Ibero-American megacities in the international media. Global prominence and climate change

Megaciudades iberoamericanas en los medios internacionales. Protagonismo global y cambio climático

Abstract
This research analyses the presence of Ibero-American megacities in foreign digital media within the specific field of climate change. The objective is to determine the use of this channel to influence public opinion and decision-making institutions. To this end, the representation of 30 Ibero-American cities in journalistic texts related to climate change in the digital media with the highest penetration (Spiegel, 20Minuten, DR News Het Laatste Nieuws) in those countries that host some of the main global governance institutions on environmental issues is studied: the United Nations Framework Convention on Climate Change (Germany), the Intergovernmental Group of Experts on Climate Change (Switzerland), the European Environment Agency (Denmark) and the Commission’s Directorate-General Climate Action European (Brussels). The results reveal the cities to have little prominence. It also demonstrates that the organisation of major events is the most effective mechanism for occupying media space. These conclusions concur with the results obtained for four city networks: C40, Eurocities, United Cities and Local Governments and 100 Resilient Cities.

Resumen
Esta investigación analiza la presencia de las megaciudades iberoamericanas en los medios de comunicación digitales extranjeros en el campo específico del cambio climático. El objetivo es determinar el uso de este canal para influir en la opinión pública y en órganos de decisión. Para ello, se estudia la representación de 30 ciudades iberoamericanas en textos periodísticos relacionados con el cambio climático en los medios digitales de mayor penetración (Spiegel, 20Minuten, DR News Het Laatste Nieuws) en los países que albergan algunas de las principales instituciones de gobernanza global en asuntos medioambientales: la Convención Marco de las Naciones Unidas sobre el Cambio Climático (Alemania), el Grupo Intergubernamental de Expertos sobre el Cambio Climático (Suiza), la Agencia Europea de Medio Ambiente (Dinamarca) y la Dirección General Climate Action de la Comisión Europea (Bruselas). Los resultados evidencian el escaso protagonismo que acaparan y que la organización de grandes eventos es el mecanismo más efectivo para ocupar espacio mediático. Estas conclusiones coinciden con los resultados obtenidos para cuatro redes de ciudades: C40, Eurocities, Ciudades y Gobiernos Locales Unidos y 100 Resilient Cities.

Keywords
Cities; climate change; media, global cities; city branding

Ciudades; cambio climático; medios de comunicación; ciudades globales; city branding
1. Introduction

Cities have become major actors in international relations (Marx, 2009). Globalization is blurring the territorial borders, provoking a weakening of the traditional nation-state and an emergence of new agents, on the one hand, of international governance and, on the other, with the capacity to attend to the direct needs of the citizens (Castells, 2005). In the second group, the citizens have to directly address many of the global challenges, and consequently attempt to influence international politics in order to obtain the necessary resources and to adapt the regulations to their needs (Fernández de Losada, 2019).

Cities compete for the attention and the resources of institutions, businesses, tourists, students, and the like, implementing strategies that help to position them in the social imaginary (Stalman, 2016) as attractive places to live, to invest, to study, to visit ... or as specialized centers in a specific field. In an environment of fierce media coverage, the capacity of communication of the citizens is decisive in achieving their objectives (Pamment, 2014).

Numerous studies have investigated the role of cities in an increasingly globalized world, such as those by Acuto (2013), Brenner (1998), Bronger (2016), Child Hill and Kim (2000), King (2015) and Sassen (2002), amongst others. In addition, research exists which focuses on the image projected to the outside world, as with that by Canosa-Zamora and García-Carballeira (2012) on Madrid or Carrillo-Sánchez and García-Calderón (2019) on Mexico City. However, proposals are limited that relate the use of the media to position themselves in the international arena with regards to climate change. Thus, this study aims to contribute to the existing literature by analyzing the handling of this issue in the media.

2. Study aim & hypotheses

The aim of this research is to study the presence of journalistic texts that relate the names of Latin American megacities with climate change and that have been published in the leading media companies of the cities, with institutions related to global governance of environmental affairs. A relation that can be significant when it comes to influencing public opinion and that of those in power with a decision-making capacity. This exploration may help to determine good practices that are useful for other cities.

This aim leads to two specific objectives: 1) Determine the areas in which the stipulated connection appears and, 2) Verify whether the presence through city networks is greater than that of the cities individually.

This study uses a qualitative methodology and establishes the following hypotheses:

H1. Ibero-American megacities use the international media to improve their positioning with regards to climate change affairs.

H2. The organization of international events on climate change provides an excellent showcase for the global positioning of these cities.

H3. City networks have a greater media presence than the cities individually with regards to climate change.

2. Global cities & climate change

2.1. Shared problems

Globalization has brought issues that traditional governance systems are unable to face with solvency (Newman, 2009). In many respects, there continues to exist “a governance system created by a 17th century man” (Hickey, 2020: 47), a system that came into being in the Westphalian state, which with some variations in practice, grants a nation-state sovereignty over a determined territory and its people (Caporaso, 2000). This governance of a limited territory has proven to be inefficient in addressing matters that concern the whole world.

