

CLIMATE CHANGES AS DETERMINANTS IN SHAPING TOURISM SUPPLY – ATTITUDES OF MANAGEMENT

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SUMMARY

Purpose

Tourism is one of the fastest growing global industries and plays a significant role in national and local economies. Global climate change, as well as sustainable development, especially from the point of view of research of beliefs and attitudes on climate change, is the current area of research by only a small number of scientists around the world, even though an expert group gathered at the Intergovernmental Panel on Climate Change in the middle of the second decade of the 20th century has confirmed "*with almost complete assurance that human activities are the dominant cause of global warming, leading to multiple manifestations of climate change*". and thus climate change is only the subject of academic research. Taking into account all other environmental problems, climate change has become the biggest challenge and threat to the survival of human civilization, with many consequences and a very wide influence on virtually every aspect of human life, and undoubtedly on tourism as an activity.

Between tourism and climate change there is a two-way relationship as tourism is largely dependent on the climate and is influenced by climate change that happens in real time. On the other hand it is estimated that tourism is responsible for at least 8 of global CO₂ emissions. which is why great efforts are being made at the global and national level in order to mitigate the consequences of climate change and to plan and take measures to prevent further negative consequences that might be irreversible in the future.

Tourism as a whole, especially transport related to arrivals and departures of tourists to destinations, and tourism accommodation *per se*, significantly contribute to global warming through greenhouse gas emissions and a significant carbon footprint of tourism. Given that the consequences of climate change lead, *inter alia*, to the increased risk of flooding and drought, melting glaciers, rising sea levels, loss of biodiversity, various human health threats and damage to all sectors of the economy, while at the same time having an extremely high contribution to tourism and the total gross domestic product (GDP) of national economies, any impact of climate change on tourism can have very important economic and development implications, especially in Croatia where tourism is the backbone of the economy.

Starting from the assumption of a two-way relationship between climate change and tourism, as well as the importance of knowing the beliefs and attitudes of managers in entire tourist accommodation industry as key persons in tourism management as decision-makers and key actors in implementation of environmental protection and implementation of development and business policies in the area of sustainable development which is inseparable from climate change impacts, the main objective of the research would be to examine and analyze the beliefs and attitudes about climate change and the interinfluence of climate change and tourist accommodation and climate changes as the determinants of tourism offer, as well as the differences between managers in different tourist accommodation facilities.

From the aforementioned, it is also the subject of scientific research that deals with analyzing, elaborating, researching and consistently determining the relevant features of tourist accommodation management beliefs and attitudes between climate change and tourism influence, as well as climate changes as the determinants of tourist offer. Purpose Knowledge of managers' attitudes and beliefs is extremely important in order to anticipate, plan and direct the use of mitigation measures and the prevention of negative impacts of climate change and the tourist accommodation industry, so that all subjects directly or indirectly linked to tourism can adapt in a suitable way to the new situation and minimize as far as possible the more negative consequences of climate change.

The scientific problem or the subject of this scientific research is related to three primary objects of scientific research that are linked to a logical entity: climate change, tourism and design of tourist offer in the Republic of Croatia, attitudes and beliefs of managers about the impact of climate change and tourism in Croatia, as well as on climate changes as the determinants of tourist offer.

In addition to the main goal, the research has also focused on several auxiliary/specific objectives that sought to determine whether certain characteristics of accommodation such as type of accommodation, type of guests, business orientation through wellness and SPA services, i.e. sports and fitness offer, accommodation locations in the coastal or continental counties, the seasonality of the business, as well as the possession of a clearly defined environmental policy, and an analysis of the influence of certain socio-demographic characteristics of respondents on the beliefs and attitudes of managers on climate change issues and the impact of climate change and tourist accommodation.

