

COMMUNICATING THE EFFECTS OF CLIMATE CHANGE ON TOURISM. THE SPANISH WRITTEN PRESS AS A CASE STUDY.

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Abstract

In any strategy for addressing climate change, either through adaptation proposals or through mitigation measures, consideration of the social variable must be fundamental if we want to design and implement effective responses that avoid future scenarios more pessimistic. In this context, it should be noted that much of the population, the media are the main window of access to this environmental problem so its role in the social construction of climate change appears as a key. In this sense, one can state that the social representation of the phenomenon being built largely "to" and "from" the media. This paper explores the communication of the possible impacts of climate change on the Spanish tourism sector through five newspapers in this country, during the period 1990-2010. To build the corpus we have expound at length the information related with this item through the on-line available digital newspaper archives of the chosen media. The analysis allowed us to evaluate the changes in coverage and the paradigm which frames the story, the main actors involved, the problems identified, and the recognition of the consequences on the different tourism modalities.

Keywords: *Tourism, climate change, communication, written press, Spain*

1. INTRODUCTION

The irrefutability of the global mean warming of the earth's surface over the last century has placed climate change at the center of the environmental debate as global economic policies are drawn up to regulate the future of the planet (IPCC, 2007; Stern, 2006).

The importance of tourism to the global economy and the unequivocal links the sector has with the elements of the atmosphere highlight the need to consider climate change in all its manifestations (UNWTO, 2008). The weather and the climate are key elements in the majority of tourism products provided by tourist destinations, so that any changes in their atmospheric conditions are likely to have a major impact (Becken, 2010; Becken & Hay, 2007; Gómez Martín, 2005; Hall, 2008; Smith, 1993; Wall & Badke, 1994). At the same time, we should not overlook the fact that tourism has acted and continues to act as a vector inducing climate change: the current state of development in the sector reflects the overall energy consumption model of the industrial revolution, highly intensive in its emissions of large amounts of carbon, with the sector being responsible for 5% of the global emissions of greenhouse gases (Gössling, Hall, Peeters & Scott, 2010; Lyle, 2009). It is for this reason, and given the importance of tourism in the economy of many countries in the world, that research into possible measures of adaptation and mitigation of climate change has acquired a priority interest (Simpson, Gössling, Scott, Hall & Gladin, 2008, UNWTO, 2009; WTTC, 2009).

In any strategy for addressing climate change, be it via the implementation of adaptation proposals or mitigation measures, the consideration of the social variable needs to be placed at the core if the goal is to design and implement effective responses that can avert the most pessimistic future scenarios. In this context, it needs to be realized that for the majority of the population, the mass media serve as their main window on this environmental problem, so the media's role in the social construction of climate change is crucial. Indeed, it would appear that the social representation of the phenomenon is created and propagated primarily by the mass media. As such, media representations are a key factor for understanding the relationship between climate change and tourism and public commitment to the issue (Boykoff, 2008; Ruiz Sinoga & León Gross, 2013).

This article aims to analyze the communication, in the written press, of the possible impacts of climate change on the Spanish tourism sector in the Mediterranean basin. To this end, the study explores the evolution in press reports referring to this subject published in the most widely circulated and read newspapers in Spain's Mediterranean regions (or Autonomous Communities), namely, *La Vanguardia* – in Catalonia, *Levante* – in the Comunidad Valenciana, *La Opinión de Murcia* – in Murcia and *Sur* – in Andalucía) and in the whole of the Spanish state (*El País*), for the period 1990-2010. Specifically, the analysis seeks to describe the quantitative evolution in the coverage of the issue and in the paradigm framing it, the changes in the main actors involved and the problems being highlighted, as well as to recognize the shifting consequences for different modes of tourism.