Hickey (2020: 33) sums it up in this way: “If Westphalia was yesterday’s grand solution to wars and religious conflict, it is now today’s problem, specifically in regard to global public goods issues”. The current structure of international politics does not permit the interference in the internal affairs of sovereign states. For each global issue, numerous definitions of the problem and proposals on how to address it exist. With this impediment, the task of dealing with the difficulties of humanity as a whole is arduous; a clear example being the matters concerning climate change.
Since the United Nations introduced environmental affairs as an important factor for development in 1972, aspects related to the environment have been present in the international arena (Fernández-García, 2009). Following the drive from diverse institutions, important global commitments have been attained – the Kyoto Protocol (2005) is one example –, although resounding diplomatic failures in pursuit of a common strategy have occurred, such as the outcome of the Copenhagen Summit in 2009.

Although, the participation of distinct actors from the traditional nation-states were a characteristic that distinguished the global climate governance from the Conference of the United Nations on Climate Change 2009 (COP 15), it was not institutionalized until the conference on the climate was held in the French capital (COP 21) (Bäckstrand, Kuyper, Linnér & Lövbrand, 2017). The Paris Agreement, adopted at the COP 21 meeting, involved the formal incorporation of new administrative dimensions in the fight against climate change, amongst them local government.

The table is more and more complicated: to the increase in actors, is added the complexity of managing environmental affairs, which ranges from controlling CO2 emissions to the existing limited resources (Bulkeley & Betsill, 2013).

### 2.2. Actors with international influence

The new levels of governance coming into play has limitations. Murthy (2019) points out that the doctrine in the field of international law places in the hands of the states the responsibility of what occurs within their territory in the framework of the international accords, which, at the same time, obliges the sub-national actors to fulfill the agreements among states. However, Hale (2018) shows that other distinct actors are significant in numerous areas of world politics. Regional governments, companies and civil society groups, amongst others, hold positions in the decision-making centers of global governance. It is there, where cities hold an increasingly significant role (Calder & De Freytas, 2009; Curtis & Acuto, 2018).

The importance of the role of cities is not new. Salomón (1993: 140) during the last decade of the 20th century already considered a city to be “an international actor that is increasingly solid and organized” and assumed “greater responsibility in the leadership of the process of internationalization”. Among the actions, stand out “cooperation, competition, positioning, formation of interest groups, creation of own diplomatic system, self-promotion and presentation” (Salomón, 1993: 128).

Earlier, in the 20s of the 20th century, cities had begun to project themselves internationally as a group through the International Union of Local Authorities (IULA). From the 90s, new global networks emerged: United Cities and Local Governments (UCLG), Eurocities, Alianza Euro-Latinoamericana de Cooperación entre Ciudades - AL-LAS (Euro-Latin American Alliance for Cooperation between Cities), Medcities, Cities Alliance, International Association of Educating Cities (IAEC), Metropolis – World Association of the Major Metropolises and 100 Resilient Cities (100RC), amongst others (Fernández de Losada & Abdullah, 2019). Acuto and Rayner (2016) estimate that almost 200 city networks exist, of which 29% are of an international nature.

With regards to environmental policy, the cosmopolitan role of cities can be analyzed, at least, from two perspectives. One, is that the urban areas concentrate human activity, which has a significant impact on the natural environment (Mills, 2007). The other, is that they are an ideal environment to develop efficient policies against climate change: “The various elements of infrastructure in cities and their systems of governance – for transport, buildings, solid waste management, sewerage and wastewater treatment, and so on – may be reworked such that cities may become forces for good (CFG, for short) in the environment” (Beck, Das, Thomson, Chirisa, Eromobor, Kubanza, Rewal & Burger, 2018: 9). In either of the scenarios, as Mills (2007: 1855) notes, “urban areas are major contributors to global climate change”. Cities are part of the problem, but also, they have the solution within their hands (Grimm, Faeth, Golubiewski, Redman, Wu, Bai & Briggs, 2008). Their capacity is not in regulatory competition on a global scale, but in specific measures (Manfredi-Sánchez, 2020: 40).

In this particular area, city networks also exist; one example being the C40 Cities Climate Leadership Group (C40).

In spite of the expressed will of local administrations to contribute to mitigating climate change, research proves that there is still a long way to go. In an analysis of 885 urban areas within the EU-28, Reckien et al. (2018) found that 66% of cities have established a plan to minimize the effect of climate change. In the case of Spain, Sainz, Olazabal and Sanz (2020) concluded that only 20% of the capitals of the provinces and the autonomous cities of Ceuta and Melilla have a specific plan that includes adaptation policies to address climate change.
2.3. Public diplomacy of cities

Public diplomacy consists “of the way in which a state communicates its narratives of itself to foreign audiences” (Golan, Manor, & Arceneaux, 2019: 15). The current situation has led cities to develop their own activities in diplomacy - supported by politics, the economy and technology - to achieve influence via their participation in international networks and appearances in the media (Curtis & Acuto, 2018: 140). It is one of the ways to “build and manage relationships” and to “influence opinions and actions to advance interests and values” (Gregory, 2008: 274).