Methodology

The theoretical part of the doctoral thesis was based on the available scientific and professional literature results that were collected and analyzed using the historical method. Although limited by scope, the introductory part provides an overview showing the degree of development of this problem. Historical method illustrates the historical development and interrelationship of tourism and climate change with an emphasis on recent data on causes and proportions of climate events, scenarios of changes in the future, all in the context of tourism impact. The historical method analyzes collected data on the impact of climate change on individual destinations in Europe and the world, and predictions of future changes, as well as data on the attitudes of the general population, especially the stakeholders in tourism, about the impact of climate change and tourism. By studying related research, the abstraction and concretization methods extracted from the multitude of data are those relevant to the research. By the method of analysis and synthesis, a whole is studied by studying the components and by combining some elements of the research. In this scientific study a combination of scientific methods, such as inductive and deductive methods, was used, with logical, methodological and scientific empirical approaches to specific knowledge. The transition from individual and special characteristics to general characteristics was done by using generalization and specialization methods. Determining the legality of a court or claim was made by using evidence and denial methods. The comparative method was used to compare certain properties. Statistical methods in the area of descriptive statistics and difference statistics, and selected multivariate analysis methods (conformational factor analysis) were used to describe certain properties and their comparison.

The survey was focused on 1084 facilities, representing the total population of all categorized facilities by type as hotels and apart-hotels, then tourist resorts and tourist apartments as well as camps, and marinas in the Republic of Croatia covered by the latest available List of categorized facilities on 7 March 2019 officially issued by the Croatian Ministry of Tourism.

For the purpose of determining the beliefs and attitudes on climate change and the interinfluence of climate change and tourist accommodation, a questionnaire originally designed for this research was used. Out of the total number of questionnaires submitted, 283 questionnaires had been duly completed, representing 26.1% of respondents, including 4.60% of the members of the Management Board or the Supervisory Body, 46.65% of the Directors or Heads of the Facility or members of the Operational Management, 19% quality managers and 33.56% of middle management staff.

Data processing was performed using the Microsoft Excel spreadsheet software. Kolmogorov-Smirnov's test analyzed the distribution of continuous numerical values and according to the obtained data corresponding non-parametric tests were applied. Categorical and nominal values are shown using corresponding frequencies and shares. Continuous values are shown using medians and interquartile ranges, and the differences between them are analyzed by Kruskal-Wallis's, that is post-hoc Mann-Whitney U test, and presented in Box and Whisker's plot in which shows median values, interquartile ranges, minimum and maximum values, and extreme values which differ from the medians by more than 1.5 interquartile ranges. Confirmatory factor analysis with

Varimax rotation was performed in which matrix and factor saturation were calculated for three factors (cognitive, behavioral and emotional domain) and for each factor the coefficient of the internal consistency of Cronbach alpha was satisfactory (> 0.700).

Findings

After the statistical analysis of the collected results it can be concluded that the main hypothesis of the survey was confirmed that managers in tourist accommodation facilities have established beliefs and attitudes about climate change and the interinfluence of climate change and tourist accommodation. When comparing the three components that are constituents of attitudes in accordance with the theory of the threefold structure of the stand, it has been shown that in the managers the most powerful and positively oriented was the behavioral component, then the cognitive and finally equally positively oriented conative component.

In the case of auxiliary hypotheses from the results obtained it can be concluded that all the auxiliary hypotheses of the research were confirmed. It has been established that there are significant differences in the attitudes of managers who manage different categories of tourist accommodation facilities for all 36 statements from the basic questionnaire according to which they expressed their degree of acceptance, i.e. their beliefs and attitudes. It was demonstrated that there is a statistically significant difference in all three components of the attitude about climate change and the interinfluence of climate change and tourist accommodation are of managers that manage different categories of tourist accommodation facilities.

There have been significant differences in the attitudes of managers managing tourist accommodation facilities of different categorization or different number of awarded stars in all the statements for which they expressed their position in all three components of the attitude.

There are significant differences in the attitude of managers who manage tourist accommodation facilities that have ecological facilities and a SPA/wellness offer, or fitness offer, in relation to managers in tourist accommodation facilities where there is no SPA/wellness offer or fitness content offers in all the statements for which they expressed their attitude in all three components of the attitude, except in the emotional component associated with the sense of fear experienced by the respondents when contemplating climate change, irrespective of the observed characteristic of the accommodation.

