

## Article

# Climate Change Discourse of Spanish-Speaking Airlines in Corporate Reports

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**Abstract:** The airline industry is currently responsible for more than 2% of greenhouse gas emissions, making it a major contributor to climate change and global warming. The aim of this paper is to investigate how airlines in Spanish-speaking countries communicate their position on climate change in their corporate reports and whether this has changed over the last few years. To this end, a corpus of 51 corporate reports produced by 5 different airlines between 2003 and 2020 was designed. The reports were subjected to linguistic analysis using computer processing and corpus linguistic methods. The results show large differences between the airlines in the way they communicate their relationship with climate change and suggest the existence of two phases in terms of attention paid to the issue, with a turning point in 2015/2016. In general, climate change tends to be addressed through the reporting of specific data, with limited mention of possible consequences. References to climate change tend to appear in indexes, titles, headings or literal reproductions of reporting standards. This helps to give some prominence to the issue, although there is most frequently no positioning or appraisal of the issue.

**Keywords:** corpus linguistics; corporate social responsibility (CSR); sustainability; corporate communication; corporate reports; climate change; airlines



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## 1. Introduction

Globally, carbon dioxide (CO<sub>2</sub>) emissions have increased by almost 50% since 1990, and this growth has been proportionally greater in recent decades. It is estimated that by the end of this century, the global average temperature will have risen by 1.5 degrees Celsius ([United Nations n.d.](#)). The UN's fight against climate change has given rise to several initiatives over the past years, such as the Kyoto Protocol in 2005 and the Paris Agreement in 2015, which aim to reduce greenhouse gas (GHG) emissions. Given that climate change is a global issue, Sustainable Development Goal 13 has an aim for “mainstreaming climate change into the policies, strategies and plans of countries, businesses and civil society, improving responses” ([United Nations n.d.](#)).

Although not traditionally under the same pressure as other more polluting industries, the passenger airline sector is currently responsible for about 2.1% of global CO<sub>2</sub> emissions ([ATAG—Air Transport Action Group n.d.](#)) and 3.5% of emissions of other global warming gases. In 2019, before the COVID-19 pandemic, more than 4.5 billion passengers used air transport services ([Burgueño Salas 2022](#)). Projections estimate that by 2050, the number of flights will reach ten billion journeys ([IATA n.d.](#)). NGOs and some segments of public opinion are skeptical about the industry's goal of achieving carbon neutrality by 2050, which should be achieved, among other measures, through improved energy efficiency, a shift away from fossil fuels or carbon offsetting programmes ([ICAO—International Civil Aviation Organization 2019](#)).

### 1.1. Corporate Communication about Environment and Sustainability

Companies may report on their environmental impact through various channels, the most important of these being the different types of corporate reports (also referred to in

Spanish as *memoria* or *reporte*) that may contain non-financial information. These include, first and foremost, annual reports, i.e., the documents that companies must publish at the end of each financial year to disclose their financial statements. In this context, the significance of this discursive genre is twofold. On the one hand, annual reports have served as a model for the creation of the other types of reports that will be presented below; on the other, they can nowadays include one or more sections on non-financial information alongside the financial statements. Secondly, companies have the option of publishing a corporate social responsibility report (hereafter CSR) or a sustainability report. It was in the 1970s and 1980s that companies started to voluntarily disclose non-financial information. These non-financial reports were modelled on annual reports. However, unlike the latter, there was no legal requirement to publish them, and they rather focused on social issues (Fifka 2012). From the 1990s onwards, and in the wake of ecological disasters, the environment became the focus of many of these social or environmental reports (Kolk 2010; Fifka 2012, p. 46; Fifka 2014, p. 3). From the first decade of the 21st century on, these voluntary corporate reports started to be called Corporate Social Responsibility Reports. This change in title coincided with a broadening of the subject matter to which they could refer, although the combination of social and environmental aspects remained the most common. These non-financial reports, without losing their voluntary character, quickly became mandatory for large companies. Indeed, in 2011, 95% of the 250 largest global companies published such non-financial reports (Fifka 2014; KPMG 2011). In the second decade of the 21st century, CSR reports started to be called sustainability reports. In this paper we will use the terms CSR and sustainability as synonyms, as this is what companies themselves tend to do (Pérez Cañizares 2021). Finally, the third type of corporate reports that may contain information on climate change are the so-called integrated reports (abbreviated as <IR>). This is the most recent type of corporate report, which emerged in the second decade of the 21st century and aims to integrate financial and non-financial information in a single document, thus establishing relationships between the two. Integrated reports have been promoted globally by the International Integrated Reporting Council (IIRC) (International Integrated Reporting Council (IIRC) 2013). Similar to other corporate communication tools, the different types of corporate reports just presented are complex genres that have evolved over the years and combine at least two different communication objectives: to inform on the one hand, and to present a good image of the company on the other (Bhatia 2010; Ditlevsen 2012, p. 92; de Groot 2014; Schnitzer 2017).