In the last century, “diplomacy fell under the scrutiny of the media and public opinion” (Gilboa, 2008: 55). The media formed public opinion, influenced the agenda of the matters under discussion, evaluated the handling by the government, and defended the collective interest (Nieto & Peña, 2008). Now, in the public sphere where diplomacy is developed, local and global communication channels which have come from the technology evolution also play a role (Castells, 2008). Channels characterized by transparency, instantaneousness and real time interaction (Manfredi-Sánchez, Herranz de la Casa & Calvo-Rubio, 2017). The use of digital tools has reduced the power of traditional media (Manor, 2019), but, as a whole, communication actions have an impact on decision making and the perception of the image of the public actors (Manfredi-Sánchez, 2011).

In order to be an actor in the international arena, one needs to be recognized as such (Sharp, 1999). The media is an ideal window to achieve it. In this regard, Gilboa (2001: 24) explains that the media has led to the incorporation of new actors in the process of formulating public policies and it represents a source of information which is “available and up-to-the-minute” for those responsible for taking political decisions. Furthermore, in line with Pamment (2015), the messages in the media can foster international learning that includes foreign citizens as actors of changes within their own communities.

In addition, nowadays, it is necessary to include the modern forms of communication on the Web that numerous actors benefit from (Bjola & Jiang, 2015; Hocking & Melissen, 2015; Zaharna, 2007) and are effective in taking advantage of symmetric communication through the participation of the audience (Entman, 2008).

At times, behind it all is the intention of constructing in the social imaginary an image of a city aligned with certain values that differentiate it from others. These campaigns of city branding (Kavaratzis, 2004) aim, amongst other goals, to attract investment (Middleton, 2011), convert it into an appealing place for tourists (Hospers, 2011), and its own inhabitants (Insch, 2011), or to position the city as a leading center, be it one-time or permanently, in a determined field (Kolotouchkina, 2015; Zhang y Zhao, 2009).

Brand management of a territory is not something connected to one sole action. It is a process that requires time and should be shared with local agents (Jordá, 2016). Aligning strategies towards a common objective is not about the sum of the results, but enabling them to grow exponentially.

Cities have been gaining terrain in the international arena over quite some time. In certain cases, they have become global cities, a term coined by Sassen (1991). A select group enjoy international influence. Numerous others strive to gain a place. In other cases, as Fernández de Losada (2019) states, the time has come to move from a symbolic positioning, to making a real mark on the international agenda.

2.4. Climate change in the media

In addition to the points previously documented, the media plays a fundamental role in constructing reality (Fernández-Reyes, 2018), which makes it a determinant that influences society and modifies habits (Zaragoza-Marlin, 2018). The case of climate change is not removed from this reality: “The representation in the media is an important factor in the public’s understanding and commitment to climate science” (Boykoff, 2009: 119). On this foundation, the attitudes of the citizens are an invigorating element for the implementation of public policies (Dirikx & Gelders, 2008). Furthermore, as Erviti (2018: 67) affirms, “the coverage that the media allocates to climate change affects the space that this topic occupies in the public agenda”.

This significance was clear at the Earth Summit held in Rio de Janeiro in 1992, when an appeal was made to the media to become involved in the preservation of the environment, being considered “the main access window to the environmental problem for the majority of the population” (Mercado, 2018: 123). Data corroborates the affirmation: nowadays, television is the main source of information on climate change for citizens (35%), before media websites (15%), specialized media (13%) and social networks or blogs (9%) (Newman, Fletcher, Schulz, Andi & Nielsen, 2020).
Research on the handling of climate change in the media is abundant, as much in studies that focus on a specific country, as in those which take an international perspective (Fernández-Reyes, Piñuel-Raigada & Águila-Coghlan, 2017). Erviti (2018) identifies three periods in a longitudinal study on the presence of climate change in the media: from the 19th century to the 70s of the 20th century, looking at the scientific definition of climate change; from the 80s, when climate change gained prominence in the public agenda and the first international accords to address the issue were signed; and from the beginning of the 21st century, when climate change became rooted in the media and political agendas and controversies and consensus emerged. The data provided by Boykoff, Daly, Gifford, Lueddecke, McAllister, Nacu-Schmidt and Andrews (2018), shows the greatest concentration of information on climate change in the media between the latter months of 2006 and 2012.