2. TOURISM AND CLIMATE CHANGE IN THE STUDY AREA

The Spanish tourism sector is one of the world's leaders. In 2011 it was ranked fourth in terms of number of visitors and second in terms of revenue (UNWTO, 2012). Thus, the number of foreign visitors entering Spain via its borders is estimated at 99.8 million, of which 56.7 correspond to actual tourists (IET, 2011a). To this demand from abroad, however, we need to add that of domestic tourism. According to the statistics published by FAMILITUR

(IET, 2011b), in 2011, the Spanish undertook 160.7 million trips, most of which (147.4 million) had some point of the Spanish State as their destination. Spain's leadership in the tourism sector has traditionally been founded on a specialized model – that of sun and beach tourism, focused above all on the Mediterranean coast and islands and the Canary Islands. Yet, in recent years Spain's coastal tourism has become increasingly more complex as it has undergone a gradual diversification, overcoming what was its traditional focus on the main activity of sun and beach holidays and expanding to include a much broader tourist offer.

The tourism sector as described is highly vulnerable to climate change. Climate change studies in Spain indicate that, in the forthcoming years, temperatures will tend to increase, as they have in the past (1975-2005: +0.5 °C/decade), with the Spanish regions in the eastern half of the peninsula being most affected by this warming. The studies also point out that there will be an increase in the spatial and temporal variability of rainfall and that sea levels will continue to rise. The theoretical study of the possible effects of climate change on various coastal elements also indicates that small changes in the parameters defining the incident waves along the coast, as well as the possible increase in mean sea level, may have important consequences for coastal zones. Thus, the main impacts that climate change may suppose for the beaches of the study area are, on the one hand, a variation in flood levels with values ranging between 0.1 and 0.2 meters and, on the other, a receding coastline (Losada, Baquerizo, Santiago, Ávila, Moreno & Ortega, 2008; Ministerio de Medio Ambiente, 2004).

The projected climate changes in the study area may have varying degrees of both direct and indirect impacts on the tourism sector that has developed there, especially if we consider that the most important modes of tourism in this geographical area are highly sensitive to the climate. Thus, the modifications in the climate parameters highlighted above will mean significant changes in the area's climate-tourism aptitude. This could result in the extension of the tourist season, as summers become more prolonged but, above all, as the spring and autumn seasons are extended. This new scenario could be an opportunity to reduce the strong seasonality that has traditionally affected the tourism industry of the Mediterranean area (Gómez-Martín & Martínez-Ibarra, 2012; Martínez-Ibarra & Gomez-Martin, 2012). On the other hand, the reduction in rainfall could lead to a decrease in the availability of water which would require a rethinking of the management of existing water resources to meet future and possibly increasing water demands (Ayala-Carcedo & Iglesias, 2001; Ministerio de Medio Ambiente, 2005; ACA, 2009).

The impact of changes in the parameters defining the incident waves along the coast, as well as the possible increase in mean sea level, may have important consequences in coastal municipalities. These, which are highly exposed and which have a tourism model that is highly sensitive to climate and climate change, will find themselves particularly vulnerable compared to the non-coastal municipalities in the Mediterranean area with a somewhat lower vulnerability owing to their physical distance from the coast and their a priori different territorial and tourist structure.

3. SOURCES AND METHODOLOGY

Drawing on the statistics reported by the *Estudio General de Medios (EGM)*, which measure newspaper readership, and the information provided by the *Oficina de Justificación de la Difusión (OJD)*, which measures the number of copies of each newspaper sold each day, we selected the newspapers of greatest readership and circulation in the Autonomous Communities of the Mediterranean region of the peninsula and in the whole of the Spanish State for the period 1990 to 2010. In this way, the newspapers selected for the regions were

La Vanguardia (Catalonia), *Levante* (C. Valenciana), *La Opinión de Murcia* (Murcia) and *Sur* (Andalucía), while at the State level we selected *El País*.

The newspaper “article”, understood in a very broad sense, constitutes the unit of analysis of this study. To construct the corpus we undertook a systematic analysis of newspaper coverage of tourism and climate change in the five newspapers selected. This analysis was conducted using the newspapers’ online archives and, on occasions, the printed version published during the study period. Overall we identified 1,014 units on which to conduct our analysis.