In the evolution of corporate reporting as a discursive genre, several global initiatives have played a key role in guiding companies in their preparation (Pérez Cañizares 2021), some of which have also contributed to a certain degree of standardisation of reports. Currently, the Global Reporting Initiative (hereafter GRI) is the body that has achieved the greatest global adoption of its standards (Nikolaeva and Bicho 2011; KPMG 2020). They are now explicitly mentioned in the legal requirements for disclosure in 67 countries (van der Lugt et al. 2020). With six different versions of its recommendations published between 2000 and 2021, the latest of which is still being implemented, the GRI standards are being used by an increasing number of companies. In 2011, 80% of the world's 250 largest companies were already using the GRI recommendations for non-financial disclosure (KPMG 2011), and 6 years later, this figure had risen to 89% (KPMG 2017). Today, the figure is 84% (KPMG 2020).

The United Nations also has a long history of promoting both a sustainable approach to economic activities and the implementation of CSR practices. The United Nations Global Compact describes itself as “the world's largest business sustainability initiative” (United Nations Global Compact n.d.). The 2030 Agenda for Sustainable Development, which is currently in force, was implemented in 2015 and sets out 17 Sustainable Development Goals (SDGs) to be achieved by that date, including SDG number 13, Climate Action. The SDGs were initially presented as a tool for businesses and other stakeholders to report on their non-financial activities in a more structured and transparent way. Indeed, in 2018, the

United Nations Global Compact and GRI launched a joint initiative to integrate the SDGs into corporate reporting ([Global Reporting Initiative \(GRI\) and United Nations Global Compact 2018](#); [United Nations Global Compact 2018](#)).

### 1.2. Climate Change in Corporate Reporting

As one of the issues that the Sustainable Development Goals aim to counter, climate change is an issue that companies should address in their non-financial reports. Indeed, the number of studies dealing with corporate discourse on climate change is relatively large, at least in English. In fact, this line of research emerged almost in parallel with CSR reporting itself ([Jaworska 2018](#)), which focused on the environment, especially in the 1990s. It was the companies with the largest environmental impacts that first started to produce CSR reports ([Fifka 2014](#)) in order to legitimise their actions ([Breeze 2012](#)). Perhaps this is why the vast majority of research on the climate change discourse has focused on industries that play a crucial role in the environment, such as the oil sector ([Kapranov 2018](#); [Dahl and Fløttum 2019](#); [Jaworska 2018](#)) or the automotive sector ([Frandsen and Johansen 2011](#)).

Some work has looked at how climate change is represented and framed in business discourse. For example, [Ihlen \(2009\)](#) analyses the frequency of use of certain keywords in the annual reports of 30 companies to assess the importance they attach to the issue. The results show different attitudes to climate change, depending more on the sector than on the region in which the companies operate; moreover, most of them emphasise the seriousness of the problem, and a very small number frame it as an opportunity.

Regarding the evolution of the salience of climate change in business discourse, two recent studies address the issue. In particular, [Pollach \(2018\)](#) examines it along with other environmental issues based on a sample of 207 of the largest Forbes companies in the world, analysing available reports for the first decade of the 21st century. The results show changes in the occurrence of the different issues over the decade, which could be explained by the existence of different attention cycles. In particular, mentions of ‘climate’ in reports grew exponentially throughout the decade and stabilised between 2008 and 2010. [Jaworska \(2018\)](#), on the basis of CSR reports published by 21 companies in the oil sector between 2000 and 2013, found both a decline in the importance of ‘climate change’ after 2009 and differences in the discursive construction of the issue. In particular, at the beginning of the period, it is presented as a manageable problem, while, over the years, climate change is characterised as an unpredictable risk ([Jaworska 2018](#)).

In contrast to oil companies, there is a lack of research on CSR communication in the aviation sector (which, in addition to airlines, includes airports and aerospace companies). A very recent literature review on this topic found only 23 articles published between 2005 and 2019 ([Zieba and Johansson 2022](#)). This lack of interest may be related to the fact that, globally, more than half of companies in the aviation sector do not publish CSR reports ([Karaman et al. 2018](#)). In particular, airlines started producing CSR reports later than companies in other industries. A 2009 paper examining the reports of airlines belonging to the 3 largest global alliances found that only 14 out of a total of 41 companies published reports at that time ([Cowper-Smith and de Grosbois 2011](#)). This lack of data may therefore explain the scarcity of research efforts. Moreover, of the papers analysed by [Zieba and Johansson \(2022\)](#), only 13 deal exclusively with airlines and not with the aviation sector as a whole. At this stage, two of them can be used to contextualise the present study: firstly, [Eccles et al. \(2012\)](#), who examined climate change-related information published by seven US airlines and concluded that they were generic and stereotypical statements; second, [Bhatia \(2012\)](#), who compared CSR reports from Chinese and US companies in three sectors (oil, banking and airlines) using discourse analysis to conclude that these reports are examples of a hybrid genre that combines data with promotional discourse. This article is the only one that uses linguistic methods to study airline CSR reports. Research has not yet produced works that deal with airlines that have Spanish as their corporate language. This is the gap that the present study aims to fill.

### 1.3. The Present Study

The general objective of this article is to find out how passenger airlines based in Spanish-speaking countries communicate their position on climate change and whether this communication has changed in recent years. Based on previous work on corporate discourse in Spanish, a longitudinal study and a comparison between companies from different Spanish-speaking countries have been carried out.

Specifically, the focus is on business communication through corporate reports, and the research aims to answer the following questions:

- RQ1: What documents do airlines use to report on CSR/sustainability? Since when have they published these documents? Are there differences between airlines?
- RQ2: Is climate change addressed in these corporate reports? Has this changed over time? Are there differences between companies in terms of the amount of information provided and its evolution?
- RQ3: What terminology do companies use to refer to climate change? Has this changed over time? Are there differences across companies?
- RQ4: How do companies present climate change? Are there differences across companies?