Authors such as Meira (2009: 6) warn that the social representation of climate change in the media comes through “intermediaries and contexts” that “simplify, reduce, distort, interpret and modulate it according to multiple variables and interests”, losing in many cases scientific strength. The factors present in these interactions are “numerous and complex” (Boykoff 2009: 117). Quesada, Blanco and Teruel (2015: 536) reached a similar conclusion on studying the editorial position of El País, Le Monde, The Guardian and Frankfurter Allgemeine Zeitung. They state that scientific discourse is many times “overshadowed” by arguments related to political or economic interests. This led Zaragoza-Martín (2018) to discuss that it is common that information in the media is closer to marketing than to the publication of science. Moreover, Boykoff (2009: 125) considers that climate change is one of the areas “most strongly politicized of the new millennium”.

Furthermore, León (2013: 14) has shown that, at times, the coverage of information in relation to climate change is connected to “catastrophic visions, lacking in sound science, about possible consequences of climate change”, which, based on the findings of other studies, consider that this hinders action. However, this focus is not typically the case. In a study centered on the Portuguese media, Carvalho and Pereira (2008) conclude that alarmism is uncommon, at least in the written media. On television the use of images can contribute to a greater emotional impact that leads to scientific inaccuracies.

The study by Fernández-Reyes et al. (2017) presents, amongst other aspects, the relation between the coverage of the Spanish media and the hosting of climate summits. On a similar line, Fernández-Reyes (2018: 17) notes that “significant events on climate change generate the opening of a greater coverage of the theme in the media agenda”.

The commented appearance of digital technologies and the current habits of news consumption on online media (Newman et al., 2020) has led to the need to extend the analysis to these channels. Arcila-Calderón, Mercado, Piñuel-Raigada and Sáurez-Sucre (2015) studied 889 news reports in Spanish in 97 news channels on the climate summit in 2010 (Cancún) and 2011 (Durban). Similarly, they concluded that the media focused on the political debate. Moreover, the study highlighted that the sources were especially related to the countries of the media.

One of the recent studies explores the used images to illustrate the news on climate change. The study by García-Herrero and Navarro-Sierra (2020) demonstrates that the newspapers El País and El Mundo use the personalization of the political leaders, largely with news agency photographs or those taken from archives. There is no lack of calls for greater volume of and more specialized information in the media to fight against hoaxes and fake news (Rodrigo-Cano, De Casas-Moreno & Toboso-Alonso, 2018).

Even so, the media represents a privileged channel to position an image of a city within and outside its territorial borders.

3. Methodology

3.1. Scope of the object under study & selection of the analysis sample

The proposed analysis covers multiple delimitations of the object under study, attending to four dimensions: D1) Cities that are home to the main organisms of global governance in climate matters, D2) The leading digital media of the countries where these institutions are located, D3) Ibero-American megacities and, D4) The presence of the term climate change.

To define the scope of the first dimension (D1), the main locations of four of the major international organisms for the environment were considered: 1) the United Nations Framework Convention on Climate Change (Bonn, Germany), 2) The Intergovernmental Panel on Climate Change (IPCC), a body of the United Nations (Geneva, Switzerland), 3) the European Environment Agency (Copenhagen, Denmark) and 4) The Directorate-General for Climate Action of the European Commission (Brussels, Belgium). The cities
selected are, as a result, Bonn, Geneva, Copenhagen, Brussels and the respective countries: Germany, Switzerland, Denmark and Belgium.

For the selection of the leading digital media in the previously cited countries (D2), the Digital News Report 2020, elaborated by Reuters Institute (Newman et al., 2020) was referred to. Based on this report, the media with the highest weekly penetration in the countries under study are: Spiegel online in Germany (17% of Internet users), 20 Minuten online in Switzerland (55% of surfers in the German language edition), DR News in Denmark (35%) and Het Laatste Nieuws online in Belgium (51% in its Flemish edition).

To determine the Ibero-American megacities [D3], the research project Public Diplomacy in Ibero-American megacities: communication strategies and soft power to influence global environment legislation (Diplocity) was used as reference, which is financed by the Ministry of Science and Innovation in Spain (RTI2018-096733-B-I00). This selection responds to the fact that this study forms part of the activities of the cited project of the State R & D Program oriented to the Challenges of Society of the Ministry of Science, Innovation and Universities, State Research Agency and of the European Regional Development Fund (Feder). There are 30 Ibero-American megacities that form part of this research, 15 of which correspond to Latin America (Mexico City, Mexico; Sao Paulo, Brazil; Buenos Aires, Argentina; Rio de Janeiro, Brazil; Lima, Peru; Montevideo, Uruguay; Quito, Ecuador; La Habana, Cuba; Bogota, Colombia; Santiago de Chile, Chile; Guadalajara, Mexico; Monterrey, Mexico; Medellin, Colombia; Santo Domingo, the Dominican Republic; and Caracas, Venezuela), and the remaining 15 to Spain (Madrid, Barcelona, Valencia, Sevilla, Zaragoza, Malaga, Palma de Mallorca, Las Palmas de Gran Canaria, Bilbao, Alicante, Cordoba, Salamanca, Merida, Santiago de Compostela and A Coruña).

