature, global recognition, stakeholder engagement emphasis and flexibility. Additionally, IATA has developed the ASRH as guidance for airlines based on GRI.

- **Comprehensive framework:** The GRI reporting framework sets out principles and metrics that organizations can use to measure and report their economic, environmental, and social sustainability performance. GRI offers a modular system of interconnected standards. These standards (universal, sector and topic standards) are designed to be used together to provide a comprehensive overview of an organization's impacts on the economy, environment, and people.
- **Global recognition:** The Global Reporting Initiative (GRI) is one of the most widely used frameworks to disclose a company's impact on sustainability aspects. According to KPMG[31]most recent analysis (2022), four-in-five world's biggest companies use GRI guidelines to report their companies' sustainability impact. The C&S (2023) report shows that the GRI Standards tend to be mentioned by disclosure regulations more frequently than other ESG & sustainability policies across world. This is an upward trend that is consistent in the last decades.
- **Flexibility and adaptability**: GRI provides a flexible framework that can be adapted to

[29] Regulators, financiers, passengers, insurers.
[30] 77 industry-specific classification systems.
[31] KPMG's 2022 'Survey of Sustainability Reporting' https://www.globalreporting.org/news/news-center/four-in-five-largest-global-companies-report-with-gri/

different organizational sizes, sectors, and geographic locations. GRI is committed to working together to ensure complementary and interoperable standards with ISSB.

Sustainability Accounting Standards Board (SASB)

The SASB is relevant to airlines because of its industry-specific approach, emphasis on financial materiality, and market recognition.

- **Industry-specific standards**: SASB provides industry-specific sustainability standards, tailoring its guidelines to the unique environmental, social, and governance (ESG) risks and opportunities within specific sectors. This industry focus allows companies to report on the most relevant and material issues for their business. For airlines, SASB's Transportation Standard[32] is applicable, and it includes considerations for airlines and air freight and logistics. The standard addresses various sustainability topics relevant to the industry, such as greenhouse gas emissions, air quality, safety, and community impacts. SASB provides ESG disclosure frameworks in their own 77 industry-specific classification systems.
- **Financial materiality** SASB emphasizes the integration of ESG factors that are financially material to a company's performance. By linking sustainability reporting directly to financial materiality, SASB helps companies communicate the impact of ESG issues on their bottom line, making the information more relevant for investors.
- **Market recognition**: SASB has gained recognition in financial markets and investment circles. According to KPMG, over half of companies in the Americas report against the SASB standards, primarily driven by companies in the US and Canada. There is increasing uptake of SASB standards outside of the Americas, with 35 percent adoption among Europe's top 100 companies by revenue[33]. In June 2023, the SASB Standards were revised to align with the industry-based guidance accompanying International Sustainability Standards Board (ISSB) IFRS S2.[34]

Task Force on Climate-related Financial Disclosures (TCFD)

The TCFD is relevant to airlines because it is focused on climate risks and opportunities, demanded by financiers, globally recognized and supported by institutions and encourages a forward-looking perspective.

- **Focus on climate risks and opportunities (adaptation and transition):** Created in 2015, the Task Force on Climate Related Financial Disclosures (TCFD) provides information to investors about what companies are doing to mitigate the risks of climate change[35]. The TCFD's framework gives guidance on disclosures related to four thematic areas (governance, strategy, risk management, and metrics and targets), and principles for disclosure[36]. These four areas represent core elements of how organizations operate. One of TCFD advantages is its focus on both resilience and adaptation (considering different climate-related scenarios).
- **Demand by financiers:** The goal of TCFD was to allow investors to receive a full picture on climate-related risks exposure of a company. The framework provides standardization and consistency in addressing climate risks and opportunities, enhancing consistency across industries and companies. Metrics and targets portion of the standard requires measurement

[32] https://www.sasb.org/wp-content/uploads/2017/09/Transportation-ExposureDraft-Redline.pdf?hsCtaTracking=02f9b3a9-f8f8-4452-b149-fd41cd292421%7C5e5a113b-ca39-45ca-9156-d39dfd4e4d3f
[33] Sample of the top 100 companies by revenue in 58 countries, territories and jurisdictions
[34] https://sasb.org/standards/download/#:~:text=SASB%20Standards%20are%20designed%20to,development%20of%20the%20SASB%20Standards.
[35] https://www.fsb-tcfd.org/recommendations/
[36] There are also several principles TCFD emphasizes in its guidance. Disclosures should be representative of relevant information; specific and complete; as well as clear, balanced, and understandable. In addition, estimates also need to be consistent over time; comparable amongst companies within a sector industry or portfolio; reliable, verifiable, and objective; and timely.

and disclosure methods based on GHG Protocol. The TCFD's standard specifies that companies should disclose all Scope 1 and 2 emissions regardless of their material impacts on the company. Scope 3 emission reporting is dependent on whether they are "material", but TCFD recommends they be included.

This standardization facilitates comparability, making it easier for financiers to assess and benchmark the climate performance of different organizations.

- **Globally recognized and supported by institutions**: According to KPMG, the Task Force on Climate-related Financial Disclosures (TCFD) adoption among the world's biggest companies nearly doubled in last two years, going from 37% to 61%. Additionally. International Sustainability Standards Board (ISSB) recently published standards, IFRS 1 and IFRS 2[37]that are meant to serve as a global baseline for sustainability reporting, incorporate the TCFD framework.
- **Forward-looking perspective:** TCFD encourages companies to adopt a forward-looking perspective in assessing climate risks and opportunities. This approach aligns with the understanding that climate-related impacts may have significant implications for a company's value over the long term.

Carbon Disclosure Project (CDP)

The CDP is relevant to airlines because it is a widely recognized platform that facilitates environmental disclosure, that is comprehensive and comparable, meets investor and stakeholder expectations, and is globally recognized.

- **Comprehensive**: The Carbon Disclosure Project (CDP) is similar to the TCFD in terms of its concern with the environmental aspect of ESG, however, with a deeper focus on curbing carbon emissions. Its disclosures are specifically targeted on key measures that include the organization's impact on forests, climate change, climate risks, water, and cities. CDP provides a standardized framework for reporting, which enhances consistency and comparability of data across companies and industries. CDP takes a triple approach:
  1. Annual Disclosure Process: CDP conducts an annual disclosure process, during which companies, including airlines, are invited to respond to a standardized questionnaire covering various environmental aspects. The questionnaire includes sections on climate change, water security, and deforestation.
  2. Scoring and Ratings: CDP evaluates the responses based on its scoring methodology and provides scores and ratings to participating companies. This scoring allows stakeholders to compare and assess the environmental performance of different organizations.
  3. Publicly Available Data: CDP aggregates the disclosed data and makes it publicly available through its platform. These data are accessible to investors, customers, policymakers, and other stakeholders interested in understanding a company's environmental performance.
- **Investor and stakeholder expectations:** Many investors and stakeholders use CDP data to assess companies' environmental performance, particularly regarding climate change. Reporting through CDP allows airlines to meet these expectations and provide credible information to interested parties.
- **Global recognition:** CDP is a global platform that has gained widespread recognition for its role in collecting and disseminating environmental data. Unlike other above ESG disclosure frameworks, CDP scores and rates its participating companies, as well as presents a frequently updated list of the most successful companies in tackling climate-related issues. In fact, CDP is one the highest ranked rating actors by investors and corporates, according to Rate the Raters report (April 2023)[38]
- **Supply Chain Engagement**: CDP's disclosure platform extends beyond individual companies

[37] IFRS 1 refers General Disclosures and IFRS2 to Climate-related Disclosures.