## 2. Materials and Methods

As mentioned above, large companies tend to publish CSR information earlier, which is a key factor in the selection of data. In the case of the airline industry, it was decided to look at the largest company in each of the countries analysed. The companies were identified using a ranking of the airlines with the largest number of passengers worldwide ([IATA n.d.](#)). Finally, as will be seen, the sample consists of companies that have a long history in common, as they were the first airlines in each country and some of them were state owned for a long time. This shared history, together with the fact that many of them have survived through mergers and multinational alliances in their more recent history, contributes to the homogeneity of the corpus. The selected companies are:

- LATAM Airlines (Chile): Ranked 17th in the world by number of flights ([CTravel International AB n.d.](#)), it is the largest company included in the study. It is the product of the 2016 merger between LAN Chile, heir to the national airline created by the Chilean government in 1929, and TAM Airlines, a major Brazilian airline. The merger created the largest airline in South America.
- Avianca (Colombia): It is the world's second oldest airline still in operation and ranks 35th in the world in terms of number of flights ([CTravel International AB n.d.](#)). Founded in 1919 as SCADTA (Sociedad Colombo Alemana de Transportes Aéreos), it changed its name to Avianca in 1940. It merged with TACA (Transportes Aéreos Centroamericanos) in 2009.
- Aeroméxico (Mexico): Currently ranked 49th in the world by number of flights ([CTravel International AB n.d.](#)). Founded in 1934 as Aeronaves de México, it currently has an alliance with US carrier Delta Airlines to operate between the US and Mexico.
- Iberia (Spain): Founded in 1927, it was Spain's state-owned airline until it was privatised and floated on the stock market in 2001. It is currently the 52nd largest airline in the world in terms of number of flights ([CTravel International AB n.d.](#)). In 2010, it merged with British Airways to form the IAG Group.
- Copa Airlines (Panama): Currently ranked 67th in the world by number of flights ([CTravel International AB n.d.](#)). Founded in 1947 as Compañía Panameña de Aviación, it currently has a strategic alliance with US carrier United Airlines.

The ranking position quoted above is merely indicative and is based on the number of daily flights operated by the different airlines. The corpus was limited to these five airlines, as those in other countries do not publish CSR information, or not to a comparable extent. In particular, Aerolíneas Argentinas, which was a good candidate for inclusion in the sample due to its history and passenger volume, had to be excluded for lack of data. The company devotes a short section of its website to sustainability, mentioning some of its

projects related to the SDGs, but does not publish any non-financial information documents. The annual reports (memoria) and financial statements (estados contables) available on the website for the years 2014 to 2020 do not contain any CSR-related information. This was also the case for TAME, Ecuador's national airline founded in 1962, which went into liquidation in 2020 following the health crisis caused by COVID-19. Finally, Boliviana de Aviación, the Bolivian state-owned company, does not report on CSR-related issues.

The possibility of including low-cost airlines in the sample was rejected from the very beginning—the large differences in business model between low-cost airlines and traditional airlines cast doubt on the comparability of the two. The problem, however, was solved by the finding that, in general, potential candidates do not publish CSR reports. This may be partly due to the fact that they are smaller companies. One exception is the Mexican airline Volaris, founded in 2005, which published CSR reports in 2017 and 2018, a sustainability report in 2019 and an integrated report in 2020. In any case, as no comparable samples were found in other countries, it was decided not to include these reports in the corpus.

Once the companies to be included in the study were selected, the corporate reports containing CSR information were located. On several occasions, the websites of the companies themselves contained only relatively recent reports (for example, the oldest report found on the Iberia website dates from 2015), so a web search was carried out to locate older reports in different repositories. For the construction of the corpus, the pdf version of the reports of the different companies was downloaded. All pdf files were converted to a text format using the software AntFileConverter (Version 1.2.1) (Anthony 2017) so that they could be subsequently analysed with the tool AntConc (Anthony 2019). On some occasions, it was necessary to use character recognition software (OCR). In general, these tools are used in corpus linguistics studies so as to describe typical distributional patterns observed in a set of texts with comparable characteristics (Biber et al. 2007). They are used with the aim of obtaining more generalisable results than in the case of research based on a small number of texts. Some work suggests that corporate discourse is particularly suitable for analysis by means of corpus linguistics (Berber Sardinha and Barbara 2009) and can provide relevant information on discourse terminology (Tognini-Bonelli 2008).

In order to trace the evolution of airline CSR reports, a corpus of 51 documents published between 2010 and 2020 was compiled. Some companies started publishing reports before 2010, but the lack of reports from the rest of the companies for those dates makes it impossible to analyse those years. Therefore, they were used exclusively to establish the historical evolution of the publication of information. Specifically, the corpus consists of approximately 1,800,000 words (tokens). The data on the composition of the corpus by company can be found in Table 1.

