

ADOPTION OF ENVIRONMENTAL CITIZENSHIP CONCEPT AMONGST UNIVERSITY STUDENTS IN CROATIA: THE EXAMPLES OF TOURISM AND TRANSPORTATION

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ABSTRACT

Environmental Citizenship is one of the leading concepts of pro-environmental actions and awareness of people in their daily lives, as well as among stakeholders who directly or indirectly deal with the environment. This concept is new in Croatia, although some postulates have been included in some school and university courses.

The main aim of this research was to investigate if Environmental Citizenship has been adopted among students of the main scientific disciplines who will make environmental decisions in the future at the local, regional and national levels, and whether future generations of students will be educated to become environmental citizens. Special attention is given to tourism and transportation as part of daily life, which have high demands on natural resources and serious environmental impacts. The main objectives were to explore the perceived environmental impacts of tourism and transportation, personal choices in tourism and transportation related to the environment, and willingness to change tourism and transportation options for the benefit of the environment.

The research was conducted using a quantitative method. The data were obtained through a questionnaire survey of 167 students of Geography and Environmental Science courses at the University of Zagreb. Data analysis showed that students have high perception of environmental problems and impacts of tourism and transportation. However, they showed indifferent or low awareness of current practices in tourism and transportation. They also showed little willingness to change their behavior in the future.

Keywords: Environmental Citizenship, geography, environmental science, transportation, tourism.

INTRODUCTION

Nowadays environmental problems are globally and locally outspread. At the global level, the world is facing with problems such as climate change, pollution problems, desertification, just to name a few. At the local level, environmental problems are present such as habitat loss, huge urban sprawl, problems with waste, and overconsumption of space. Considering the emergency of the environmental problems, it is necessary to develop a more sustainable and environmentally aware society which will achieve positive outcomes for the environment and will prevent the creation of new environmental problems. Such society should transform their values, beliefs, attitudes and behavior of individuals who see themselves as part of the global environmental politic [1], [2]. One of such developed possibility is a concept of Environmental Citizenship.

According to [2] “Environmental Citizenship is defined as the responsible pro-environmental behavior of citizens who act and participate in society as agents of change in the private and public sphere on a local, national and global scale, through individual and collective actions in the direction of solving contemporary environmental problems, preventing the creation of new environmental problems, achieving sustainability and developing a healthy relationship with nature. Environmental Citizenship includes the practice of environmental rights and duties, as well as the identification of the underlying structural causes of environmental degradation and environmental problems and the development of the willingness and the competences for critical and active engagement and civic participation to address those structural causes and to act individually and collectively within democratic means, taking into account inter- and intra-generational justice.” It is obvious that Environmental Citizenship is related to pro-environmental public and private behavior of citizens driven by a belief in fairness of the distribution of environmental goods, in active participation and in the co-creation of sustainability policy [3], [4]. Environmental Citizenship is an important element in transition to sustainability where different citizenry is needed to achieve positive outcomes for the environment by way of personal lifestyle changes and/or citizen participation in environmental decision-making which will result in environmentally friendly actions [5], [6]. Educating individuals and communities to become Environmental Citizens is one of the challenges of our time if we want to achieve sustainable growth and preserve our natural environments [7].

Tourism and transportation are activities with markedly and visible impact on space. They have high demand for natural resources and severe environmental impacts. Although transportation could be considered as one of the fundamental life functions which connects people and areas, the impact of transportation on the environment is significant. Amongst many other impacts, transportation is one of the most abundant energy and petroleum consumers and the fastest-growing contributor to air pollution through carbon dioxide emissions, thus becoming a significant contributor to global warming [8], [9]. On the other hand, although tourism could be considered as a “clean” human activity, environmental degradation in tourism regions soon threatened tourism itself by damaging the main attraction basis [9]. Excessive growth in tourism, encouraged by its economic benefits for hosts, particularly in mass forms of tourism, very often causes high pressure on destination areas and negative impacts both on local communities and guests, within a phenomenon commonly known as overtourism [10]. The extent of tourism impacts in those areas exceeded its negative environmental impacts and becomes a social problem as well, which can be resolved only by quality tourism planning and change in behavior, attitudes and actions of both hosts and guests [11].

Youth are growing up and living in a world of prominent environmental problems resulting from the declining state of the environment, which is intensifying economic and social problems [12]. These environmental issues are interrelated and interdependent and overarch the natural and social realms [13]. Youth should be considered as key agents of Environmental Citizenship and future environmental restoration.

In line with all mentioned above, the object of this paper is a research of tourism and transportation choices within interrelated context and their perceived environmental impact based on faculty students. The main aims of the paper are to investigate: a) perceived environmental impacts of tourism and transportation, b) level of environmental awareness relevant to tourism and transportation, c) personal choices in tourism and

transportation related to environment, d) willingness to change tourism and transportation options for the benefit of the environment.