[38] Rate the Raters 2023: ESG Ratings at a Crossroads report, April 2023

to include supply chains. Airlines can engage with their suppliers through CDP, encouraging transparency and sustainability practices throughout the supply chain.

Greenhouse Gas Protocol (GHGP)

The GHG Protocol is relevant to airlines because is an internationally recognized standard for corporate accounting and reporting emissions referenced or recommended by many sustainability reporting frameworks (including GRI, TCFD and CDP).

Additionally, for airlines it is recommended to use the GHG Protocol as a comprehensive framework that covers all three scopes of greenhouse gas emissions. This includes Scope 1 (direct emissions from owned or controlled sources), Scope 2 (indirect emissions from purchased energy), and Scope 3 (indirect emissions from the value chain). By using the GHG Protocol, airlines can ensure that their emissions data are reported consistently and can be compared with that of other organizations. This consistency is crucial for stakeholders, including investors, customers, and regulators, who seek reliable and comparable information.

Appendix 2. IATA ESG metrics methodology

Step 1: Airline review

To determine the most frequently reported ESG metrics, a review of 31 publicly available airline sustainability reports (representing 30% of global traffic) was undertaken with more than 70 different metrics assessed. The preliminary list of ESG metrics was reduced by including only those reported by 61% or more of the selected airlines, with these then being discussed and reviewed by the IATA Sustainable Finance Taskforce. These key metrics reflect the results of individual airline materiality assessments and, hence, are dynamic in nature. This underlines the need for re-assessment of the sectoral ESG metrics as the regulatory and sustainable finance landscapes evolve.

The airline reports review process also included an assessment of appropriate business metrics and corresponding ESG intensity ratios.

Step 2: ESG frameworks review

IATA reviewed 26 existing and proposed ESG regulations, reporting frameworks and best practices, sustainability rating and procurement platforms, and banking and other initiatives. This provided assurance that the list of proposed ESG metrics was consistent with the requirements of the multiple ESG frameworks affecting aviation.

- **Regulations (existing and proposed):** European Union (EU) Corporate Sustainability Reporting Directive (CSRD); EU Green Taxonomy; International Sustainability Standards Board (ISSB); Securities and Exchange Commission (SEC) Climate Risk Disclosure Rule; and ASEAN Taxonomy Board.
- **Reporting frameworks and best practices:** IATA Airline Sustainability Reporting Handbook (ASRH); Global Reporting Initiative (GRI); Greenhouse Gas Protocol (GHGP); Sustainability Accounting Standards Board (SASB); Carbon Disclosure Project (CDP); World Economic Forum (WEF) Measuring Stakeholder Capitalism; Poseidon Principles; Swiss Climate Scores; and World Air Transport Statistics (WATS).
- **Sustainability rating and procurement platforms:** Morgan Stanley Capital International (MSCI); S&P Dow Jones Sustainability Indices (DJSI); Vigeo Eiris (Moody's ESG Solutions Group), FTSE Russell; Sustainalytics; and Ecovadis.
- **Banking and other initiatives:** Glasgow Financial Alliance for Net Zero (GFANZ); Net Zero Banking Alliance (NZBA); Transition Pathway Initiative (TPI); Climate Action 100+; Aviation Climate-Aligned Finance; and IMPACT on Sustainable Aviation.

The list is not exhaustive, and it is likely that more frameworks will emerge as this space evolves.

Step 3: Consultation process

To ensure the proposed ESG metrics are practical, feedback was sought from IATA airline members on the Sustainable Finance Taskforce, SEAC, and IFAC. Airline members were asked to review the refined list of metrics to determine if their collection and disclosure are useful, reasonable, and practical. The consultation process also included engagement with non-IATA members and other relevant aviation stakeholders.

The valuable feedback from stakeholders supported the development of the final set of metrics and guidance presented in this document.

Given the number of emerging aviation climate finance initiatives, IATA engaged with selected banks and ESG rating agencies to avoid duplication and promote harmonization of sectoral ESG metrics.

IATA will continue to engage and monitor closely regulatory initiatives that could impact reporting requirements for airlines, such as the EU Green Taxonomy, ISSB, SEC's proposed Climate Risk Disclosure Rule, and ASEAN Taxonomy Board, among others.

Appendix 3. IATA ESG metrics with guidance

General guidance:

- We recommend that airlines report all their activities while, at a minimum, focusing on corporate activities and flight operations. The reporting should state whether the airline is reporting as a subsidiary or a group. Boundaries and scope should be made clear for each metric.
- We recommend that contextual information is provided, explaining how the data has been compiled. This comprises the standards, methodologies, and assumptions used, including whether the information is calculated, estimated, modeled, or sourced from direct measurements, and the approach taken for these, such as the inclusion of any sector-specific factors.
- We recommend that airlines collect ESG metrics on an annual basis, at the minimum, and that all reported data is stored.
- We recommend the use of independently verified data when possible.

Table 3. Core and extended ("Core+") metrics with Guidance.

Core metrics (**green** =environment, **yellow** = social, **grey** = governance)					
Metric code	**Metric name**	**Metric units**	**Guidance**	**Comments**	**Reference**
E.1	Fuel consumption (flight operations)	Metric tonnes (t) and/or liters (L)	Report total fuel consumption, with the following breakdown: **E.1.1** Fuel consumption from non-renewable sources: report for each type of fuel from non-renewable sources the total use (Jet fuel A/A-1, Jet B, Avgas). **E.1.2** Sustainable Aviation Fuel (SAF) consumption: report total use of certified SAF.	**E.1.2** SAF consumption should be based on purchase records. This guidance might change when a recognized SAF accounting system is adopted.	ASRH[i]; IEnvA[ii], ICAO SARPs Annex 16, Volume IV[iii], An Airline Handbook on CORSIA[iv].