**Table 1.** Corpus of CSR reports issued by Spanish-speaking airlines.

Company	Tokens	Types
LATAM	691.841	20.653
Avianca	556.252	19.963
Iberia	312.971	12.461
Aeroméxico	139.198	8.734
COPA	122.918	8.421

To identify references to climate change in the reports, a list of terms related to the topic was compiled. The list was based on SDG 13, Climate Action (take urgent action to combat climate change and its impacts) and the explanation provided by the United Nations Global Compact to achieve this goal. In addition, a list of all the words found in the company reports was generated using AntConc (Anthony 2019), which was sorted according to frequency and examined starting with the most frequent words. Although this list contained many non-climate-related words, it was possible to identify other relevant terms, which were added to the list. In this way, the word list was constructed using both



the data themselves and external input (Pollach 2018). Table 2 lists the terms analysed in the study.

**Table 2.** List of climate change-related terms analysed.

Climate Change-Related Terms
acuerdo de París ( <i>Paris agreement</i> )
calentamiento global ( <i>global warming</i> )
cambio climático ( <i>climate change</i> )
CO <sub>2</sub>
biocombustible ( <i>biofuel</i> )
efecto invernadero ( <i>greenhouse effect</i> )
emisiones ( <i>emissions</i> )
huella de carbono ( <i>carbon footprint</i> )
protocolo de Kioto ( <i>Kyoto protocol</i> )
temperatura ( <i>temperature</i> )

The first phase of the analysis involved grouping the reports by year and searching for these terms. The aim of this phase was to obtain data to examine the evolution of climate change salience in reports. In a second phase, a comparison was made between the companies in relation to their use of the different terms, with the aim of identifying any differences between them in the importance they have given to climate change over the last 10 years. In principle, a high frequency of certain terms is related to the importance given to the issue they refer to (Pollach 2018). Studies with a qualitative approach also suggest that a high frequency of relevant terms indicates an in-depth treatment of the topic (Ihlen 2009). The data provided by the software were screened by eliminating occurrences of the search terms if they did not relate to the topic of climate. For example, the use of ‘compensación’ (*compensation* or *offset*), which refers to financial compensation, was removed so that the data analysed in the following section are the result of a contextual examination of the use of each term. This can easily be done in the programme itself, as it allows the use of concordances and the localisation of each passage. Finally, the third phase of the analysis consisted of locating collocations and a qualitative analysis of those passages in which companies explained or assessed their position on climate change in somewhat more detail (Mautner 2016).

### 3. Results

#### 3.1. Disclosure of CRS Information in the Airline Industry

All five companies surveyed currently publish documents containing CSR information. Two of them do so in annual reports or in integrated reports, while the other three companies publish separate reports, which they refer to as sustainability reports. All these documents are published in Spanish and occasionally translated into English to reach a wider audience. Historically, the Spanish airline Iberia was the first to start producing reports. In 2003, it published its first corporate responsibility report, which was prepared according to the G2 version of the GRI and continued to be published under this name until 2016, when it became a sustainability report. In 2003 and 2004, the report was a separate document, but between 2005 and 2010, it was published as part of the annual report, together with the financial statements. For example, Iberia’s 2008 corporate responsibility report starts on page 246 of the annual report. From 2011, the report appears as a separate document with its own cover page. This development is a direct consequence of the merger of Iberia and British Airways to form the IAG group: from that moment on, the group publishes an annual report for IAG, so Iberia has not published an annual report since 2011.

Latin American companies started to publish CSR information around 2010. In the case of Chilean airline LAN, it was the same year. At that time, LAN had already announced its intention to merge with the Brazilian airline TAM, and its first sustainability report was prepared according to the GRI’s G3 guidelines. In 2014, the company was included in the

Dow Jones Sustainability Index, becoming only the second company in the aviation sector to be included in the index (the first being the Air France-KLM group). Inclusion in the index is the result of good performance in eco-efficiency and climate change (LATAM, 2014, p. 5).

The company continued to publish a separate sustainability report up to 2017. From 2018 to date, the group has published an integrated report that follows both GRI and IIRC guidelines.

Avianca, the Colombian airline, has followed a similar path to LAN: a first sustainability report was published for the years 2008 and 2009. Between 2011 and 2015, the company published separate social responsibility and sustainability reports in order to disclose on these topics. From 2016, financial and non-financial information was published together in a document called the management report. From 2017, an annual report was published, which, for the first time, followed the guidelines of the GRI and the United Nations Global Compact. Also this year, the company was included in the Dow Jones Sustainability Index MILA (Avianca, 2017, p. 4).

Aeroméxico is the company with the least data. The first CSR document published by the company, called the corporate social responsibility report, refers to the financial year 2011–2012, one year later than the rest of the airlines, although this report already followed the GRI guidelines. In addition, the company started to publish these documents every two years. For 2015–2016, the document was called a sustainability report, and from 2017 until now, the company has published a sustainability report on an annual basis.

Finally, COPA Airlines, based in Panama, published its first CSR report in 2010. In this report, the company highlighted its commitment to the United Nations Global Compact since 2001. This is also reflected in the title of the reports published between 2011 and 2014, which are called communication of progress. In this context, ‘progress’ refers to progress in implementing corporate governance in accordance with the 10 principles of the UN Global Compact (COPA Airlines, 2012, p. 3). In addition, the GRI guidelines were also followed from 2012. The company changed the title of the document in 2015, when the first sustainability report was published. From 2016 until the last year analysed, 2020, the document was called a sustainability report. A list of all CSR or sustainability documents published by the airlines can be found in Appendix A.