RESEARCH METHODS

The results of this research were obtained using a questionnaire survey on environmental awareness and Environmental Citizenship in tourism and transport. The survey targeted students of geography and environmental science, as future educators in school and stakeholders in the field of spatial planning, economic development and environmental protection. Therefore, the survey included occasional sample 167 students of the University of Zagreb, Faculty of Science, Department of Geography, representing 30% of all students of studies related to geography and environmental science at the Faculty. The survey was performed online in October 2019 using the web service Survey Monkey. To achieve reliability of the questionnaire and measurability of the scale, during the preparation of the research various references were consulted. Environmental awareness among students coming from the United States to Australia and New Zealand for fieldwork and experimental learning were examined by [14]. Complex research on environmental behavior at three educational faculties in Israel were performed by [15] where they emphasized the role of teachers in environmental education and sustainable development and defined environmental literacy approach. Research on online education about environment and environmental behavior and awareness were performed by [16]. Topic about recycling and waste were examined by [17], while the relationship between knowledge about environment, environmental behavior, values and actions were investigated by [18].

The questionnaire consisted of mostly forced-choice using multiple-choice answers and statements with the Likert scale, and only few were open-ended. Questions were divided into four sections: (1) sociodemographic information on respondents, (2) environmental knowledge and awareness, (3) environmental awareness in tourism and (4) environmental awareness in transportation. This paper included results of analysis of all sections, in order to get an insight into environmental awareness and behaviour when travelling.

For the purposes of this paper, responses were analysed using the descriptive statistics method in MS Excel. Multiple-choice responses were presented as proportions, while Likert scale questions were analysed as average grades of coded answers and, when necessary, as shares of different categories in the whole sample. Responses in open-ended questions were presented as proportions of the total number of responses or, were included in the original extent to explain respondents' statements. In open-ended questions in which respondents gave more than one answer (e.g. impacts of travelling); all listed responses were included into analysis.

SOCIODEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

The sample of 167 respondents that participated in research consisted of 55.7% female and 44.3% male students. As the sample specifically targeted students, the research included persons in age 18-42, out of which 93.4% were aged 18-24, 6.0% were aged 25-29, while only one person was above 30. Average age of respondents was 21.5 and median age 22 years. The sample reflects the general structure of students by enrolled courses at the Department of Geography. During the research, 67.1% of participants studied the research course in Geography, 3.6% studied teaching course of Geography and History, 11.0% were in the graduate teaching course of Geography and 18.2% studied

Environmental Science. 17.4% were studied first year, 24.0% studied second, 11.4% studied third, 25.8% studied fourth (or first graduate year) and 21.6% were studied fifth year (or second graduate).

In order to investigate if the area of living had an impact on environmental awareness, respondents were asked to list the place in which they had spent their childhood and the place of living during the study. As it was expected, 96.4% respondents were from Croatia and only 3.0% came from abroad (4 from Bosnia and Herzegovina and 1 from Germany), while 1 did not specify. Out of the total number of respondents from Croatia, 28.6% have always lived in Zagreb, only Croatian city with more than 200,000 inhabitants; 3.1% came from cities with a population 100,000 – 200,000 (Split and Rijeka); 19.3% from mid-size Croatian cities (20,000 – 100,000), while 23.0% came from small towns with a population under 20,000 and 26.1% from rural areas. With 73.9% from urban or urbanized areas, the sample of respondents was above the Croatian degree of urbanization (57% in 2019) [19]. Observed by the regional structure, two-thirds (66.5%) came from the most populated Central Croatia or Zagreb Macro Region, 14.9% were from East Croatia, 8.1% from the Northern Croatian Littoral, 9.9% from Dalmatia, while only 1 person was from the Dinaric Croatia. Lower share of respondents from the Littoral Croatia reflects the general structure of students at the Department of Geography, as these regions gravitate to studies of geography at the University of Zadar. However, due to everyday tasks related to studying, most students that had resided in areas outside a 1-1.5 hours travelling to the university have moved to Zagreb and got used to living in a city. Therefore, 84.4% stays in Zagreb most of the week, 11.4% resides in the Zagreb Urban Agglomeration, and only 4.2% remained outside, mostly within 2 hours drive from the centre of Zagreb.

As environmental awareness is adopted in great part at home and from parents through earlier education, respondents gave information about the level of education of their parents, in order to determine if it had an impact on respondents' attitudes and behaviour towards the environment. Out of all acquired information, 3.9% of respondents' parents had only elementary school, 57.1% had high school, 26.9% university education (pre-graduate and graduate), and 12.1% a postgraduate study. With 39.0% with a university diploma, it turned out to be above the Croatian average.

ENVIRONMENTAL AWARENESS

The first part of the analysis focuses on the environmental awareness of the respondents. They had to assess how they perceive it, indicate where they acquired it, express their attitude towards the environment and climate change, and name the most important environmental problems. In the first two questions of this section, respondents had to rate the extent to which they consider themselves to be environmentally aware individuals and environmental citizens using a Likert scale of 1-5 (Fig. 1). They then had to choose the statement that best described them. Based on this statement, the respondents were placed in one of the categories according to [20] (Tab. 1).

A large majority (84%) believe they are environmentally aware individuals with an average grade of 3.9. Self-perception as environmental citizens was slightly lower, but still high, with an average of 3.7 and 69% positive responses. The discrepancy between these responses can be explained by the stricter definition of environmental citizenship, which includes actions for the environment, and the fact that many respondents may not have been familiar with the concept of environmental citizenship.