E.2	Scope 1 CO_2 emissions	tCO_2e tCO_2[39]	Report total Scope 1 CO_2 emissions[40], and with the following breakdown: **E.2.1 Mobile combustion sources**[41] (transportation of passengers, cargo, and other). **E.2.2 Stationary combustion sources**[42] (generation of electricity, heat, or steam). **E.2.3 Fugitive emissions**[43]	Direct greenhouse gas (GHG) emissions in the airlines sector are principally the result of the following types of activities undertaken by the company: mobile combustion sources (E.2.1), stationary combustion sources (E.2.2), and fugitive emissions (E.2.3). **E.2.1** Jet Fuel (A/A-1, Jet B) and Avgas[44]**:** Airlines may use the industry-standard conversion factor for converting fuel mass into CO_2, equal to 3.16 (in kg CO_2/kg fuel) for Jet-A fuel/Jet-A1 fuel or 3.10 (in kg CO_2/kg fuel) for AvGas and Jet-B fuel (see ICAO Annex 16, Volume IV[iii], page 21). However, airlines may report emissions based on national/regional regulations. The airlines should identify the source of this requirement. For all other fuels (e.g. other sources of fuel used in ground operations, such as from airline-owned or controlled ground vehicles, forklifts, trucks etc.), please refer to the "GHG Protocol - A Corporate Accounting and Reporting Standard" and use "Emission factors from cross sector" tool; refer to "transport fuel use tab" or other published emission factors to calculate CO_2 and CO_2e. Note: Refer to "transport fuel use tab" for mobile combustion sources and "stationary fuel use tab" for stationary sources.	GHG Protocol Corporate Standard[v], IPCC Fourth Assessment Report: Climate Change 2007[vi], ICAO SARPs Annex 16, Volume IV[iii], GRI 305-1[vii]; ASRH[Error! Bookmark not defined.]; IEnvA EMP Flight Operations[viii]; WEF[ix]; An Airline Handbook on CORSIA[iii].

[39] IATA member airlines report fuel consumption in terms of CO_2 under CORSIA (ICAO, Standards and Recommended Practices (SARPs), First Edition of Annex 16, Volume IV)

[40] Scope 1 CO_2 emissions include all direct GHG emissions. Direct GHG emissions are defined by the GHG Protocol as "emissions from sources that are owned or controlled by the reporting entity", following the activities boundary guidance in the general section**.** This does not include secondary atmospheric effects or interactions.

[41] These emissions result from the combustion of fuels in company-owned/controlled mobile combustion sources (e.g., trucks, trains, ships, aircrafts, buses, and cars). Some examples include jet fuel, and other sources of fuel used in ground operations, etc.

[42] These emissions result from the combustion of fuels in stationary sources, e.g., mobile generator, boilers, furnaces, turbines.

[43] These emissions result from intentional or unintentional releases, e.g., equipment leaks from refrigeration and air conditioning equipment; joints, seals, packing, and gaskets; methane emissions from venting; hydrofluorocarbon (HFC) emissions during the use of refrigeration and air conditioning equipment; and methane leakages from gas transport.

[44] Emissions from the combustion of jet fuel include carbon dioxide (CO_2) and other gases and particulates that have direct and indirect effects on the climate and on local air quality. On the latter, there are aircraft engine standards that regulate emissions of carbon monoxide (CO), unburned hydrocarbons (UHC), and nitrogen oxides (NO_x). Nitrogen oxide (NO_x) emissions comprise nitrous oxide (N_2O), nitric oxide (NO) and nitrogen dioxide (NO_2), all of which are reported as a single value for NO_x. There is currently data for specific engine operating conditions for these emissions during the landing and take-off cycle (idle, approach, take-off and climb-out), and they are part of the engine certification schemes. These emissions (NO_x emissions during landing and take-off (LTO) [<3000 ft] cycle) are captured under IATA ESG metric E.4 "NO_x emissions". N_2O (aka laughing gas) is not captured individually as N_2O is rarely found in the NO_x mix. Additionally, NO_x emissions depend on engine design and operating conditions (i.e., are different for each aircraft and jet engine type).
Research has shown that methane (CH_4) emissions are rarely, if ever, present as a product of jet fuel combustion, particularly on modern engines, where combustion efficiencies are above 99.9%. For this reason, there are presently no engine standards for measuring and reporting CH_4 from jet fuel combustion (reference: The contribution of global aviation to anthropogenic climate forcing for 2000 to 2018, D.S. Lee et al., 2021).

E.2 (cont.)				**E.2.2** Refer to "GHG Protocol - A Corporate Accounting and Reporting Standard" and use tool; refer to "stationary fuel tab" or other published emission factors to calculate CO_2 and CO_2e. Note: Refer to "transport fuel tab" for mobile combustion sources and "stationary fuel tab" for stationary sources. **E.2.3**[45] Refer to "GHG Protocol - A Corporate Accounting and Reporting Standard" and use tool; refer to "stationary fuel tab" or other published emission factors to calculate CO_2 and CO_2e. **General comment** For fugitive emissions from refrigerants used in refrigeration, air conditioning etc, refer to the direct global warming potentials (GWPs) mentioned in the IPCC Fourth Assessment report: Climate Change 2007. It should be noted that those airlines that do not have independently verified emissions data may be required to get independent verification to comply with requirements by the financial community. Consider investing in fuel monitoring systems because, ultimately, they might be required by law.	
E. 3	Scope 2 CO_2 emissions	tCO_2e	Report total Scope 2 CO_2 emissions (CO_2 emissions that an airline causes indirectly when the energy it purchases and uses is produced by another entity)[46], and a breakdown using the location-based and market-based methods.	Refer to the 'GHG Protocol Scope 2 Guidance' for guidance on how to calculate the location-based and a market-based value.	ASRH[i]; GHG Protocol Corporate Standard[v]; GRI 305[x]; IEnvA EMP Flight Operations[ii]; IEnvA EMP Corporate Activities[xi].

[45] These emissions result from intentional or unintentional releases, e.g., equipment leaks from refrigeration and air conditioning equipment; joints, seals, packing, and gaskets; methane emissions from venting; hydrofluorocarbon (HFC) emissions during the use of refrigeration and air conditioning equipment; and methane leakages from gas transport.

[46] Scope 2 emissions include all indirect GHG emissions. Indirect GHG emissions are defined by the GHG Protocol as "emissions that are a consequence of the activities of the reporting entity but occur at sources owned or controlled by another entity". Indirect (Scope 2) GHG emissions include, but are not limited to, the CO_2 emissions from the generation of purchased or acquired electricity, heating, cooling, and steam consumed by an organization – disclosed as specified in Disclosure 302-1 of GRI 302: Energy 2016.