To measure the media’s response to the phenomenon under study we used the content analysis method (Berelson, 1952). In this study, in analyzing this content we have taken into account a broad spectrum of categories, both of a quantitative (volume of information; article length; section of the newspaper; genre) and qualitative nature (vision of problem or tone; scale and geographical area; theme; problem detected; actors cited; mode of tourism). To monitor these categories we prepared a number of files which could be used for conducting the count. The data analysis involved the calculation of descriptive statistics.

4. RESULTS

The results obtained from the content analysis are described below for each of the categories identified in the analysis.

4.1 Volume of information

An examination of the volume of newspaper reports dedicated to climate change and tourism in the Spanish press during the period 1990 to 2010 reveals three main stages (Fig. 1 and Fig. 2). The first begins in 1990 and continues through until the year 2000. The second begins in 2001 and terminates in 2007. The third begins in 2008 and continues up to 2010.

Only 88 units were published during the first stage (1990-2000), coinciding with the awakening of interest in the problem in the academic world. The first international scientific papers reporting evidence of the impact of climate change on the tourist sector were written in the late eighties (Harrison, Kinnaird, McBoyle, Quinlan & Wall, 1986; Wall, Harrison, Kinnaird, McBoyle & Quinlan, 1986; Gable, 1987), although it was not until the early nineties that a substantial increase in such publications was noted (Scott, Wall & McBoyle, 2005). During the second stage (2001-2007), 519 articles examining climate change and tourism were published in the papers analyzed, indicative of the growing trend during these years for the publication of reports and the celebration of national and international conferences on climate change, in general, and climate change and tourism, in particular. During the third stage (2008-2010), 407 units were published, indicative of a marked wane in media attention.

In light of the above, we can conclude that a correlation does exist between the evolution in scientific, economic and political interest in the phenomenon and the media response, while no significant divorce is found, in general, between reality and the construction of information. However, one point is worth noting. The evolution in the volume of information responds better to international landmarks in climate change, in general, and tourism and climate change, in particular, than to events at the State or regional level (Fig. 1 and Fig. 2). Thus, in the regional press as in the newspaper providing statewide coverage, the response does not seem to have been as forceful in relation to some of the most notable landmark events in relation to climate change and tourism in Spain.