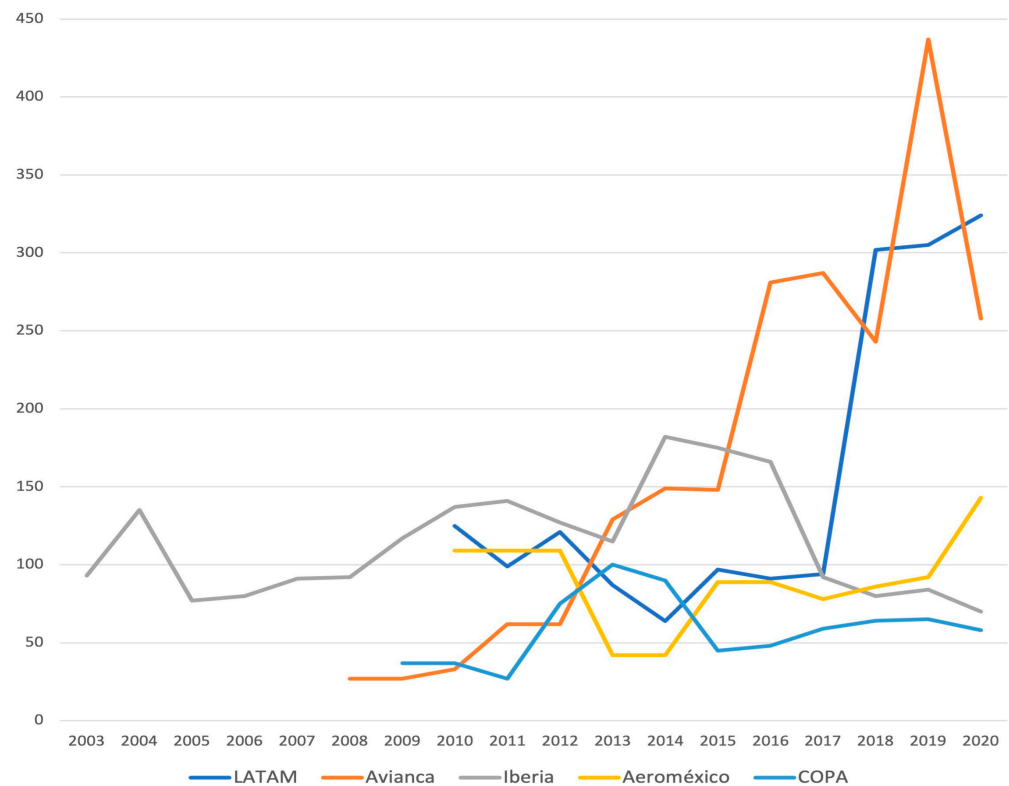
In terms of length, separate CSR reports are almost always less than 150 pages. The size increases when companies decide to combine financial and non-financial information in a single document, as in the case of Avianca from 2016 and LATAM from 2018. The evolution of the number of pages is shown in Figure 1.

### 3.2. Climate Change in Airline Reports

The analysis of the corpus of reports published by the five airlines between 2010 and 2020 revealed significant differences between them in the frequency of appearance of terms related to climate change. The mentions, broken down by year and company, can be seen in Table 3, which shows that two of the companies, Aeroméxico and COPA, remain well below the rest in relation to the total number of occurrences of terms related to climate change. In the case of Aeroméxico, it should be noted that only 8 reports are included in the corpus, instead of 11 for the other companies. This is due to the fact that the Mexican company published a single report on three occasions, covering two or three years.

Figure 2 shows these results. The evolution of each company is different, although two phases can be identified. In the first part of the decade, Avianca, Aeroméxico and COPA all make little or no use of terms related to climate change, while both Iberia and LATAM accumulate more than twice as many mentions during this period. In 2015, there is a turning point where the issue becomes less important for all companies and the number of mentions decreases. Then, in the second phase, from 2016 to the present day, three groups can be identified: firstly, LATAM and Avianca, which double and sometimes even triple the number of mentions of the other companies; secondly, Iberia and Aeroméxico,

whose number of mentions is moderate; and finally, COPA, which maintains its trajectory of giving very little importance to the issue.



**Figure 1.** Evolution of the number of pages of airline reports used to disclose on CSR topics.

**Table 3.** Number of terms related to climate change appearing in the reports.

Year	LATAM	Avianca	Iberia	Aeroméxico	COPA
2010	26	18	56	60	31
2011	75	25	146		19
2012	129	55	146		48
2013	126	39	104	17	19
2014	80	25	143		24
2015	86	34	48	46	7
2016	185	64	142		9
2017	142	145	73	19	12
2018	163	155	64	62	8
2019	197	171	51	63	7
2020	101	161	82	65	14
Total	1310	892	1055	332	198

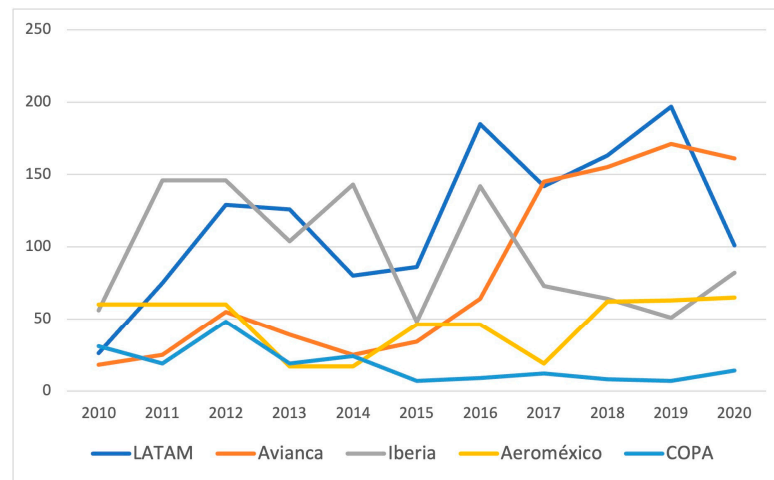
Note: Aeroméxico published reports covering periods longer than a year, which explains why dates for only 8 reports are available.