There have been significant differences in the attitudes of managers who manage tourist accommodation facilities that are open year-round in relation to managers in tourist accommodation facilities that are seasonal, in most of the statements they expressed their attitude about in all three components of the attitude. Statistically significant differences were observed in 18 of the 22 statements in the cognitive component of the attitude, in 3 of the 6 statements related to the emotional component of the attitude, and in 5 of the 8 claims related to the behavioral component of the attitude.

There are significant differences in beliefs and attitudes about climate change and the interinfluence of climate change and tourist accommodation, as well as about climate changes as determinants of the creating tourist offer between managers in tourist accommodation facilities given the type and manner of guest arrival or between managers in tourist accommodation facilities which are oriented towards accommodation of individual guests in relation to managers in tourist accommodation facilities that are family-oriented or oriented towards organized groups. The differences were observed in 11 of 22 statements in the cognitive component of the attitude, in 5 of the 6 statements in the emotional component of the attitude, and in 6 of the 8 statements in the behavioral component of the attitude.

There have been significant differences between the attitudes of managers who manage tourist accommodation facilities who have and those who do not have a clearly defined environmental and quality policy or environmental protection policy contained in any of the valid quality certificates in all the statements they have expressed their attitude about, in all three components of the attitude, except in the emotional component associated with the sense of fear experienced by the respondents when contemplating climate change.

There are significant differences in attitudes between managers in tourist accommodation facilities located in coastal or continental counties, in all three components all the statements except in the statement which claims that the national government should set national targets for increasing the use of renewable energy, such as wind energy or solar energy.

There are significant differences between attitudes about climate change and the interinfluence of climate change and tourist accommodation as well as about climate changes as the determinants of creating tourism offer among managers whose sphere of responsibility is quality policy in relation to managers who are focused on strategic management or in relation to managers that are part of the ownership structure, as there are also significant differences in the beliefs and attitudes between managers at the middle management level compared to managers in top management positions.

There have been significant differences in the beliefs and attitudes about climate change and the interinfluence of climate change and tourist accommodation, as well as about climate changes as the determinants of tourism offer, depending on certain sociodemographic characteristics of respondents, especially their gender, level of education, length of service in the tourism sector, membership in ecological NGOs or activism in ecological actions and initiatives.

Consequently, the beliefs and attitudes of managers in the tourist industry are the function of various characteristics of the accommodation facility, where stronger proecological attitudes and higher levels of ecological awareness about climate change and the interinfluence of climate change and tourist accommodation, as well as climate changes as the determinants of tourism offer are shown by managers working in: in categorized tourist accommodation facilities of higher category (higher number of stars); categorized tourist accommodation facilities located in coastal counties; categorized tourist accommodation facilities that work all year round; categorized tourist

accommodation facilities that have a strong orientation towards the SPA/wellness offer and amenities; categorized tourist accommodation facilities that have a clearly defined written quality policy and environmental protection and categorized tourist accommodation facilities aimed at organized groups and family guests who come for holiday.

Also, stronger proecological attitudes and higher levels of ecological awareness of climate change and the interinfluence of climate change and tourist accommodation, as well as of climate changes as the determinants of creating tourist offer are shown by managers working in categorized tourist accommodation facilities in top management positions, by managers who have completed tertiary level of education, who are members of ecological NGOs and consider themselves activists, who are of female gender and those who have more years of work experience.

Originality of the research

The results of this paper provide a series of insights that may be relevant for the development of sustainable practices in the tourism sector and in particular hotel industry in general, as they contribute to understanding of the attitudes of key decision-makers and can provide the basis for predicting their behavior in relation to the application of environmental protection measures against the negative impact of tourism which is unambiguous.

Keywords attitudes, beliefs, climate change, management, tourism, destinations

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