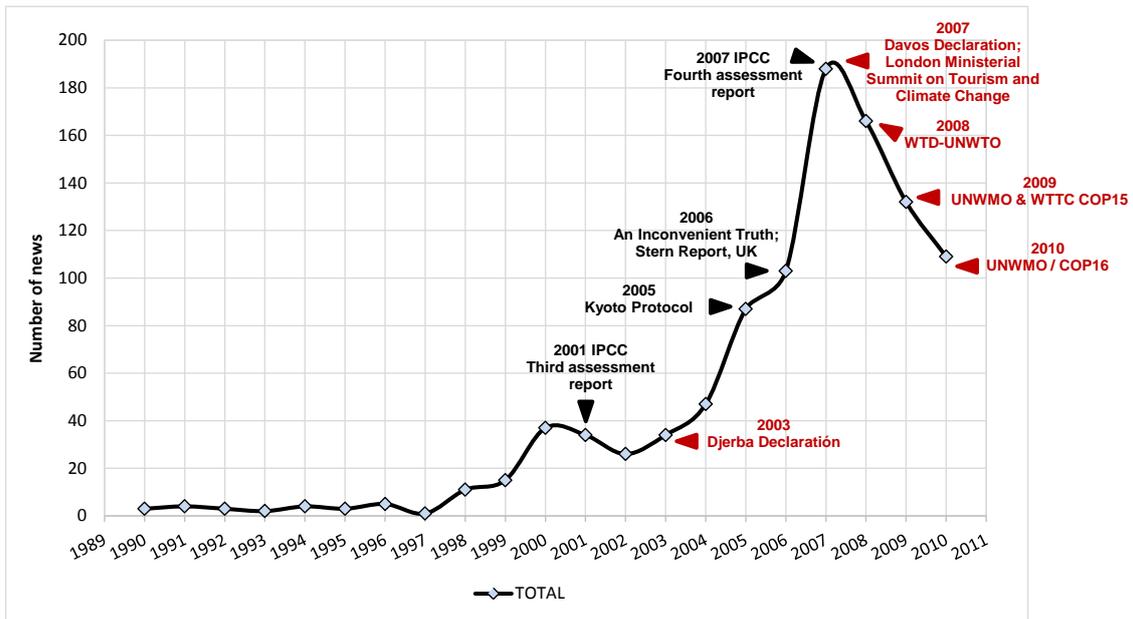


Figure 1. Evolution in volume of newspaper reports about tourism and climate change (total in all the media selected) and notable landmarks at the international level.

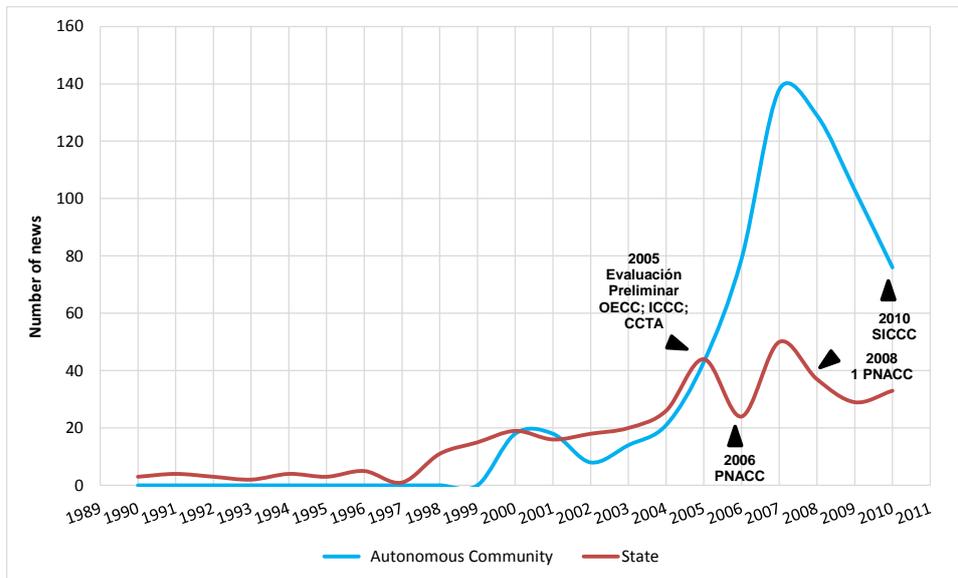


Figure 2. Evolution in volume of newspaper reports about tourism and climate change (regional press v. State press) and notable landmarks at the State and regional scale

4.2 Article length

This variable, unit text length (measured in number of words), reflects the breadth of coverage of the phenomenon. The analysis shows that the coverage of the tourism-climate change binomial is not as broad as what might generally be considered basic journalistic coverage (750-800 words). Most of the articles are fewer than 700 words long (68.6%). Units with a length between 701 and 1,500 words represent around 29.4% of articles and those with a length greater than 1,500 words account for just 2%. The diachronic analysis shows that the

length of the articles has increased over time, some of the periods of longest articles coinciding with periods of greater volume of information.

4.3 Section

Newspapers organize their information into sections to help their readers find their way around their publications. Each section includes a set of stories or reports that are related or present a certain thematic or geographical homogeneity. Not all the sections have the same importance and are classified accordingly as essential or secondary. Our analysis shows that most media reports addressing the tourism-climate change issue appear in sections of secondary importance (Society, Local, Science and Health, Lifestyle), although it should be noted that some of these secondary sections are of special interest to a majority of readers (this being the case, for example, of the Society section). It should also be noted that the subject has only very rarely featured on the front page, reflecting the low priority given by the media to the problem.

The longitudinal analysis of the information in this category does not show any major variation over the period of study.