Finally, the object under study has been delimited to the presence of the term climate change [D4].

The four dimensions delimit the area of research and the content of interest: this study analyses all journalistic texts published in the media Spiegel online, 20 Minuten, DR News and Het Laatste Nieuws that contain the name of any of the Ibero-American megacities under study and the term climate change in the language of the media (klimawandel, klimaaatverandering or klimatorandringer).

The period of analysis covers two years, from 1st January 2018 to 31st December 2019. This time frame was selected as was considered to be of sufficient duration for the communication strategies to obtain results.

3.2. Method & instruments of analysis

In order to discover the way in which the cities and climate change are related in the media an exploratory analysis was carried out of the published journalistic texts, using a content analysis as the research method. This qualitative technique constitutes a systematic procedure that enables an examination of the signified (thematic analysis) and the signifiers (procedure analysis, conventions, and formal features) of any text and to quantify them into categories for statistical study (Bardin, 2002; Hernández, Fernández & Baptista, 2010).

As with all research methods, the content analysis is structured in a series of phases, which should be performed in an explicit manner in order to permit other researchers at different times and under different circumstances to apply the same technique and to obtain comparable results to previous studies, building on or verifying them in opportunities of coherent analysis (Ortega-Mohedano, Pereira-Galhardi & Igartua, 2015). Furthermore, it is important to understand that all research methods and techniques require an execution by stages (Igartua, 2006).

This research, specifically, has followed three phases. In the first stage, the gathering of all the texts of the sample was performed through an advanced search in the Google browser using the following coding: [city] AND [climate change in the language of the media] site: [website of the media] after: 2017 before: 2020. In total, 120 searches combining the four dimensions were conducted. The stated process was carried out on two occasions, from different computers, in order to minimize possible information loss and to verify the quality of the data. The obtained results in both cases were similar. The pages that did not correspond with the journalistic pieces, as with sections with headlines that were included chronologically to follow the latest news (by the minute), whereby the terms only appear in a link to the information (most read news or related information) or those which were duplications. The data collection was performed between 29th July and 17th August 2020.

The resulting publications were registered in Microsoft Excel software to file for later use of the data. This record enabled an initial approximation of the sample content, which is essential in establishing categories for study.
In the second phase a content analysis of the selected units was carried out, for which a file was created composed of 15 key variables: analysis date, media, country of media, city, country, date of press text, headline, link, type of text, (information/opinion), appearance of the name of the city in the headline (Yes/No), appearance of the term climate change in the headline (Yes/No), theme in which the city is mentioned, presence of the city (primary/secondary) and image (city, mayor, other, without image). In addition, a field for observations of any aspect that was considered relevant was included for later analysis (Table 1). The analysis was performed as a group task by the authors to prevent coding bias.

Table 1. Parameters of analysis employed for the coding of the journalistic texts

<table>
<thead>
<tr>
<th>Date of analysis</th>
<th>Type of text (Informative/Opinion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media</td>
<td>City named in the headline (Yes/No)</td>
</tr>
<tr>
<td>Country of media</td>
<td>climate change present in the headline (Yes/No)</td>
</tr>
<tr>
<td>Target country</td>
<td>Theme in which the city is named</td>
</tr>
<tr>
<td>Target country and city</td>
<td>Presence of the city (primary/secondary)</td>
</tr>
<tr>
<td>Date of journalistic text</td>
<td>Image (city, mayor, others, without image)</td>
</tr>
<tr>
<td>Headline</td>
<td>Observations</td>
</tr>
<tr>
<td>Link</td>
<td>Source: Own elaboration</td>
</tr>
</tbody>
</table>

Finally, and as a complement, a search was performed in the same media informative pieces whereby the terms climate or climate change together with the name of any of the following city networks: C40, Eurocities, UCLG (United Cities and Local Governments), and 100 Resilient Cities.

To the results of this search, a new analytical file was applied (Table 2), derived from the recoding of the previously observed parameters (Table 1). In this case, twelve variables were considered: date of analysis, media, country of media, name of the network, date of the journalistic text, headline, link, type of text (informative/opinion), appearance of the network name in the headline, appearance of the term climate or climate change, theme in which the network is mentioned and the presence of the network (primary/secondary). The method employed for the analysis coincides with that used for the cities.