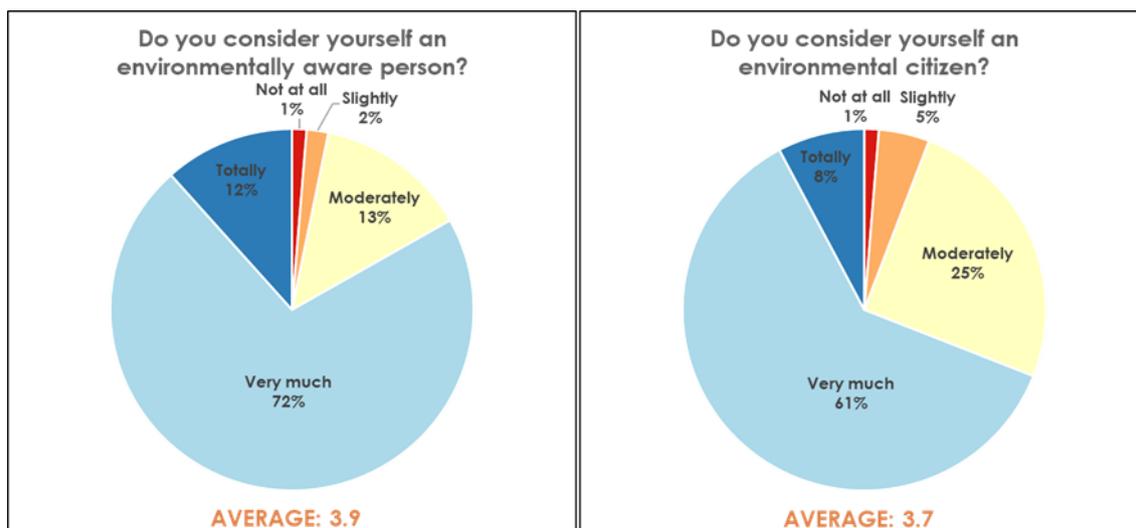


Figure 1. Perception of respondents as environmentally aware persons and environmental citizens

In reality, only one third of respondents are willing to do more for the environment. According to the classification of [20] these are wastage focused (32.9%) and green activists (1.9%) (Tab. 1). The other two-thirds admit that they do not do as much for the environment as they could – 40.7% of respondents think they give their current maximum for the environment because they are constrained by other factors (*long-term restricted and currently constrained*), 16.1% do not do more because they think they cannot change much (*basic contributors*), while 7.1% are satisfied with their lifestyle and do not plan to change it for the benefit of the environment (*consumers with conscience*). Despite the low percentage of the disinterested (1.6%), this shows that even among geography and environmental science students there are still people who are not at all aware (or ignorant) of environmental problems.

Table 1. Environmental segments of the respondents according to their attitudes towards the environment

CATEGORIES	STATEMENT (DESCRIPTION)	SHARE (%)
Disinterested	I don't do anything for the environment and I don't see a reason to start.	1.3
Basic contributor	I do my small bit for the environment but I think people like me can't change a lot.	16.1
Long-term restricted	I do my bit for the environment but I can't do more because there are so many things I have to think about.	20.0
Currently constrained	I do as much as I can for the environment and I will do more as soon as I have more time and money.	20.7
Consumer with conscience	I do as much as I can for the environment but I don't plan to make great changes in my lifestyle for the environment.	7.1
Wastage focused	I do as much as I can to use resources carefully because I don't like waste.	32.9
Green activist	I do everything I can for the environment, even if it means I have to expose myself.	1.9

Note: categories and statements used the methodology of [20]

The discrepancy between the self-perception of environmental awareness and citizenship and the types analysed shows that there is a lack of knowledge on environmental citizenship, that environmental awareness is not sufficiently translated into action, and

that respondents overestimate themselves (they think they are better than they actually act).

Family and social background are still more important in raising environmental awareness (50%) than education (34%) (Fig. 2). One third of the respondents believe that they acquired their environmental awareness at home and 17% in the community where they grew up. The lower share of education shows that there is a real need for formal Education for Environmental Citizenship or at least some kind of environmental education in primary and/or secondary education. Schools in Croatia currently offer only one cross-curricular theme of sustainable development, which is taught in geography, biology and many other subjects. However, as this is a relatively new curriculum in Croatia, it remains to be seen how it will affect the generations currently in the education system.