4.4 Genre

This indicator allows us to examine the level of objectivity or subjectivity presented by the writer of the text, as well as the centrality of the theme under discussion. The analysis undertaken indicates a clear predominance of articles of an informative genre (79.5%), followed by interpretative or investigative articles (11.4%) and those of opinion (9.1%). It is worth stressing that about 75% of the analyzed texts can be identified as "news" items of an informative genre, dominated by an objective-expository view of the phenomenon. Note the relative lack of centrality of the theme for the media, with only 1.5% of articles being included in the editorial columns.

The longitudinal analysis of the information in this category does not show any major variation over the period of study.

4.5 Vision of problem or tone

The tone serves to evaluate the focus of the media coverage and, therefore, indicates the meaning that the news story transmits of reality. The assessment of the tone was based on the location of certain marker words in the text (mainly descriptive adjectives and verbs) considered indicators of the three categories established. Overall, the tone of the articles was neutral in the newspapers tested, although the number of articles presenting a pessimistic or optimistic tone was not negligible (Fig. 3).

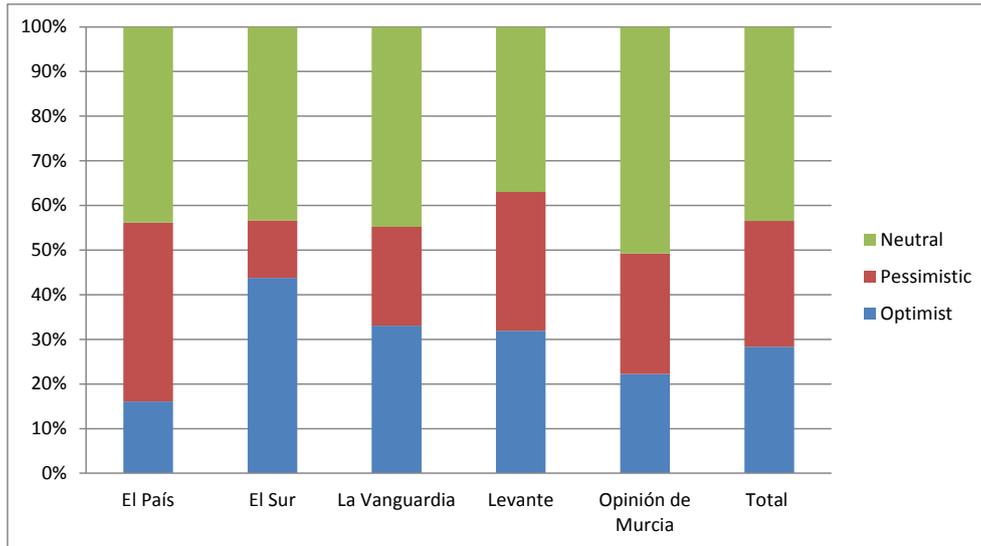


Figure 3. Tone of the newspaper articles about tourism and climate change.

It is interesting to note that the diachronic analysis reveals a slight decrease in the pessimistic tone of the information in the media analyzed, accompanied by a slight increase in optimistic and neutral tones (Fig. 4). This inflection coincides with the increase in the volume of information relating to the tourism-climate change issue detected in the time series analyzed.