### 3.3. Terminology Used in Reports to Refer to Climate Change

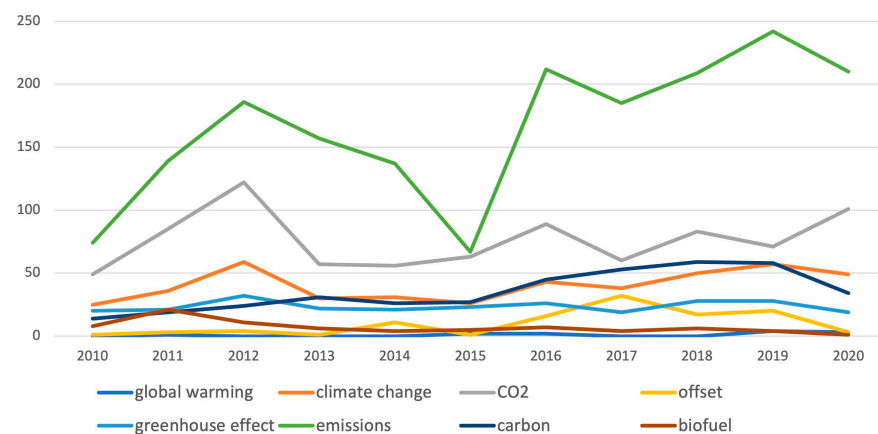
Having looked at the overall weight of all the terms analysed, we can now look in detail at which of them are most frequently used in the reports. Firstly, it should be made clear that some of the terms in Table 2 are very scarce, such as ‘Kyoto Protocol’, which appears only in isolated mentions in the reports of Iberia between 2014 and 2016, or ‘Paris Agreement’, which appears in isolated cases during the second phase. The same applies to ‘temperature’, which occurs very rarely in relation to the possible increase in ambient temperature. The use of the remaining terms, whose evolution does not seem to have changed too much over the decade, is shown in Figure 3. It was decided to include ‘global



warming’, in spite of the fact that it is very unrepresentative, because it is a result that we will be returning to later.



**Figure 2.** Evolution of the number of terms on climate change used by the airlines.



**Figure 3.** Evolution of the frequency of use of the terms.

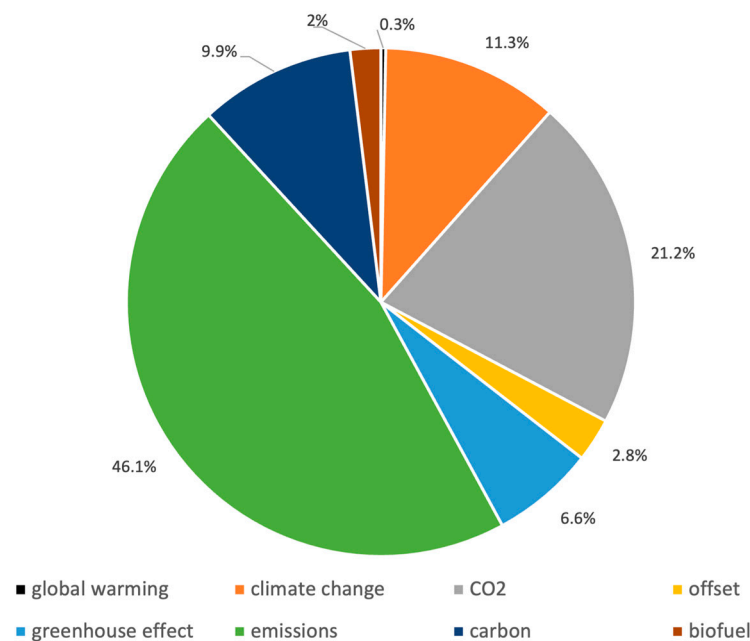
As we can see, the most frequently used terms are ‘emissions’ and, to a lesser extent, ‘CO<sub>2</sub>’, and they are also the ones that show the greatest volatility. In fact, the graph shows a minimum of occurrences in 2015, which coincides with the end of the first phase we highlighted in Figure 2. On the other hand, the use of ‘global warming’ is almost non-existent throughout the period. The use of ‘carbon’ appears mainly in the collocation ‘carbon footprint’ (127 out of a total of 390 occurrences), ‘carbon credits’ (37 occurrences) and also ‘carbon neutral’ (45 occurrences). For ‘greenhouse’, the vast majority of examples are of the term ‘greenhouse gases’, often abbreviated to GHG. The term ‘offsetting’, which is closely related to ‘carbon credits’, increases slightly in the second phase, while the use of ‘biofuel’, which is also very limited, becomes progressively less important.

As the use of the terms has not changed significantly over the period, it is illustrative to look at how often the terms are used together. This is shown in aggregate in Figure 4.