E.4	NO_x emissions	kg	For NO_x, report total landing and take-off (LTO) [<3000 ft] cycle emissions.[47]	For NOx, airlines can use the ICAO Aircraft Engine Emissions Databank (refer to NO_x LTO total mass column), or alternatively use "ICAO Engine Exhaust Emissions Data Bank" engine certificates.	ICAO Aircraft Engine Emissions Databank[xii]; ASRH[i]; GRI 305-7[xiii,xiv]; GHG Protocol Corporate Standard[xv]; IEnvA[xvi]; WEF[xvii].
E.5	Aircraft noise: % of fleet that meets with ICAO Chapter III, IV and XIV	%	Report the percentage (%) of the total fleet number that meets the limits of ICAO Annex 16, Volume I, Chapter 3, 4 and 14, by chapter, as stated in the certificates.	Each aircraft's noise certificate shows whether the aircraft meets the limit set by the ICAO Annex 16, Volume I, Chapter 3, 4 or 14. Refer to the information on chapter compliance, as stated in the certificates.	ICAO Annex 16[xviii]; ASRH[xix]; IEnvA EMP for Flight Operations[xx]; IEnvA EMP for Corporate Activities[xxi].
E.6	Energy consumption within the organization, non-renewables and renewables	GJ; MWh	**E.6.1** Report total energy consumption within the organization in flight, ground, and corporate operations, with the following breakdown: **E.6.1.1** Total fuel[48] consumption within the organization from non-renewable and renewable sources and including fuel types used. **E.6.1.2** The total from non-renewable and renewable sources.	**E.6.1.1** • For jet fuel, refer to metric E.1.1 and convert to joules, using the fuel density guidelines ICAO, Standards and Recommended Practices (SARPs) Annex 16, Volume IV, Part II, Chapter 2, 2.2.3.2. • For SAF, refer to metric E.1.2 and convert to joules using the fuel density guidelines in ICAO, Standards and Recommended Practices (SARPs) Annex 16, Volume IV, Part II, Chapter 2, 2.2.3.2. • Other fuels: include all other fuels, from stationary sources and also other mobile sources (such as ground vehicles). **E.6.1.2** From non-renewable and renewable sources, the total, including: • electricity consumption • heating consumption • cooling consumption • steam consumption	ICAO SARPs Annex 16[iii]; GRI 302-1[xxii], An Airline Handbook on CORSIA[xxiii]; ICAO Environmental Technical Manual[xxiv].

[47] In the same way, HC and CO can be calculated and reported.
[48] Airlines can report also the non-renewable and renewable sources consumption as a percentage of total energy consumption.

				To calculate the total energy consumption within the organization, the following formula can be used: Total energy consumption within the organization = (Non-renewable fuel consumed) + (Renewable fuel consumed) + (Electricity, heating, cooling, and steam purchased for consumption) + (Self-generated electricity, heating, cooling, and steam, which are not consumed)- (Electricity, heating, cooling, and steam sold).	
S.1	Community engagement and charitable support	Amount in reporting currency, hours, cargo t, passengers	**S.1.1** Report the amount of community engagement and charitable support activities in terms of, for instance, the monetary value of charitable activities, staff hours of volunteering[49], cargo tonnes of humanitarian aid, number of humanitarian-relief worker passengers, etc. **S.1.2**. Report this metric broken down by type of activity, for instance by community-based and humanitarian assistance.	Where possible, organizations are expected to anticipate and avoid negative impacts on local communities. Where this is not possible, or where residual impacts remain, organizations are expected to manage those impacts appropriately, including grievances, and to compensate local communities for negative impacts. An organization is expected to consider the differentiated nature of local communities and to take specific action to identify and engage vulnerable groups. This might require adopting differentiated measures to allow the effective participation of vulnerable groups, such as making information available in alternative languages or formats. Where necessary, organizations are expected to establish additional or separate processes so that negative impacts on vulnerable or disadvantaged groups are avoided, minimized, mitigated, or compensated.	GRI 413-1[xxv]; WEF[xxvi].
S.2	Work-related injuries	#, rate of recordable injuries	Report the number and rate of recordable work-related injuries.	Calculate the rates based on 200,000 hours worked, using the following formula: Rate of recordable work-related injuries = Number of recordable work-related injuries/ Number of hours worked x 200,000. Work-related injury or ill health refers to negative impacts on health arising from exposure to hazards at work (this definition is based on the International Labour Organization (ILO), Guidelines on Occupational Safety and Health Management Systems, ILO-OSH 2001, 2001).	ASRH[xxvii]; GRI 403-9[xxviii]; ILO[xxix].

[49] During working hours.

				Types of work-related injury can include amputation of a limb, laceration, fracture, hernia, burns, loss of consciousness, and paralysis, among others. For an airline, these could also include injuries from exposure to extreme temperatures, the effect of air pressure, falling objects, and assault by a passenger. 200,000 hours worked refers to 100 employees working 40 hours a week, 50 weeks a year (source). Employees include all workers who are not direct employees but whose work and/or workplace is controlled by the organization.	
S.3	Fatalities as a result of work-related injury	#, rate of fatalities	Report the number and rate of fatalities as a result of work-related injury.	Calculate the rate of fatalities as a result of work-related injury based on 200,000 hours worked using the formula: Rate of fatalities as a result of work-related injury = Number of fatalities as a result of work-related injury/ Number of hours worked x 200,000. 200,000 hours worked refers to 100 employees working 40 hours a week, 50 weeks a year (source). Employees include all workers who are not direct employees but whose work and/or workplace is controlled by the organization.	Ibid.
S.4	Employee training: Includes different types of training	Average training hours per employee	Report the average hours of training per year per airline employee during the reporting period.	Additional supportive information could include breaking down the metric by type (regulatory, mandatory, voluntary etc.), subject matter (safety, ethics, diversity and inclusion, cyber/data privacy etc.), employee category and/or gender (male/female/non-binary). An employee is an individual who is in an employment relationship with the organization according to national law or practice (definition from GRI Glossary).	GRI 403-5[xxx]; GRI 404-1, 404-2[xxxi]; GRI 410-1[xxxii]; WEF[xxxiii].

G.1	Diversity (gender, grade)	# male / female/non-binary divided by employee category (matrix table)	Report the number of employees per employee category by gender (recommended gender categories: male/female/non-binary), including members of the board or other senior management in the governance structure.	Additional supportive information could include reporting on the 25by2025 pledge related metrics: • Total number of population and women in senior positions (if not already included above) and under-represented areas. • Total number of nominations and female nominations from your airline for IATA governance roles (if applicable). The definitions for "senior position" and "under-represented area" are airline-specific. They must be consistent year on year.	IATA25by2025[xxxiv]; WEF[xxxv].
G.2	Total number of confirmed corruption cases	#	Report the total number of confirmed corruption cases.	Corruption is understood to include practices such as bribery, facilitation payments, fraud, extortion, collusion, and money laundering; the offer or receipt of gifts, loans, fees, rewards, or other advantages as an inducement to do something that is dishonest, illegal, or represents a breach of trust. It can also include practices such as embezzlement, trading in influence, abuse of function, illicit enrichment, concealment, and obstructing justice.	ASRH[xxxvi]; GRI 205[xxxvii].