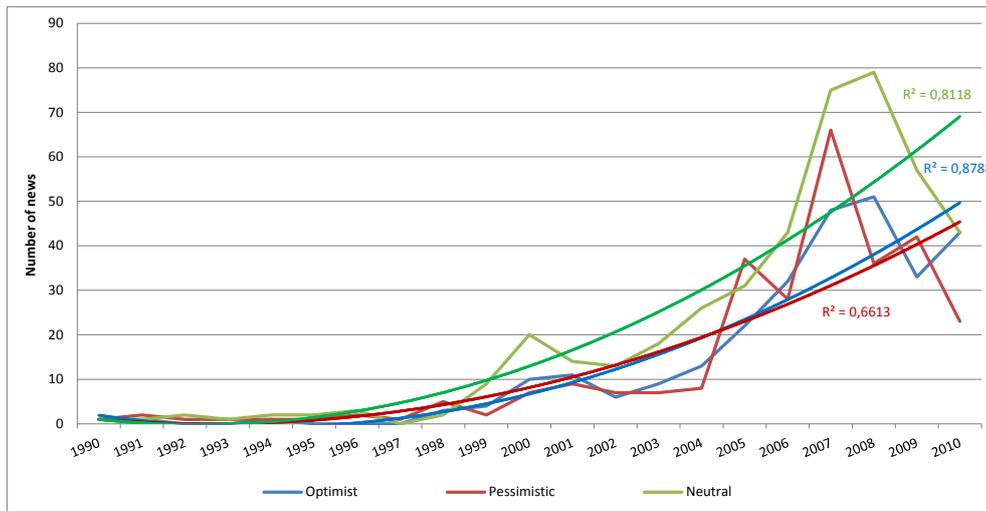


Figure 4. Evolution in the tone of the newspaper articles about tourism and climate change.

4.6 Scale and geographical area

Of the units analyzed, 73% examine the problem of tourism and climate change at the regional scale, 16% at the local scale and 11% at the global scale. By geographical area, it is the Mediterranean regions of Spain that attract the greatest interest (Fig. 5).

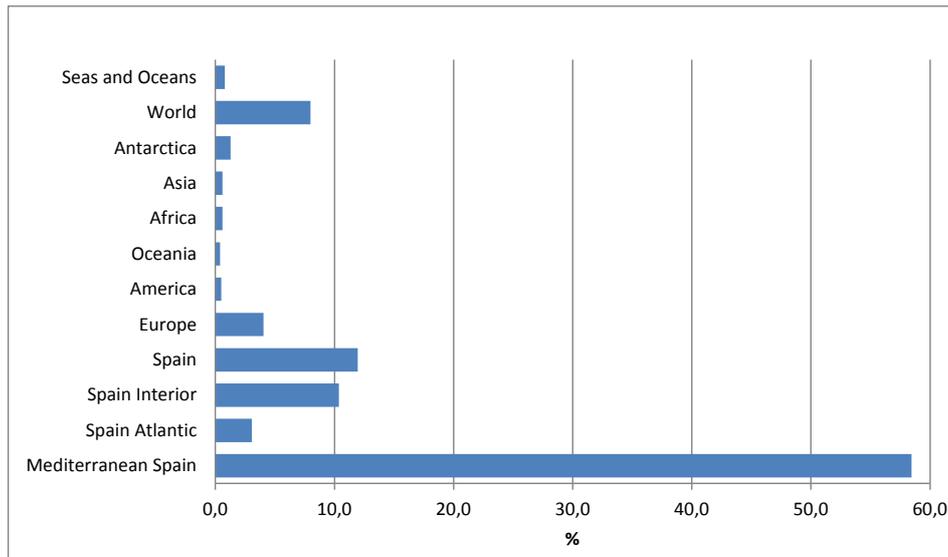


Figure 5. Geographical areas covered by the newspaper reports.

4.7 Main themes and problems detected

The main themes addressed in relation to tourism and climate change concern themselves with the impact of climate change on the tourism sector (48%), the adaptation of the tourism sector to climate change (17.5%) and the recognition of tourism as an inducer of climate change (16.8%) (Fig. 6). Among the main impacts of climate change on tourism we should highlight the increase in summer temperatures and the consequent loss of comfort (12.9%), the loss of biodiversity in key geographical areas of tourist interest (11.2%), rising sea levels and the implication of this for coastal infrastructure and equipment (9.9%) and the increase in extreme weather events and their associated impact on the perception of security in tourist areas (9.8%) (Fig. 7). It is somewhat surprising to see that such central concerns for the tourism sector as the reduction in water reserves (8.7%) and the prolongation of the tourist season (2.8%) or possible changes in tourist calendars (1.41%) are not the subject of greater media attention. It is also important to emphasize that most of the impacts identified in the press are impacts that might be qualified as *negative* given that they could jeopardize the normal functioning of the sector. Potential positive impacts are minimized in media reports.