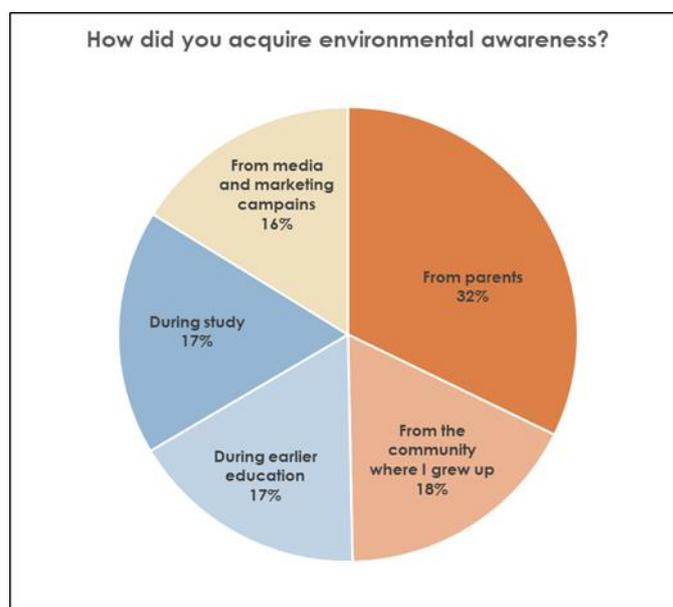


Figure 2. Background of environmental awareness of students

To explore perceptions of environmental issues, respondents were asked to list the environmental issue they found most important (Tab. 2). As some respondents gave multiple answers, all answers were included in the analysis and presented as proportions in total. The analysis showed that the three most important environmental problems are waste (44.1% of all responses), pollution (of air, water and in general) (23.5%) and emission of greenhouse gases and climate change (17.6%). Within the general waste problem, 13.0% of the responses mentioned plastic as the most important environmental problem, while other responses included large amounts of waste, improper waste disposal, throwing waste into the oceans, etc. All other environmental problems are perceived as less serious than those mentioned above - deforestation (5.9%), water use (1.8%) and loss of habitat and biodiversity (1.8%). It must be emphasized that respondents were able to choose up more options, so the number of the responses exceeds 167.

Table 2. The most important environmental issues according to respondents' responses

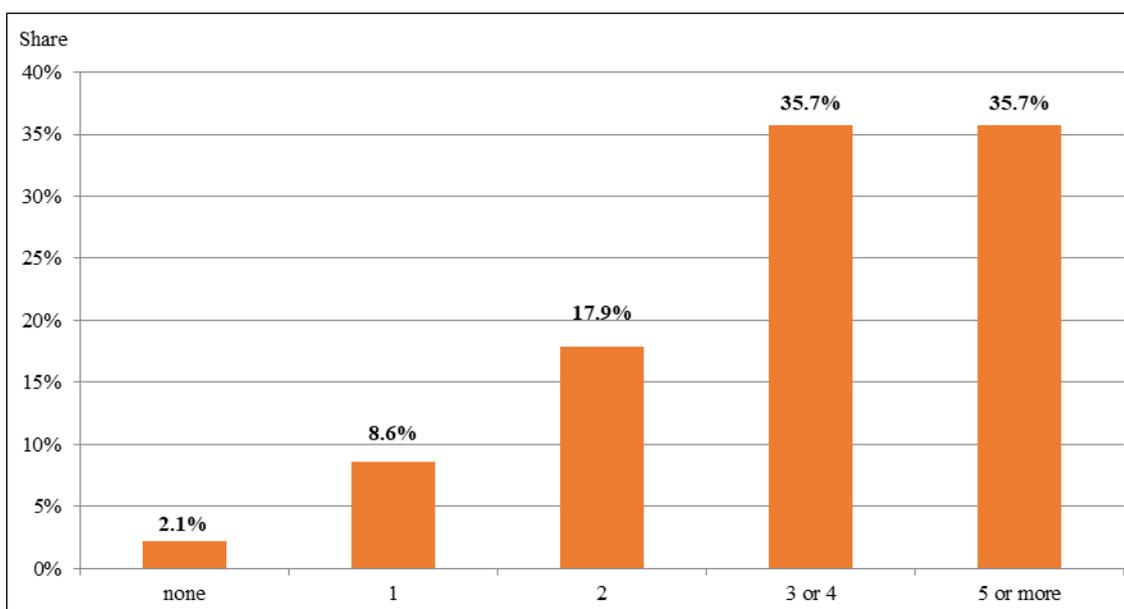
ISSUE	NUMBER OF RESPONSES	SHARE (%)
Waste	75	44.1
Pollution	40	23.5
GHG emission and climate change	30	17.6
Unsustainable energy sources	4	2.4
Water use	3	1.8
Deforestation	10	5.9
Loss of habitats and biodiversity	3	1.8
Other	5	2.9
Total	170	100.0

Perceptions of greenhouse gases and climate change were additionally examined in a forced-choice question in which respondents had to choose what they thought caused this problem. A large majority (85.8%) consider climate change to be the result of a combination of natural forces (part of the cyclical climate change in nature) and human activities (increase in greenhouse gases); 11.6% see it solely as a function of human activities, while only 2.6% think it is determined only by natural forces. These results were to be expected as the survey included a sample of well-informed people who were taught about climate as part of their university studies.

TRAVELLING HABITS

This chapter analyses the respondents' travel habits, the number of trips they made in the 12 months preceding the survey, the destination and the type of trip. As the survey took place before the outbreak of the COVID-19 pandemic, the results represent pre-pandemic travel habits and attitudes.

The results show a fairly high level of student mobility; 71.4% made three or more trips in the year prior to the survey, while 35.7% made five or more trips (Fig. 3).

**Figure 3.** Number of tourist trips of respondents in recent 12 months (prior to the survey)

The higher mobility of students compared to the national average is partly related to their young age (and fewer constraints due to family commitments) and, above all, to their

great interest in travelling to visit the Earth's natural and cultural resources, which is particularly evident in their choice of courses (geography and environmental sciences). Only three of the respondents did not travel at all.