Extended ("Core+") metrics (green =environment, yellow = social, grey = governance)					
Metric code	**Metric name**	**Metric units**	**Guidance**	**Comments**	**Reference**
E.7	Scope 3 CO_2 emissions	tCO_2 tCO_2e	**E.7.1** Report Scope 3 (other indirect) emissions. **E.7.2** The Scope 3 categories (as defined by 'GHG Protocol Corporate Value Chain Standard') could be ranked by priority for the airline sector (based on the mapping of airlines' sustainability reports and comments received from the IATA Advisory Councils (SEAC and IFAC) and IATA Sustainable Finance Taskforce as follows: **E.7.2.1 High priority Scope 3 categories for airlines** 2. Capital goods 3. Fuel- and energy-related activities (not included in Scope 1 or Scope 2) 4. Upstream transportation and distribution **E.7.2.2 Medium priority Scope 3 categories for airlines** 1. Purchased goods and services 5. Waste generated in operations 6. Business travel 7. Employee commuting 8. Upstream leased assets 9. Downstream transportation and distribution 13. Downstream leased assets 14. Franchises 15. Investments **E.7.2.3 Low priority Scope 3 categories for airlines** 10. Processing of sold products 11. Use of sold products 12. End-of-life treatment of sold products Note: The category numbers correspond to the Scope 3 categories as defined by the GHG Protocol Corporate Value Chain Standard.	**E.7.2** In general, for the airline sector, categories 3 and 4 ["Capital goods, Fuel- and energy-related activities (not included in Scope 1 or Scope 2)" and "Upstream transportation and distribution"] are considered a priority activity for reporting. If an airline's activities include cargo operations, category 9 ("Downstream transportation and distribution") could be a high priority as well. For most airline business models, categories 10, 12, and 15 are low priority. Other indirect (Scope 3) GHG emissions are a consequence of an organization's activities but occur from sources not owned or controlled by the organization. Scope 3 GHG emissions include both upstream and downstream emissions. **General comments** The GHG Protocol Corporate Standard states that companies have discretion over which categories they choose to report on. It is advised to focus on categories that are most relevant/a priority for airlines. To identify other indirect (Scope 3) GHG emissions, airlines may wish to conduct an initial assessment deciding whether the emissions from their activities: • Contribute significantly to the organization's total anticipated other indirect (Scope 3) GHG emissions. • Offer potential for reductions the organization can undertake or influence. • Contribute to climate change-related risks, such as financial, regulatory, supply chain, product and customer, litigation, and reputational risks, • Are deemed material by stakeholders, such as customers, suppliers, investors, or civil society, • Result from outsourced activities previously performed in-house, or that are typically performed in-house by other organizations in the same sector. • Have been identified as significant for the organization's sector.	GHG Protocol Corporate Standard[xxxviii]; GRI 305-3[xxxix]; IEnvA EMP for Flight Operations[viii].

				• Meet any additional criteria for determining relevance, developed by the organization or by organizations in its sector. Note: Consideration should also be given to the existence of regulatory/mandatory reporting guidelines when identifying which scope 3 emissions to report on. Accounting for scope 3 emissions need not involve a full-blown GHG life cycle analysis of all products and operations. Usually, it is valuable to focus on one or two major GHG-generating activities. While difficult to provide generic guidance on which scope 3 emissions to include in an inventory, some general steps are articulated in GHG Protocol Technical Guidance for Calculating Scope 3 Emissions.	
E.8	Carbon offsets (voluntary-airline purchased)	t	Report carbon offsets cancelled[50] (used - so that it cannot be resold) by the airline in a carbon registry on a voluntary basis, in terms of carbon emissions reductions.	Additional supportive information could include detailing the reason for cancellation (used - so that it cannot be resold) provided in the carbon registry and/or differentiating between passenger and cargo-related offsets.[51]	ICAO CORSIA[iii]; IEnvA EMP for Flight Operations[viii].
E.9	Carbon offsets (voluntary-customer purchased)	t	Report carbon offsets cancelled (used - so that it cannot be resold) by the airline on behalf of passengers, corporates, or other third parties, in a carbon registry on a voluntary basis, in terms of carbon emissions reductions.		Ibid.
E.10	Carbon offsets (mandatory)	t	Report eligible carbon offsets cancelled (used - so that it cannot be resold) by the airline to meet a carbon offset obligation under a compliance scheme, in terms of carbon emissions reductions in tonnes and broken down by type/name of scheme (e.g. CORSIA).	Compliance scheme refers to any market-based measure or regulatory obligation where mandatory (offsetting) requirements must be met by airlines.	Ibid.

[50] Cancellation makes the claim of carbon reduction legitimate (cancellation = used). Carbon register tracks the "status" of a credit. After cancellation, there is no commercial value of the credit, it cannot be resold or traded, and it avoids double counting of credits.

[51] If an airline offers or purchases carbon offsets, then it is recommended to disclose it.

E.11	Waste	t	**E.11.1** Report the total weight of waste (where available, including cabin waste for domestic and international flights), with a breakdown of this total by weight of hazardous (including International Catering Waste / Regulated Garbage) and non-hazardous waste. **E.11.2** Airlines can report this at an aggregate level and/or by waste disposal type (where data is available).	**E.11.1** Total waste generation can be derived from several potential airline sources, including: • Offices/facilities. • Construction and demolition. • MRO (maintenance, repair, and overhaul). • Executive lounges. • Catering. • Cabin operations. It is highly recommended to define the source of waste streams (see above). For instance, defining whether the reported hazardous waste is produced solely from MRO operations and/or other operations. **E.11.2** Waste disposal methods could include: • Reuse. • Recycling. • Composting. • Recovery, including energy recovery. • Incineration (mass burn). • Deep-well injection. • Landfill. • On-site storage.	ASRH[xl]; GRI 306-2, 306-5[xli]; IEnvA EMP for Flight Operations[xlii]; IEnvA EMP for Corporate Activities[xliii]; WEF[xliv].
E.12	Recyclables	%; t	**E.12.1** Report the total weight of recyclables diverted from disposal (where available, including cabin waste for domestic and international flights) in tonnes and as a percentage of the total weight of waste. **E.12.2** These can be reported at an aggregate level and/or broken down (where data is available) by composition of the recyclables and waste recovery operations.	**E.12.1** Total recyclables can be derived from a number of potential airline sources, including: • Offices/facilities. • Construction and demolition. • MRO (maintenance, repair, and overhaul). • Executive lounges. • Catering. • Cabin operations. **E.12.2** Examples of the composition of recycled cabin wastes diverted from disposal can include: • Aluminium cans (opened) – liquid removed. • Glass (opened) – liquid removed. • PET bottles (opened), beverage. • Cardboard (opened) – liquid removed. • Liquid (from opened beverages). • Paper (including newspapers & magazines – not food service packaging).	GRI 306-4[xliv].