The diachronic analysis shows a progressive expansion in the themes and impacts addressed in the articles of the selected newspapers. This shows a greater journalistic response to the tourism-climate change issue and, therefore, a more complex perception of the phenomenon with time.

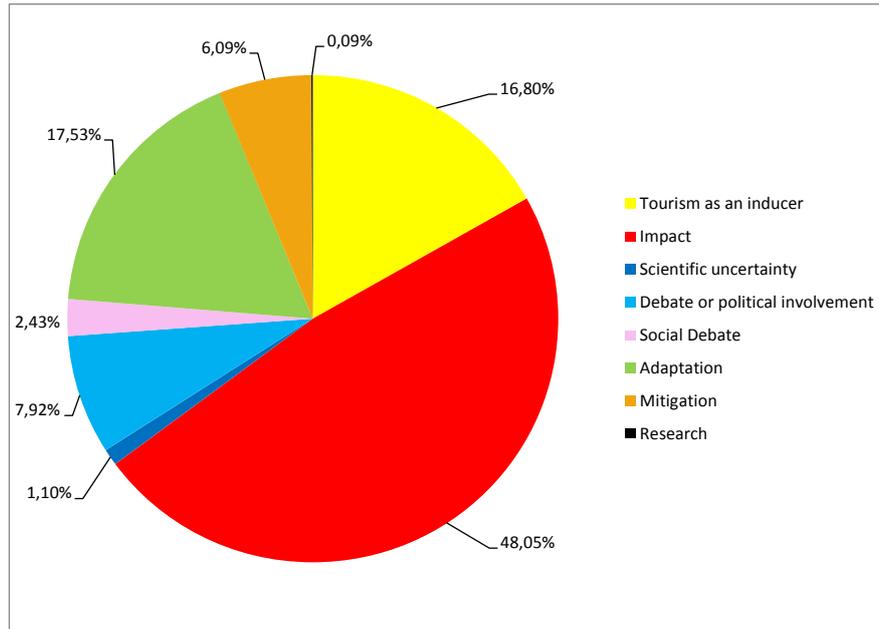


Figure 6. Themes addressed in the newspaper articles

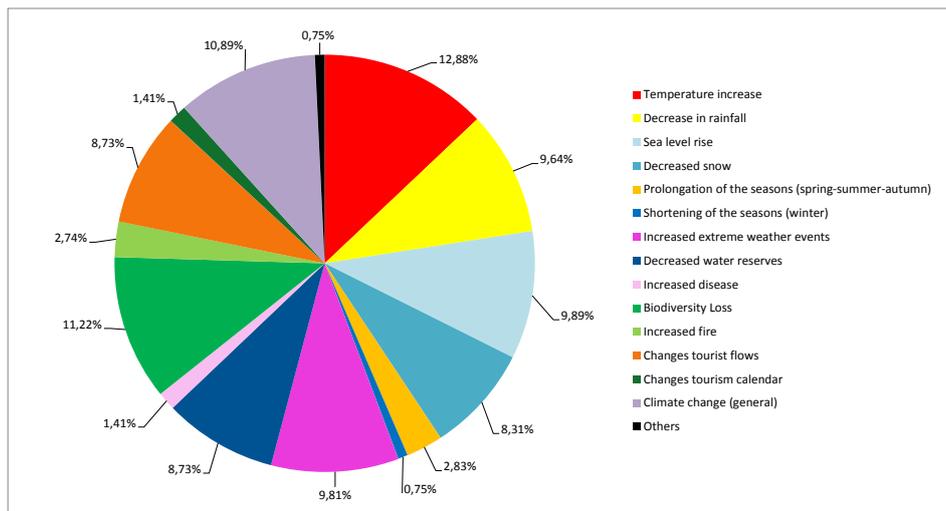


Figure 7. Main impacts addressed

4.8 Actors cited

The main factors cited in the news reports are the tourists, the supply, the tour operators/ tourist agents and the institutions. The time series analysis shows a greater diversification of actors cited with the passing of the years, evidencing once more a more complex and complete perception of the phenomenon.