### 3.4. Framing Climate Change

The concordances obtained from the corpus analysis showed that almost half of the occurrences of the analysed terms (47%) coincide with titles, headings or literal reproductions of the Global Reporting Initiative (GRI) standards. This means that these are occurrences where collocations cannot be traced. However, analysis of the collocations in the remaining

examples reveals some features of the airlines' attitudes to climate change, which are not always consistent.



**Figure 4.** Proportion of use of the terms analysed (2010–2020).

LATAM is the company that offers the most data when it comes to interpreting its position on climate change. The company talks about ‘facing’ (*enfrentar*) (2017; 2018), ‘coping’ (*hacer frente*) (2020) and also ‘fighting’ (*combatir*) climate change (2013). Climate change is described as a ‘problem’ (*problema*), and LATAM is ‘committed (...) to contribute to the solution’ (*comprometido (...) a aportar a la solución*) (2012; 2019). Placing climate change at the centre of the environmental dimension underlines the importance the company attaches to it.

“Within the current sustainability strategy, the environment dimension is called Climate Change, and its objective is for the company to assume a leadership role in the region in this area.” (LATAM, 2020).

(Dentro de la actual estrategia de sostenibilidad la dimensión de medioambiente se denomina Cambio Climático, y tiene como objetivo que la compañía asuma un rol de liderazgo en la región en esta temática.)

As far as Avianca is concerned, the company says it has adopted ‘coordinated actions on climate change’ (*acciones coordinadas sobre el cambio climático*) (2019; 2020) consisting of ‘the implementation of measures to reduce emissions, increase energy efficiency and use clean technologies’ (*la implementación de acciones para la reducción de las emisiones, mayor eficiencia energética y uso de tecnologías limpias*) (2018). The Colombian airline focuses less on the phenomenon itself and more on its consequences and is therefore ‘constantly seeking to face the global challenges related to climate change’ (*búsqueda constante para afrontar los retos globales asociados al Cambio Climático*) (2019). For Avianca, climate change is a ‘fundamental issue’ (*tema fundamental*), but its importance lies in the fact that it ‘directly affects its operations’ (*afecta de manera directa sus operaciones*) (2016).

Higher global temperatures and increased rainfall can be clearly seen in these **changes of climate**, as can alterations to the direction of winds and extreme weather situations that could **affect the performance** of our aircraft and, therefore, the **efficiency of our operation** and our service. (Avianca, 2016). (Bold emphasis added.)

*(Y es que, en estos **cambios de clima** se hace evidente una mayor temperatura global y mayor pluviosidad, así como alteraciones en la dirección de los vientos y situaciones climáticas extremas que pueden **afectar el desempeño** de nuestros aviones y, por consiguiente, **la eficiencia de nuestra operación** y nuestro servicio.)*

The lexical collocations in Iberia's reports show that the company 'tackles' (*hace frente*) climate change (2010, 2011, 2012, 2013) but above all 'develops strategies to combat it' (*desarrolla estrategias de lucha*) (2012, 2013, 2014 and 2015). The way to do this is 'through the reduction of gases' (*mediante la reducción de los gases*) (2014), and the goal is 'for the good of society' (*para el bienestar de la sociedad*) (2014, 2015 and 2016). Furthermore, Iberia considers this fight to be 'one of its corporate priorities' (*una de sus prioridades corporativas*) (2011), recognising that 'the operations that Iberia carries out (...) may affect climate change' (*las operaciones que Iberia desarrolla (...) pueden afectar al cambio climático*) (2012 and 2013) or 'generally affect climate change' (*afectan de manera general al cambio climático*) (2014).

In the case of Aeroméxico, the company describes climate change as 'one of the most important challenges facing humanity' (*uno de los retos más importantes de la humanidad*) (2017) that 'threatens human activity' (*amenaza la actividad humana*) (2010–2012; 2013–2014). In order to respond to it, the company's actions are to 'confront it' (*enfrentarlo*) (2010–2012; 2013–2014), 'strengthen its commitment' (*reforzar su compromiso*) (2010–2012) and to start 'a development of measures to combat it' (*desarrollo de medidas de combate*) (2017). All these actions will be carried out by Aeroméxico 'through the precautionary principle' (*a través del principio de precaución*) (2010–2012; 2013–2014). Perhaps the quote that best sums up Aeroméxico's position on climate change, at least at the beginning of the period studied, is the following (bold emphasis added):

Globally, the airline industry contributes around 2% of global CO<sub>2</sub> emissions and **just** 13% of that produced by all modes of transport (International Civil Aviation Organization, 2010). **Nevertheless**, we recognise the importance of participating in the fight against climate change (Aeromexico, 2010–2012).

*(A nivel global la industria aérea contribuye con alrededor del 2% de las emisiones globales de CO<sub>2</sub> y con **apenas** el 13% del producido por todos los medios de transporte (International Civil Aviation Organization, 2010). **No obstante**, reconocemos la importancia de participar en la lucha contra el cambio climático.)*

Finally, the few times that COPA Airlines mentions climate change in its reports, the placements show that the company is 'addressing' (*aborda*) climate change (2013; 2014) and on one occasion also claims to be 'combating global climate change' (*combatir el cambio climático global*) by preserving green spaces (2011).