				• Food Waste (1) loose and sealed food and (2) from opened food service packaging. • Packaging (food waste removed). • Loose amenity kits, headphones, and textiles (blankets, duvets, pyjamas, etc.). • Sealed PET Bottles, sealed Food and Beverages (excluding sealed PET bottles). • Sealed amenity kits, headphones, and textiles (blankets, duvets, pyjamas, etc.). • Headrests. • Construction and demolition materials, including aggregates and steel reinforcing bar. • MRO products, including metal alloys. • Other (for instance, wood waste (cargo pallets, shoring), plastic wrap (cargo protection, usually fed to plastic presses and granulated). Waste recovery operations could be broken down into: • Preparation for reuse. • Recycling. • Other recovery operations.	

E.13	Water consumption	L; megaliters	Report total water consumption in airline operations.	Water consumption measures water used by an organization such that it is no longer available for use by the ecosystem or local community in the reporting period. Reporting the volume of water consumption can help the organization understand the overall scale of its impact due to water withdrawal on downstream water availability. Water consumption onboard aircraft is generally restricted to potable water provided in lavatory sinks, toilets, and galleys, including hot drink makers. Potable water for aircraft is generally provided by airports through the local municipal potable water system (PWS) or from groundwater sources. Airline operators are not generally considered to be large consumers of water. However, as global businesses they frequently operate in water-scarce regions, where the demand for water exceeds sustainable yields from local water sources. Water scarcity is predicted to worsen due to various factors, including population growth, climate change and the degradation and exploitation of water supplies.	GRI 303-5[xlvi]; IEnvA EMP for Flight Operations[xlvii]; IEnvA EMP for Corporate Activities[xlviii]; WEF[xlix].
E.14	Water consumption in water-stressed areas	L	Report total water consumption in flight, ground, and corporate operations in areas with water stress.[52]	Publicly available and credible tools for assessing areas with water stress include the World Resources Institute 'Aqueduct Water Risk Atlas', and the WWF 'Water Risk Filter'. Given the wide geographical outreach of airline operator activities, it is likely that a number of airlines operate in water-scarce regions. Airline operators may face social challenges associated with receiving preferential water supply instead of surrounding communities. Therefore, it is recommended that airlines identify water-stressed areas where they have significant ground operations or otherwise uplift a significant quantity of water.	GRI 303-3-b[l]; IEnvA EMP for Flight Operations[xlvii]; WEF[xlix].

[52] Water stress is defined as the ability, or lack thereof, to meet the human and ecological demand for water. Water stress can refer to the availability, quality, or accessibility of water.

E.15	Single-use plastics (SUP)	#, t	Report all single-use plastic (SUP)[53] products purchased during the reporting period, including disclosing any single-use plastics that were replaced or removed compared with the previous reporting period.	Total single-use plastic items can be derived from several potential airline sources, including: • Offices/facilities. • Construction and demolition. • MRO (maintenance, repair, and overhaul). • Executive lounges. • Cabin operations. The baseline should be calculated based on the number of items (e.g., number of toothbrushes). Weight is also an option to determine the baseline. It is highly recommended to define the source of single-use plastic use (see airline sources above).	IEnvA EMP for Flight Operations[li]; WEF[xliv].
S.5	Work-related ill-health	number of work-related ill health cases	Report the number of recordable work-related ill health cases.	Work-related injury or ill health refers to negative impacts on health arising from exposure to hazards at work. (This definition is based on the International Labour Organization (ILO), Guidelines on Occupational Safety and Health Management Systems, ILO-OSH 2001, 2001). Work-related ill health can include acute, recurring, and chronic health problems caused or aggravated by work conditions or practices. They include musculoskeletal disorders, skin and respiratory diseases, malignant cancers, diseases caused by physical agents (e.g., noise-induced hearing loss, vibration-caused diseases), and mental illnesses (e.g., anxiety, post-traumatic stress disorder). This disclosure covers, but is not limited to, the diseases included in the ILO List of Occupational Diseases. Employees include all workers who are not direct employees but whose work and/or workplace is controlled by the organization.	GRI 403-9 (a&b), 403-6 (a), 403-10[lii]; ASRH[liii]; ILO[xxix].
S.6	Fatalities as a result of work-related ill health	#	Report the number of fatalities as a result of work-related ill health.	Employees include all workers who are not direct employees but whose work and/or workplace is controlled by the organization.	GRI 403-9 a & b[xxviii].

[53] A SUP product means a product that is made wholly or partly from plastic and that is not conceived, designed, or placed on the market to accomplish, within its life span, multiple trips or rotations by being returned to a producer for a refill or re-used for the same purpose for which it was conceived.

S.7	Employee satisfaction	Employee satisfaction score/indicator (1 lowest, 10 highest)	Report the results of any employee satisfaction or engagement surveys undertaken during the reporting period, and any measures in place to improve satisfaction and engagement.	When compiling the information, the reporting airline should disclose and apply the approach to measuring satisfaction or engagement consistently, in the period and between periods. Satisfaction could also be calculated as an index of two or more metrics that are combined to paint a fuller picture of overall satisfaction. These metrics can be own airline-specific wellness surveys, absentee records, employee turnover etc.	ASRH[liv].
S.8	Number of aviation accidents	#	Report the number of aviation accidents[54] during the reporting period.		ICAO Annex 13[lv]; ASRH[liii].
S.9	Risk for incidents of child, forced or compulsory labor	#, %	Report the number of incidents, and the percentage of operations and suppliers considered to have significant risk for incidents of child labor, young workers exposed to hazardous work, forced or compulsory labor.	Child labor refers to an abuse, should not be confused with 'children working' or with 'young persons working', which may not be abuses as stipulated in ILO Convention 138. Child labor is subject to ILO Conventions 138 'Minimum Age Convention' (ILO Convention 138) and 182 'Worst Forms of Child Labour Convention' (ILO Convention 182). Forced or compulsory labor exists globally in a variety of forms. The most extreme examples are slave labor and bonded labor, but debts can also be used as a means of maintaining workers in a state of forced labor. Indicators of forced labor can include withholding identity papers, requiring compulsory deposits, and compelling workers, under threat of firing, to work extra hours to which they have not previously agreed. Eliminating forced labor remains an important challenge. Forced labor is not only a serious violation of a fundamental human right but also perpetuates poverty and is a hindrance to economic and human development.	GRI 408[lvi]; GRI 409-1[lvii]; ILO[lviii] WEF[xxxv].

[54] Aviation accidents refer to an occurrence associated with the operation of an aircraft, in which (any of the following): a) a person is fatally or seriously injured; b) the aircraft sustains damage or structural failure; c) the aircraft is missing or is completely inaccessible.