However, most of the trips were short trips, which is largely related to the limited travel budget of the respondents (students), which is also reflected in the means of travel. More than 72.1% of respondents travelled within Croatia, 25.0% travelled to neighbouring countries (Bosnia and Herzegovina, Italy, Hungary, Montenegro, Serbia, Slovenia) and 35.7% travelled to other European countries. Only three respondents travelled to countries outside Europe in the given period. It must be emphasized that respondents were asked where they had travelled most frequently during the period indicated and could choose up to two options. Therefore, the sum of the percentages exceeds 100%.

Two thirds of all trips were made by public transport – 52.1% by bus, 5.7% by train and 5.0% by plane. This confirms the previous statement about the limited budget for travel and the fact that few have or can use a private car (37.1%). The bus is the main means of public transport and is used for travel within and outside Croatia. Students also use it for travelling to some more distant destinations (e.g. Germany, Italy, Czechia, Poland) for which air travel would be more suitable. However, respondents largely avoided air travel because of the high prices, mainly because there were few low-cost airlines from Zagreb in the period before the survey. Only a few respondents use rail for their trips, as the railway in Croatia is poorly developed and not used for most tourist destinations.

PERCEPTION OF ENVIRONMENTAL IMPACTS OF TOURISM

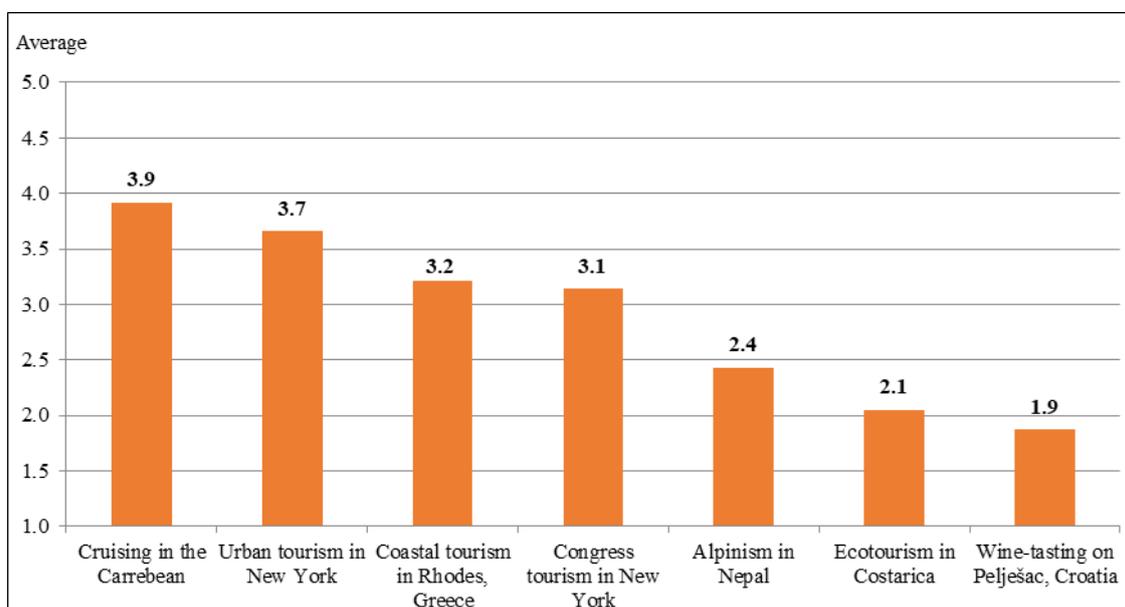
This chapter focuses on perceptions of various aspects of travel and tourism - awareness when travelling, the main negative environmental impacts of tourism, the forms and tourist activities selected, and the extent to which respondents are willing to change their travel behaviour. Compared to self-perceived environmental awareness, respondents are less aware of the impacts of tourism - 4% answered that they are completely aware of these impacts, 44% very aware, 24% moderately aware, 22% slightly aware, while 6% are not aware at all, for an average grade of 3.2. They mentioned several main groups of impacts of their travel: (1) gas emissions (55%), (2) waste (in terms of amount of solid waste and its recycling) (20.7%), (3) pollution (7.4%), (4) resource consumption (6.3%), (5) environmental degradation (3.2%) and pressure on tourism areas (3.7%) (Tab. 3). The highest awareness of transport-related gas emissions, of which 22.1% relate specifically to greenhouse gases, may be related to the modes of transport they use most (cars and buses) and current campaigns warning people about the harmfulness of greenhouse gases to climate change, often oversimplifying the role of transport as the main polluter of the environment. It must be emphasized that respondents were able to choose up more options, so the sum of the responses exceeds 167.

Respondents' perceptions on this issue are reflected in their response to the question of which mode of transport has the highest carbon dioxide emissions per passenger – 45.0% mentioned cars, 30.7% planes, 13.6% cruise ships, 10.7% buses, while none mentioned electric trains. Although their perceptions differ from the actual data, it is evident that respondents are well aware of the carbon dioxide emissions of all fossil-fuelled modes of transport.