#### 4. Discussion

The above results show large differences between the airlines in terms of communication on climate change in their corporate reports. They also suggest the existence of two phases in terms of attention paid to the issue, with a turning point in 2015/2016. On the one hand, we have the position of COPA, which makes hardly any reference to the issue and mentions it less and less over the years, and on the other hand, the reports of LATAM and Avianca, in which the importance of the issue has increased considerably, and they are at the forefront of the group in the second phase. The case of Aeroméxico shows that it attaches medium or low importance to the issue, in any case, slightly higher than COPA, and that it maintains this attitude throughout the period under review. Finally, Iberia is the only company for which the issue of climate change has lost importance since the first phase, in which it led the number of references to the issue along with LATAM, and yet from 2015–2016 it reduced the number of references to climate change, placing itself at the same level as Aeroméxico. The existence of different phases in the attention given to issues conceived as environmental threats, including climate change, has been noted in other works, although they refer to a period prior to the one analysed here (Pollach 2018).

The comparison between the publication of CSR information by Spanish and Latin American companies shows that the latter started producing CSR reports a few years later and that the names containing the term ‘responsibility’ tended to disappear over time. In fact, companies that publish separate non-financial reports now call them ‘sustainability’ reports. These results are in line with other studies that have looked at the evolution of CSR and sustainability communication in Spanish (Pérez Cañizares 2021).

As far as the terms used are concerned, their distribution has not changed over the decade analysed. The almost total absence of ‘global warming’ is in line with the results of other studies (Boykoff 2011; Jaworska 2018), which suggest that this term is avoided because it conveys a more concrete threat than ‘climate change’, which is perceived as a more distant phenomenon. The widespread use of the terms ‘emissions’ and ‘CO<sub>2</sub>’ can be explained by the fact that these are some of the terms that GRI Standard 305 requires to be reported. These emissions are quantifiable and should be measurable, comparable with those of other companies, and serve as a benchmark to establish an evolution. From the outset, the choice of the most commonly used terms can be seen as a way of approaching the issue by communicating technical data (‘emissions’ and the amount of ‘CO<sub>2</sub>’) and limiting the mention of possible consequences (‘climate change’ and, in particular, ‘global warming’). Thus, the discourse on climate change focuses on providing the data and mentioning possible changes from previous values or meeting targets but excluding more general assessments. This observation is linked to the frequent appearance of the terms in indexes, titles, headings or literal reproductions of GRI or SDG 13 standards. The isolated appearance of the terms helps to give the topic some prominence and gives the reader the feeling that it is being talked about, although, in reality, the information communicated is smaller and even banal (Ihlen 2009).

Finally, in terms of how different airlines position themselves in relation to climate change, several companies, especially Iberia, conceptualise it as a phenomenon to be confronted or fought. Other research has found that in the energy sector, the metaphor of ‘fighting’ to refer to climate change is typical of the early years of the 20th century, while in later years, the lexicon used shows a less proactive position (Jaworska 2018). The importance of lexical choice is also evident in LATAM’s communication strategy, which gives the issue a central place, replacing the term ‘environment’ with ‘climate change’ in its business strategy. Avianca, for its part, presents climate change as a threat to the development of its business, without elaborating on the consequences. Finally, the attitude of downplaying the contribution of the air transport sector to climate change, particularly in relation to the role of other industries, as found in one of the Aeroméxico reports, is mentioned with some frequency in the media, although it does not appear in such a clear way in any of the other airline reports.

An important caveat in this context, which applies in particular to the results of the qualitative analysis in Section 3.4, is the following. In general, what companies communicate about their CSR activities, and, in particular, how they position themselves on climate change in their reporting, does not necessarily match their actions and performance. In addition, the homogenising effect that the application of standards such as the GRI has had, coupled with the fact that the content of non-financial reports is rarely audited, makes it difficult to determine the extent to which the mere mention of an issue implies that it is considered important.

Further research could clarify the importance attached to climate change in relation to other environmental impacts of the industry, such as noise pollution or waste generation, or compare legacy airlines with low-cost carriers. The existence of a large body of literature on climate change in the energy sector may also facilitate a comparison between the two industries.

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#### Appendix A. Corporate Documents Used by the Airlines to Disclose on CSR (2003–2020)

- *LATAM Airlines* (Chile): 2010, 2011, 2012 and 2013, Reporte de sostenibilidad (as LAN Chile); 2014, 2015, 2016 and 2017, Reporte de sostenibilidad (as LATAM); 2018, 2019 and 2020, Memoria integrada.
- *Avianca* (Colombia): 2008–2009 and 2010, Informe de sostenibilidad; 2011, 2012, 2013, 2014 and 2015, Informe de responsabilidad social y sostenibilidad; 2016, Informe de gestión; 2017, 2018, 2019 and 2020, Informe anual.
- *Aeroméxico* (Mexico): 2010–2012 and 2013–2014, Informe de responsabilidad social corporativa; 2015–2016, reporte de sostenibilidad; 2017, 2018, 2019, 2020, Informe de sostenibilidad.
- *Iberia* (Spain): 2006 to 2015 (yearly), Informe de responsabilidad corporativa; 2016 to 2020 (yearly), Informe de sostenibilidad.
- *Copa Airlines* (Panama): 2010, Informe de responsabilidad social empresarial; 2011, 2012, 2013 and 2014, Comunicación de progreso; 2015, Informe de sostenibilidad; 2016 to 2020 (yearly), Reporte de sostenibilidad.

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