4.9 Mode of tourism

Although primarily the newspaper articles refer to tourism in general, a large number do refer to sun and beach tourism, winter tourism and nature tourism (Fig. 8).

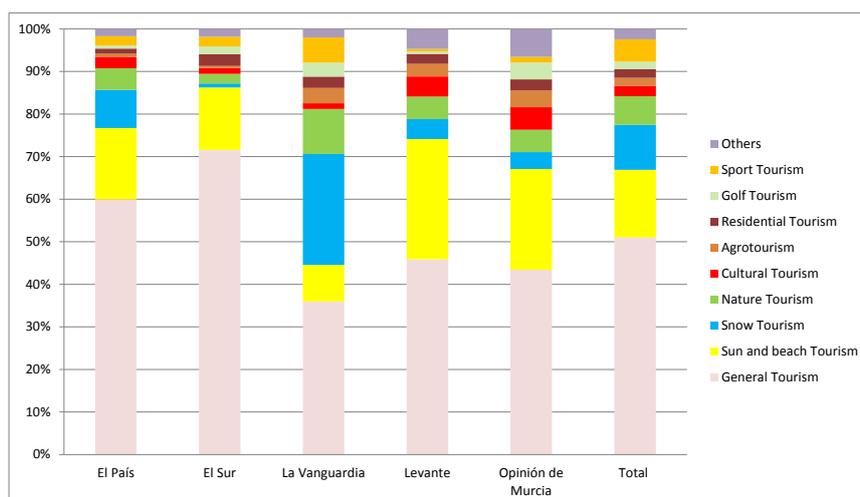


Figure 8. Modes of tourism referred to in the newspaper articles

In this sense, there would appear to be a certain coherence between the media information and Spain's tourism, in general, and that of the Mediterranean area, in particular: the sun and beach tourism, winter tourism (especially in Catalonia) and nature tourism are the dominant modes in this geographical area and they are highly exposed and vulnerable to climate change.

5. CONCLUSIONS

The analysis of the 1,014 newspaper articles published between 1990 and 2010 in the selected press sources has revealed that there is a correlation between the evolution in scientific, economic and political interest in the phenomenon and the media response, there being no significant divorce between the topicality of the subject and the construction of the information. However, two particular points should be highlighted. The first is that media coverage is not as great as might be expected, given that we are dealing with a geographical context in which tourism is of great economic and territorial importance and, moreover, one that is highly vulnerable to climate change. It might be that the media coverage given to the subject serves merely to stress the complex relationships of "power" or "interest" that have been established between the media, scientists and the tourism sector. The second specific point worth stressing concerns the fact that the evolution in the volume of information and in the length of newspaper articles addressing the subject responds better to international landmarks in climate change, in general, and in tourism and climate change, in particular, than it does to similar landmark events at the State or regional levels. Yet, this favorable response from the media to international landmark events in climate change, in general, and in tourism and climate change, in particular, has had a negative impact on the accuracy of the information, which has not always been reported appropriately.

The overall effect of these problems is to exacerbate the negative view of the problem, which ultimately is also reflected in the tone of the newspaper articles. While most texts seek to present their information in a neutral tone (in keeping with the informative genre chosen by the majority for disseminating their information), there is an increasingly pessimistic tone characterizing the articles. In general, the diachronic analysis captures this change in tone, which is related to the greater volume and complexity of the information provided. Interestingly, the tone becomes less pessimistic as the volume of information increases, while among the themes dealt with such arguments appear as that of adaptation, mitigation and the ideas of the broader political and social debate. The evolution observed in the communication

of the phenomenon, which reflects the path taken by the scientific field itself, can be transcendental in the perception of the consequences of climate change for the tourism sector and, therefore, in the perception of the risk itself.

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