Table 3. The most important environmental impacts of respondents' travel

IMPACT	NUMBER OF RESPONSES	SHARE (%)
Gas emissions from transport	54	28.4
GHG emissions from transport	42	22.1
Waste issues	32	16.8
Plastic waste	7	3.7
Environmental pollution	14	7.4
Energy and fuel consumption	12	6.3
Pressure on tourism areas	7	3.7
Degradation of habitats and landscape	6	3.2
Use of natural resources	3	1.6
Noise	2	1.1
Other	11	5.8
Total	190	100.0

When respondents were asked to rate the harmfulness of each selected form of tourism and each tourism activity using Likert scale (1 - not at all; 5 - totally), they gave quite different and surprising answers (Fig. 4). The forms of tourism were rated very differently, from cruising in the Caribbean, which was considered most harmful to the environment (average grade 3.9), to wine tasting on Pelješac, which was not considered harmful at all (1.9). Although the respondents did not have to explain the reasons and it is not possible to speculate on the background of their answers, it seems that they rate selected forms of tourism according to the number of visitors staying in the same place at the same time.

**Figure 4.** Respondents' perception on harmfulness of selected forms of tourism

Therefore, mass tourism is perceived as more harmful to the environment than some forms of special interest tourism (e.g. ecotourism, alpinism and wine tourism). Their perception is in line with general tourism theory, but few tourists in some forms of special interest tourism in regions with sensitive environments (e.g. alpinism in Nepal) can have more harmful impacts on the environment than much larger numbers of tourists in cities or in tourism regions with developed infrastructure that can support them without

exceeding carrying capacity (e.g. urban tourism in New York, congress tourism in Hong Kong or even coastal tourism in Rhodes, Greece).

Perceptions of potentially harmful tourism activities, investigated in this part of the research (using Likert scale (1 - not at all; 5 - totally)) vary less than forms of tourism, ranging from 4.1 for swimming in lakes in protected areas to 3.1 for off-road driving in rural areas (Fig. 5). As before, perceptions are related to the number of users of an activity, more than the activity in which they participate, and respondents may perceive protected areas as more visited than rural areas. Respondents' sensitivity towards nature and protected areas seems to be high, as activities in these areas are perceived as more harmful to the environment. The moderately high rated impacts of illegal tourism accommodation on the environment are associated with landscape degradation and increased littering, and are perceived as more harmful than driving a speedboat (which could harm marine life) or barbecuing in the Mediterranean in summer with a higher risk of fire.

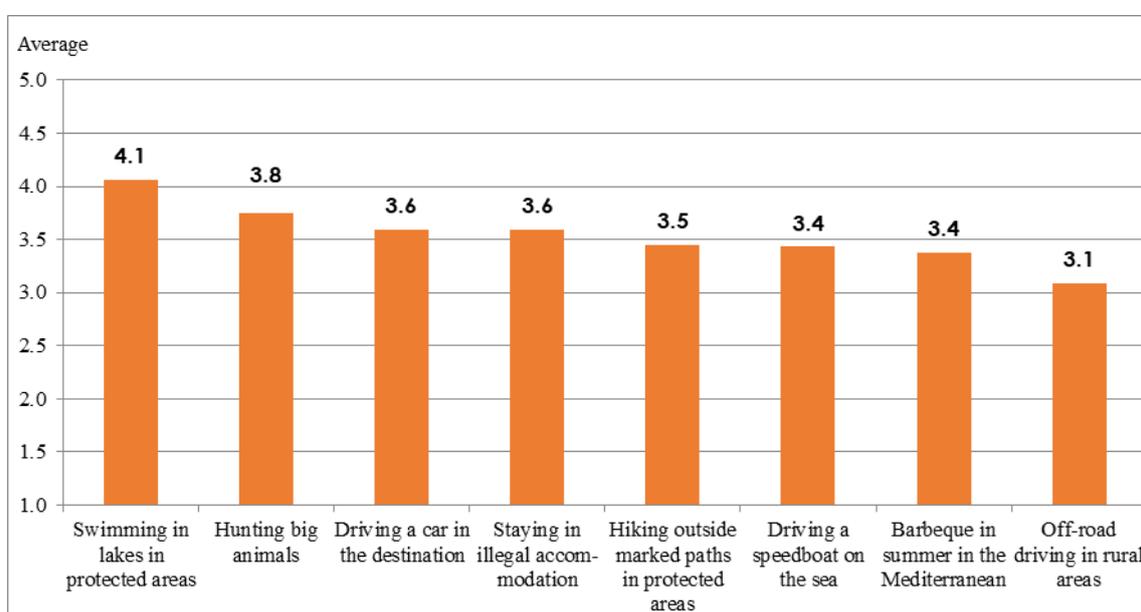


Figure 5. Respondents' perception on harmfulness of selected tourist activities

Respondents were asked how and to what extent they are willing to change their travel habits in order to reduce the negative impact on the environment using Likert scale (1 - not at all; 5 - totally) (Fig. 6). Most of them are willing to reduce their consumption (if they had to pay extra for it) (average grade 4.0) and to use another mode of transport (train) if it is available (3.7 for cars and 3.2 for planes). Many would take only a few trips with longer stays instead of multiple short trips during the year (3.4), but they would be less willing to change a destination to avoid a flight (2.8). However, there is less willingness to pay more to offset CO₂ emissions when travelling (3.1), even though awareness of CO₂ emissions from fossil-fuelled transport has increased. The rather high percentage of respondents who are not willing to change anything because they think they do enough throughout the year shows that there are still people who are not at all aware of the extent of the negative impacts of travel.