S.10	Pay gap	Ratio of the basic salary and remuneration of women to men	**S.10.1** Report the ratio of the basic salary and remuneration of women to men for each employee category, by significant locations of operation. **S.10.2** Airlines should also disclose the definition used for 'significant locations of operation'.	The pay gap metric is considered an indicator of organizational structural inequality and under-representation of disadvantaged groups in senior and higher-paid roles. A wide gap between the highest-paid individual and the median reinforces inequality and could impede long-term value creation for the business. Depending on how the organization is structured, it can become a crucial aspect for investors to make appropriate decisions.	GRI 405-2[lix] WEF[xxxv].
G.3	Percentage of critical suppliers subjected to environmental and social impact assessments and total spend they represent	%	Report the percentage of critical suppliers[55] subjected to environmental and social impact assessments[56] out of all critical suppliers, and the percentage of total critical supplier spending they represent.	Assessments can be informed by audits, contractual reviews, two-way engagement, and complaint and grievance mechanisms. Recommended practice for new suppliers**:** Perform a supplier screening prior to engagement. Adopt a formal or documented process that applies a set of performance criteria for determining whether to proceed in a relationship with a supplier.	ASRH[lx]; GRI 308-2[lxi]; GRI 414-2[lxii]; IEnvA EMP for Corporate Activities[lxiii].
G.4	Percentage of the active workforce covered under collective bargaining agreements	%	Report the percentage of employees in the active workforce that were covered under collective bargaining agreements during any part of the reporting period, where allowed by law.	Active workforce is defined as the maximum number of unique employees employed at any time during the reporting period. Collective bargaining agreements are defined as a mechanism or tool of negotiation by which a union has a collective interest in negotiations to the benefit of several employees.	GRI 407-1[lxiv]; SASB (TR-AL-310a.1)[lxv]; GRI102-41[lxvi] WEF[xxxv].

[55] A critical supplier could be: High-volume suppliers or similar; Critical component suppliers or similar; and/or non-substitutable suppliers or similar.
[56] Assessments can be made against agreed performance expectations that are set and communicated to the suppliers prior to the assessment. An assessment could also be defined as "risk screening".

G.5	Losses as a result of legal proceedings associated with anti-competitive behavior regulations	Amount in reporting currency, #	Report: **G.5.1** Total amount of monetary losses an airline incurred during the reporting period as a result of legal proceedings associated with anti-competitive behavior, such as those related to enforcement of laws and regulations on price fixing, anti-trust behavior (e.g., exclusivity contracts), patent misuse, or network effects, as well as bundling of services and products to limit competition (if not confidential). **G.5.2** Number of completed legal proceedings associated with anti-competitive behavior (see G.5.1) that were incurred during the reporting period.	**G.5.1** The losses shall include all monetary liabilities to the opposing party or to others (whether as the result of settlement or verdict after trial or otherwise), including fines and other monetary liabilities incurred during the reporting period as a result of civil actions (e.g., civil judgments or settlements), regulatory proceedings (e.g., penalties, disgorgement, or restitution), and criminal actions (e.g., criminal judgment, penalties, or restitution) brought by any entity (e.g., government, business, or individual). The scope of monetary losses shall exclude legal and other fees and expenses incurred by the entity in its defence.	GRI 206[lxvii].
G.6	Number of government enforcement actions of aviation safety regulations	#	Report the number of enforcement actions that are related to aviation safety regulations.	The enforcement actions could be from the European Aviation Safety Agency (EASA), the US Federal Aviation Administration (FAA), or the equivalent national authorities.	SASB (TR-AL-540a.3. N)[lxviii].

Table 4. Business activity indicators (per annum, as minimum).

BUSINESS ACTIVITY INDICATORS (per annum, as minimum)				
Metric code	**Metric name**	**Guidance**	**Comments**	**Reference**
B.1	Available Tonne-Kilometers (ATK)	Report available tonnes kilometers (ATK)	The sum of the products obtained by multiplying the number of tonnes of capacity available for the carriage of revenue load (passengers, baggage, freight and mail) on each flight stage of a flight by the flight stage distance. The same method of calculating available payload capacity is used for both scheduled and charter flights for statistical reporting purposes.	World Air Transport Statistics[lxix].
B.2	Passenger-Kilometers Flown (RPK)	Report revenue passenger kilometers (RPK)	The sum of the products obtained by multiplying the number of revenue passengers carried on each flight stage by the flight stage distance.	Ibid.
B.3	Tonne-Kilometers Performed (RTK)	Report revenue tonne kilometers (RTK)	The sum of the products obtained by multiplying the total number of tonnes of each category of revenue load carried on each sector of a flight-by-flight stage distance.	Ibid.; ASRH[Error! Bookmark not defined.].
B.4	Departures	Report number of aircraft departures	Departures are equal to the number of landings made or flight stages flown.	World Air Transport Statistics[lxix].
B.5	Landings and Take-offs (LTOs)	Report number of landings and take-offs (LTOs)	The number of LTOs are equal to the number of departures (see B.4) multiplied by two.	Ibid.
B.6	Passengers	Report number of passengers carried	The number of revenue passengers carried (i.e. a passenger for whom the carriers receive commercial remuneration) should be obtained by counting each passenger on a particular flight (one that has the same flight number throughout the journey of the passenger) only once and not at each individual stage of that flight, with the single exception that a passenger flying on both the international and domestic stages of the same flight should be counted as both a domestic and an international passenger. Non–revenue passengers should be excluded. Generally, this number excludes no-shows, unless it's otherwise indicated.	Ibid.
B.7	Employees	Report number of employees (and as a subset, workers whose work and/or workplace is controlled by the airline)	Employees refers to all personnel (both permanent and temporary) on the payroll of an airline as of 31 December of the relevant reporting year.	Ibid.; ASRH[liii]; GRI 401-1[lxx]; WEF[lxxi].

Table 5. ESG Intensity Ratios

ESG INTENSITY RATIOS					
Metric code	**Metric name**	**Metric units**	**Guidance**	**Comments**	**Reference**
I.1	Intensity 1	gCO_2/RTK	Report gCO2/RTK to track the evolution of CO_2 emissions intensity, while accounting for changes in traffic volumes.	This intensity ratio follows the Net Zero 2050 Tracking Progress Methodology	ASRH[Error! Bookmark not defined.]; GRI 305-4[lxxii]; HYPERLINK "https://www.iata.org/contentassets/b3783d24c5834634af59148c718472bb/net-zero-tracking-progress-methodology.pdf"Net Zero 2050 Progress Tracking Methodology[lxxiii].
I.2	Intensity 2	gCO_2/ATK	Report gCO_2/ATK to track the evolution of CO_2 emissions intensity, while accounting for changes in available capacity.	This intensity ratio follows the Net Zero 2050 Tracking Progress Methodology	Ibid.
I.3	Waste Intensity for cabin operations (for activity table)	t/passenger	Report the average cabin waste per passenger for short and long-haul flights in tonnes / passenger.		
I.4	NO_x emissions intensity	kg NO_X per LTO	Airlines may also report: • NO_x emissions intensity: kg NO_X per LTO cycle (i.e. kg NO_X/LTO); • separately for wide and narrow bodies.		ASRH[i]; GHG Protocol Corporate Standard[lxxiv]; IEnvA EMP for Flight Operations[lxxv]; WEF[xvii].