Table 2. Units of complementary analysis employed for the coding of the journalistic texts

<table>
<thead>
<tr>
<th>Date of analysis</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media</td>
<td>Type of text (informative/opinion)</td>
</tr>
<tr>
<td>Country of media</td>
<td>Appearance of the network name in the headline</td>
</tr>
<tr>
<td>Name of the network</td>
<td>Appearance of the term climate or climate change</td>
</tr>
<tr>
<td>Date of journalistic text</td>
<td>Theme in which the network named</td>
</tr>
<tr>
<td>Headline</td>
<td>Presence of the network (primary/secondary)</td>
</tr>
<tr>
<td>Source: Own elaboration</td>
<td></td>
</tr>
</tbody>
</table>

4. Results

4.1. Presence of journalistic texts relating to climate change by city

The research identified 185 journalistic texts in which the name of one of the cities in the sample appeared together with the term - climate change: of the 185, 65.9% are related to the city of Madrid. Far behind follow Santiago de Chile (6.5%), Buenos Aires (5.9%), Barcelona (5.9%), Rio de Janeiro (3.8%), Sao Paulo (2.2%), Mexico City (1.6%), Lima (1.6%), Palma de Mallorca (1.6%), Medellin (1.1%), and Sevilla (1.1%). Quito, Bogota, Guadalajara, Valencia and Alicante only appeared in one news article (0.5%), while the search for all other cities provided no results (Graphic 1). In Table 1, the theme around which the name of each of the cities is related with is detailed.

With respect to the date of publication, 9.7% of the analyzed texts were published in 2018, while 89.7% were registered with a date corresponding to 2019. One of the pieces displayed no date of reference.

December 2019 accumulated 36.2% of the search results. November and October of the same year occupied second and third position with 22.7% and 6.6% of the texts, respectively.
4.2. Coverage by media and addressed themes

The coverage by each of the digital media varies significantly. Two tendencies are observed on focusing on this area of study. The media company Spiegel online, selected for this study due to it being published in the country where the UNFCCC (United Nations Framework Convention on Climate Change) is located, is responsible for 53.5% of the search results. In second position, is the Belgian Het Laatste Nieuws online, connecting the object under study with the country that is home to the Directorate-General for Climate Action of the European Commission, with 29.7% of the journalistic pieces relating the cities with climate change. On the contrary, in Denmark, where the European Agency of the Environment is located, the digital DR News Online has only published 11.4% of the total number of news items that the sample consists of and the newspaper 20 Minuten online, 5.4% of the pieces. This last press source is distributed in Switzerland, home to the Intergovernmental Panel on Climate Change (IPCC) of the United Nations. (Graphic 2).

With regards to the context in which the journalistic texts unfold, various scenarios are observed. In 66.5% of the instances of the presence of the names of the cities in the media, they are in relation to the hosting of events, such as climate summits, meetings between countries (G20), and conferences or meetings of experts, amongst other events of interest (Graphic 3). Within this group, 84.6% relate the UN Climate Change Conference COP 25 with Madrid, and 8.1% with Chile. The remainder are divided between six references...
to the G20 summit in Buenos Aires, one to the Rio de Janeiro Summit in 1992, a conference in Quito, and a meeting of experts in Medellin.

When analyzing the coverage of these events, *Spiegel* is responsible for the greatest volume (56.1%), followed by *Het Laatste Nieuws Online* (30.9%), DR News (8.9%) and 20 Minuten online (4.1%).

Far from events, protests are the second theme that most connects the names of cities with climate change (5.9%). Behind, comes global warming (4.7%), fires (2.7%), drought (2.2%), water supply (2.2%) and pollution (2.2%). To a lesser degree appear topics related to tourism, sustainable construction, renewable energy or political decisions, amongst others (Table 3).

### Graphic 3. Themes addressed in the news relating the cities with climate change

- Events
- Protests
- Global warming
- Fires
- Drought
- Water supply
- Pollution
- Others

Source: Own elaboration

#### 4.3. Type of text, prominence of the city and the presence of images and networks

With regards to the pieces analyzed, 94.6% are informative texts and 5.4% opinion texts. As to the prominence of the city that appears, in 7% of the cases the city is the focus of the piece, whereas in the remaining 93% the city is incidental. Furthermore, only in 11.9% of the instances is the name of the city included in the headline. The term climate change forms part of the headline in 3.2% of the sample. No informative nor opinion texts were found that combined in the headline the name of one of the analyzed cities and climate change.

The greatest presence involves images. Only one publication was found (dated 1st November 2019 in *Het Laatste Nieuws* and in relation to the COP 25) whereby the text was not accompanied by photographs or videos. In the cities studied, photographs were identified in 14.6% of the publications, with 44.4% of them related to major events. In these cases, the presence of the city is largely limited to its name appearing on signage and equipment (banners, photocalls, podiums, and the like). The remainder being in relation to protests (11.1%, focused on Bogota, Buenos Aires and Palma de Mallorca), water supply (7.4%, Sao Paulo and Mexico City), sustainable construction (7.4%, Buenos Aires and Mexico City), adverse meteorological phenomena (7.4%, Alicante and Guadalajara), renewable energy (3.7%, Sevilla), wetlands (3.7%, Valencia), fires (3.7%, Sao Paulo), temperature (3.7%, Palma de Mallorca), tourism (3.7%, Palma de Mallorca) and a video on environmental protection (3.7%, Rio de Janeiro). In none, appear an image of the mayor.
Table 3. Themes related to the city in the media analyzed