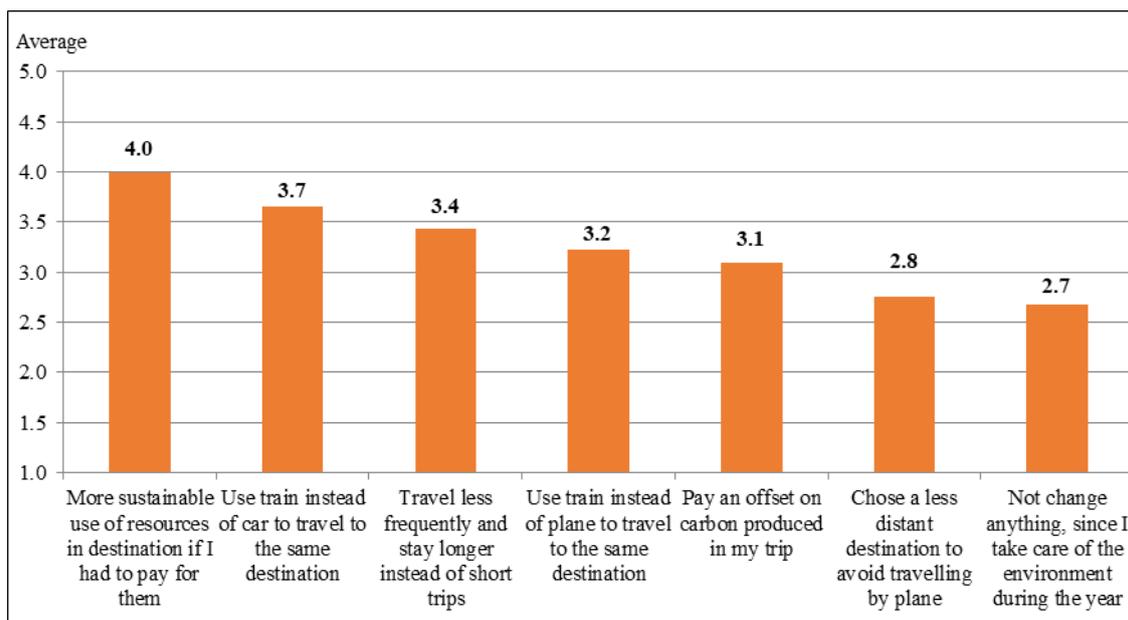


Figure 6. Respondents' willingness to change travel behaviour for the benefit of environment

The last question in the section on tourism explored who respondents hold most responsible for providing information on environmental issues and negative environmental impacts of tourism and how they explain their answer. Most respondents consider the education system most important (41%), 22% the media, 17% the government, 10% any individual and 9% international organisations. The role of the education system is explained by the fact that pupils and students learn about the environment and it is easiest to acquire different behaviours, values, habits and knowledge at a young age. Those who prefer the media claim that they can reach everyone in an easy and ubiquitous way and therefore should also have the task of informing about the impact of tourism. Respondents who consider everyone responsible believe that each individual has an impact with their choices and behaviour and that the only way to reduce the negative impacts of travel is through their own choices. Those who call for government intervention, on the other hand, believe that behavioural change can only be enforced from the outside, through legislation, and that it is their job to inform. The results show once again the importance of education about the environment as well as education about tourism and its impacts, which has already been recognised in important documents on global tourism. In particular, the Global Code for Ethics in Tourism in Article 2. Tourism as a vehicle for individual and collective fulfilment calls for the inclusion of the value of tourism exchange, its social, cultural and economic benefits as well as its risks in school curricula [21].

ENVIRONMENTAL CITIZENSHIP AND TRANSPORTATION

Since the transportation is one of the key life activities, perception of students on relation between environment and transportation were investigated in this chapter. Students were asked about environmental impacts of transportation, transportation in their everyday lives and making holidays and their future plans regarding transportation options.

Firstly, students expressed their attitudes about environmental impacts of transportation using Likert scale (1 - completely disagree, 5 - completely agree) and the average grades of their answers were calculated (Fig. 7). Students gave relatively high grades to proposed

statements, which implies their high perception of positive and negative environmental impacts of transportation. Students were aware of positive impact of sustainable transportation modes (e.g. public transportation, 4.1), i.e. of negative impact of car transportation on environment (4.1). According to their opinion, electric energy has real potential to represent a future in transportation sector. However, they are somewhat sceptic regarding the environment friendliness of transportation modes fuelled by batteries (3.6). From the political aspect, students expressed their opinion that government should have a key role in promoting or limiting different transport options, but with a higher grade for promoting, and a bit lower grade for limiting.