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Appendix 4. Airline material topics

Figure 4: Indicative list of proposed airline material topics

Proposed topics[57]	Link with the Sustainable Development Goals
Conduct and compliance	
Customer experience	
Energy and emissions	 
Labor conditions	
Noise	No direct targets but can indirectly affect several goals
People and development	 
Supply chain	
Waste and effluents	  

[57] Airline Sustainability Reporting Handbook (ASRH).

Appendix 5. Useful Templates

Appendix 5.1. Template for material topic management

Table 6. Indicative template for material topics

Category	Description
MATERIAL TOPIC	
Rationale for materiality	
Impact on the airline (from materiality assessment)	
Importance to stakeholders (from materiality assessment)	
Stakeholders involved	
Risks	
Opportunities	
Policies and commitments	
Processes involved	
Goals and targets	
Metrics considered	
Actions taken	
Other comments	

Appendix 5.2. Template ESG metrics – Core

Table 7. List of core ESG metrics.

Metric code	Metric (**green** =environment, **yellow** = social, **grey** = governance)	Units
E.1	Fuel consumption (flight operations)	t [58]
E.2	Scope 1 CO_2 emissions	tCO_2; tCO_2e[59]
E.3	Scope 2 CO_2 emissions	tCO_2; tCO_2e
E.4	NO_x emissions	kg
E.5	Noise: % of fleet that meets with ICAO Chapter III, IV and XIV	%
E.6	Energy consumption within the organization, non-renewables and renewables	GJ; MWh
S.1	Community engagement and charitable support	Amount in reporting currency, hours, cargo t, # of passengers
S.2	Work-related injuries	#, rate
S.3	Fatalities resulting from a work-related injury	#, rate
S.4	Employee training	# hours
G.1	Diversity (gender, grade)	#
G.2	Total number of confirmed corruption cases	#

[58] Tonnes (t)—in this guidance, tonnes refer to metric tonnes.
[59] CO_2e - A carbon dioxide equivalent or CO_2 equivalent, abbreviated as CO2e, is a metric measure used to compare the emissions from various greenhouse gases based on their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential (Eurostat).

Appendix 5.3. Template ESG metrics – Extended

Table 8. List of extended ESG metrics.

Metric code	Metric (green =environment, yellow = social, grey = governance)	Units
E.7	Scope 3 CO_2 emissions	tCO_2 tCO_2e
E.8	Carbon offsets (voluntary- airline purchased)	t
E.9	Carbon offsets (voluntary- customer purchased)	t
E.10	Carbon offsets (mandatory)	t
E.11	Waste	t
E.12	Recyclables	%; t
E.13	Water consumption	L; megaliters
E.14	Water consumption in water-stressed areas	L
E.15	Single-use plastics (SUP)	#, t
S.5	Work-related ill-health	number of work-related ill health cases
S.6	Fatalities resulting from work-related ill health	#
S.7	Employee satisfaction	Employee satisfaction score/ indicator (e.g., 1 lowest, 10 highest)
S.8	Number of aviation accidents	# of aviation accidents
S.9	Risk for incidents of child, forced or compulsory labor	#, %
S.10	Pay gap	Ratio of the basic salary and remuneration of women to men
G.3	Percentage of critical suppliers subjected to environmental and social impact assessments and total spend they represent	%
G.4	Percentage of the active workforce covered under collective bargaining agreements	%
G.5	Losses due to legal proceedings associated with anti-competitive behavior regulations	Amount in reporting currency, #
G.6	Number of government enforcement actions of aviation safety regulations	#

Notes on ESG metrics guidance

[i] IATA. 2023. *ASRH Edition 2*: Chapter 3 -Airline Sector Disclosures, C. Energy and Emissions, p.28-31.

[ii] IATA. 2022. *IEnvA Environmental Management Plans for Flight Operations, Edition 3.0*: CO_2 Emissions from Flight Operations, p. 8-26; Sustainable Aviation Fuel (SAF) capability development and usage, p. 30-39.

[iii] ICAO. 2018. *Standards and Recommended Practices (SARPs) First Edition Annex 16 - Environmental Protection, Volume IV*– Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).

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[v] WBCSD/WRI. 2004. Greenhouse Gas Protocol, *A Corporate Accounting and Reporting Standard, Revised Edition*: Chapter 4 "Setting Operational Boundaries", Scope 1: Direct GHG emissions, p.27.

[vi] IPCC. 2007. *AR4 Climate Change 2007*.

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[viii] IATA. 2022. *IEnvA Environmental Management Plans (EMP) for Flight Operations Edition 3.0*: CO_2 Emissions from Flight Operations, p. 8-26.

[ix] WEF. 2021. *Measuring Stakeholder Capitalism: Full List of Revised Core and Expanded Metrics*: WEF: Climate Change, p. 4.

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[xiv] GRI. 2018. *GRI 305: Emissions, 2016*: Chapter 9, "Reporting GHG Emissions", p.63.

[xv] WBCSD/WRI. 2004. Greenhouse Gas Protocol, *A Corporate Accounting and Reporting Standard, Revised Edition*: Chapter 9 "Reporting GHG Emissions", p.62.

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[xvii] WEF. 2021. *Measuring Stakeholder Capitalism: Full List of Revised Core and Expanded Metrics*: Air pollution, p.6.

[xviii] ICAO. 2018. *Annex 16 - Environmental Protection - Volume I - Aircraft Noise* Volume I, Chapter 3, 4 and 14.

[xix] IATA. 2023. *ASRH Edition 2*: Chapter 3 -Airline Sector Disclosures, E. Noise, p.34-35.

[xx] IATA. 2022. *IEnvA EMP for Flight Operations Edition 3.0*: Noise from Flight Operations, p. 39-43.

[xxi] IATA. 2022. *IEnvA EMP for Corporate Activities Edition 1.0*: Noise Emissions for Corporate Activities, p.21-22.

[xxii] GRI. 2018. *GRI 302: Energy, 2016*: Disclosure 302-1, Energy Consumption within the organization, p.7.

[xxiii] IATA. 2019. An Airline Handbook on CORSIA, p.21

[xxiv] ICAO. 2018. *Environmental Technical Manual - Volume IV*, 3.1.2.

[xxv] GRI. 2018. *GRI 413: Local Communities, 2016*.

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