<table>
<thead>
<tr>
<th>City</th>
<th>Theme in which named</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alicante</td>
<td>Floods</td>
</tr>
<tr>
<td>Barcelona</td>
<td>Temperature, pollution, Greta Thunberg, politics, security, tourism, experts</td>
</tr>
<tr>
<td>Bogota</td>
<td>Protests</td>
</tr>
<tr>
<td>Buenos Aires</td>
<td>G20 Summit, protests, temperature and sustainable construction</td>
</tr>
<tr>
<td>Mexico City</td>
<td>Sustainable construction, drought and water supply</td>
</tr>
<tr>
<td>Guadalajara</td>
<td>Meteorological phenomena (hail)</td>
</tr>
<tr>
<td>Lima</td>
<td>Drought and fires</td>
</tr>
<tr>
<td>Madrid</td>
<td>COP25, protests, temperatura, renewable energy, pollution, police operations, politics, safety and security, research</td>
</tr>
<tr>
<td>Medellin</td>
<td>Meetings of experts and transport</td>
</tr>
<tr>
<td>Palma de Mallorca</td>
<td>Protests, temperature and tourism</td>
</tr>
<tr>
<td>Quito</td>
<td>Conferences</td>
</tr>
<tr>
<td>Rio de Janeiro</td>
<td>Fires, climate summit, environmental protection, energy, water supply</td>
</tr>
<tr>
<td>Santiago de Chile</td>
<td>Cop25, drought and meetings of experts</td>
</tr>
<tr>
<td>Sao Paulo</td>
<td>Fires and water supply</td>
</tr>
<tr>
<td>Sevilla</td>
<td>Renewable energy and pollution</td>
</tr>
<tr>
<td>Valencia</td>
<td>Wetlands</td>
</tr>
</tbody>
</table>

Source: Own elaboration

The searches related to city networks of C40 Cities Climate Leadership Group (C40), United Cities and Local Governments (UCLG), Eurocities, and 100 Resilient Cities (100RC) only provided six results. Each of them related to the C40 and news appearing in the Danish media, DR News Online. The appearance of this city network in the six pieces occurred between 6th and 16th October 2019 and were regarding the holding of a meeting of the group in Copenhagen.

5. Discussion

Through a Google search, 185 journalistic pieces were found which link the name of the cities under study in this research with the term climate change in the leading online media companies in Germany (Spiegel), Denmark (DR News), Belgium (Het Laatste Nieuws) and Switzerland (20Minuten). These countries are home to prominent international institutions of environmental governance, such as the United Nations Framework Convention on Climate Change (UNFCCC), the European Environment Agency (EEA), the Directorate-General for Climate Action of the European Commission (DG CLIMA), and the Intergovernmental Panel of Experts on Climate Change (IPCC) of the United Nations.

The analysis of the obtained data from the research demonstrates that the organization of major events is a focus of media attention and, as a result, a prominent showcase for the symbolic positioning of the cities beyond their borders. A clear example is the hosting of the COP25 in Madrid. During the two years of analysis, the Spanish capital appeared in 65.9% of the texts in the digital press, of which 85.2% were related to the summit. The temporal analysis of the publications corroborates such: December 2019 had 36.2% of the searches, right in the month that the COP25 was held in Madrid.

Similarly, although to a lesser degree, in Santiago de Chile of the 12 appearances, 83.3% refer to the failed hosting of the COP, and with the Argentinian city of Buenos Aires, where more than half (54.5%) of the 11 appearances are connected to the G20 meeting. Evidently, events are one of the best formulas to attract the attention of the media, which confirms the second hypothesis of this research (H2).

Apart from these events, media presence is scarce: 14 cities of the 30 which form the sample do not appear in the media analyzed in the framework of this study. Of those which are present, excluding those already cited, only Barcelona accumulated more than 10 appearances, specifically, 11 in 24 months. In this case, the themes are various, covering matters related to temperature, pollution, tourism, and the Swedish environmental activist Greta Thunberg, amongst others. Rio de Janeiro, similarly, appears for diverse reasons including fires, energy, the protection of biodiversity, and the climate summit of 1992. The same occurs with Sao Paulo, Mexico City, Lima, Palma de Mallorca, Medellin, Sevilla, Quito, Bogota, Guadalajara, Valencia and Alicante.
In the majority of cases (93%), the cities do not appear as the focus of the information. They are mentioned as secondary actors for hosting events, forming part of a study, being the scene of protests, providing a positive or negative example, or at the foot of a photograph which illustrates publications connected with the environment. In the instances whereby they are the focus of the story, once again, it is in the role of the organization of events, in this case accompanied by initiatives related to water supply, sustainable construction or for suffering adverse meteorological phenomena. No mentions of initiating plans against climate change or regulatory proposals were found.

In light of these results, it is not possible to categorically affirm that the Ibero-American megacities use the international media in their positioning in affairs related to climate change. Occasionally initiatives and, especially, major events are the manner in which in a controlled way they gain entry into the foreign media. In other cases, the drive is unwelcome. Fires, adverse meteorological phenomena, being part of an investigation or a protest, as well as other causes, are behind this media presence. This fact does not enable a clear assertion that, with the stated exceptions, the media is an influential channel in the institutions of international governance, which refutes the first hypothesis of the research (H1).

Furthermore, the analysis shows that the presence of city networks in the media is scarce. Of the two years analyzed, only one of the three searched networks provide a result related to the climate or climate change. The C40 Cities Climate Leadership Group (C40) appears in six news pieces on DR News Online regarding the meeting in Copenhagen in 2019. Once again, these events open the doors to the media. Cities, such as Barcelona (11), Buenos Aires (11), Madrid (122), Rio de Janeiro (7) and Santiago de Chile (12) occupied space on the Web of the media more frequently than that of the C40. The difference in terms of number of appearances has minimal relevance in the case of Sao Paolo (4) and even less with Mexico City (3), Lima (3) and Palma de Mallorca (3). In light of this data, the city networks do not have a greater media presence than the cities individually in matters related to climate change, which refutes the third hypothesis (H3) established in this study.

6. Conclusions

In a globalized world, the homogeneity of the Westphalian system appears to be inadequate in addressing the issues that concern humanity as a whole. The transfer of competences to sub-states and the importance that other types of institutions have acquired with an unquestionable influence on public affairs at all levels favors the appearance of new actors in the international public sphere. Cities, for their proximity to the problems of their citizens and for their responsibility to the governance of a significant portion of the world population, have gained prominence beyond state borders.

However, cities are not the only ones interested in being heard. Businesses, NGOs, diverse groups, regions and, of course, states, participate in a continuous battle of interests. With limited material and human resources, municipal governments search for ways to promote an image aimed at achieving quite diverse objectives (including attracting investment, being a desired tourist destination, being known as environmental protectors) and to exercise influence to attain resources and corresponding regulations. Certain cities have achieved it: New York, London, Tokyo, Paris, Hong Kong, Chicago, Los Angeles, Singapore and many others possess a strong and renowned identity. They even have influence as much on a national level as international. Many others strive to attain a similar position.

The media has been – and continues to be – a valuable channel to position leading brands in social imaginary. Today, it shares this privilege with other forms of communication based on digital technologies that facilitate the emission of global messages. Even so, the credibility and the penetration that media companies possess, especially in the groups where decisions are taken, ensure that it maintains a pillar in the communication strategies of any institution.

If appearing in the national media is difficult, achieving such in the press of other countries is particularly complex. In the case of matters related to climate change, and in line with authors such as Fernández-Reyes, Piñuel-Raigada and Águla-Coghlan (2017), and Fernández-Reyes (2018), this study has confirmed that major international events are the focus of the media. In this way, the attention of foreign journalists is captured by the organizing cities. The contribution is largely positive for the image of the city. The projects, initiatives, programs and other actions connected to the fight against climate change hardly find space. Neither do the proposals that are generated locally nor their recognition. Influence through this channel is, hence, extremely limited.

The situation is not so different for the city networks. Despite the fact that the advantages of uniting strengthen their capacity for action in the international sphere, their presence in the digital press in relation
to climate change is also rare. Once again, major events – as in the case of assemblies whereby representatives meet -, result in minimal appearances. References in other matters were not found.

Individually or as part of a group, the international influence of the cities through the digital press is scarce. The important role that is attributed to them in matters concerning climate change is not reflected in the media. It is fitting to wonder whether the origin of this scenario can be found in the communication strategies of the cities or in the norms that shape the thematic agenda that the media adheres to.

This study has focused on the end result of the specific actions of the media, which opens the door for future research that analyzes the strategies behind and the criteria that media companies follow when selecting this type of theme. Connecting these perspectives, it would be possible to value the results according to the objectives and to determine good practices that aid in a global positioning of cities. Continuing with the field of climate change, there remains a need to further research the use that cities make of direct communication channels with their audiences.

7. Acknowledgement

Translator: Linda Charlesworth.

8. Bibliography


Funding

This article forms part of the activities of the research project (RTI2018-096733-B-I00) of the State R & D Program oriented to the Challenges of Society of the Ministry of Science, Innovation and Universities, the State Research Agency and the European Regional Development Fund (EDF) on public diplomacy of Ibero-American megacities: communication strategies and soft power to influence environmental global law.

European Regional Development Fund (EDF) Call 2020/3771.