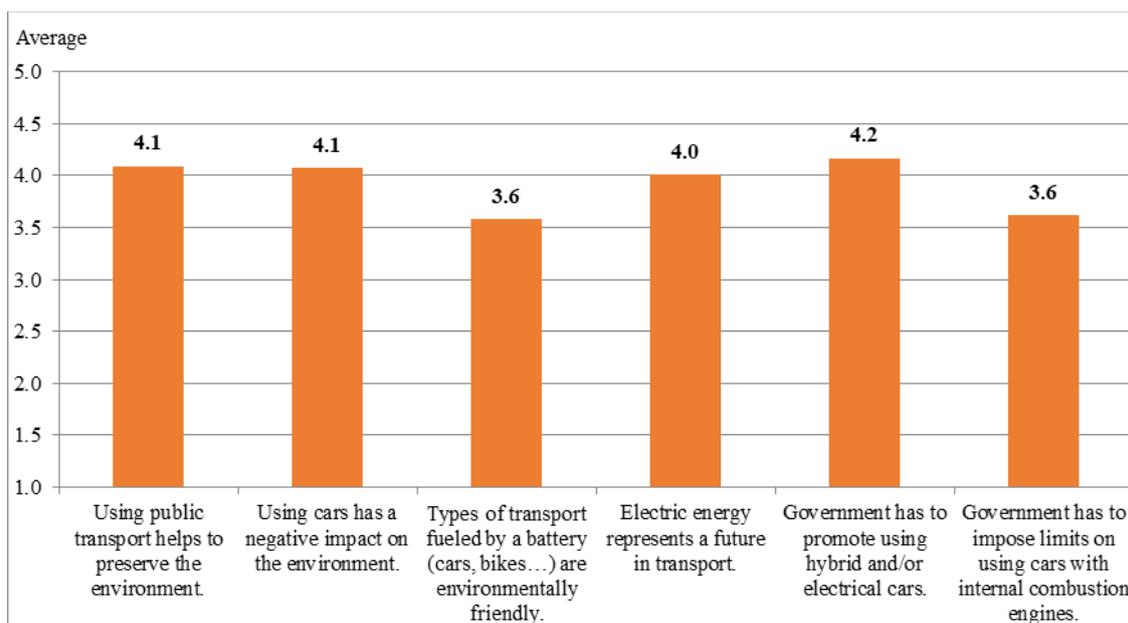


Figure 7. Respondents' perception of environmental impacts of transportation.

Any kind of travelling requires certain transportation mode (walking is also transportation mode, e.g. [22]). Here students were asked about attitudes towards transportation used in everyday life and for holiday purposes, again using Likert scale (1 - completely disagree, 5 - completely agree) (Fig. 8). It could be seen that students' personal choices and habits are less environmentally aware, it could be even characterised as indifference. It is obvious that lots of students walk or ride a bike (or skate) on shorter distance, but the reason for that is less likely environmental awareness. Their moral obligation to take care of the environment when using transportation options is not so high (3.1). Related to that attitude, environmentally friendly transport in everyday travelling is even less important for students (3.0), and the usage of transportation options best for the environment in everyday travelling is even less prominent (2.9). Most probably students use transportation mode which is more suitable for them considering financial options, and other reasons (time travelling, schedule, etc.). This is more prominent when discussing holiday issue, because environmental awareness is even lower. Environmentally friendly transport in travelling on a holiday is less important for students (2.6) than everyday travelling, and the usage of transportation options best for the environment when traveling on a holiday is even lower (2.4).

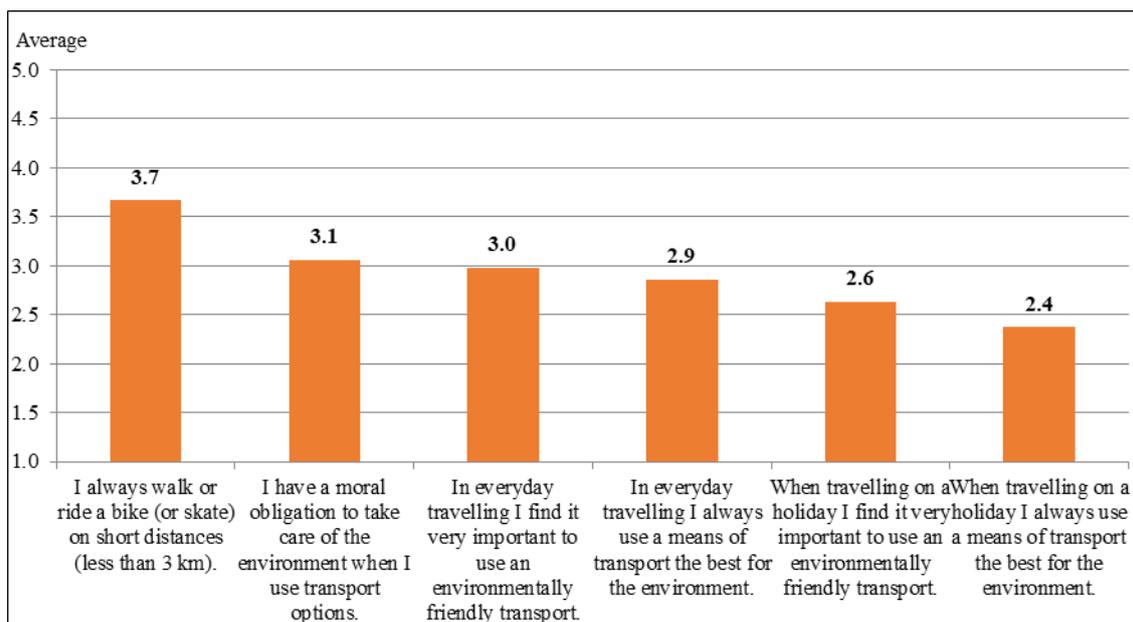


Figure 8. Respondents' attitudes towards transportation in everyday life and making holidays.

At the end, students' attitudes about their future plans regarding transportation options were investigated using Likert scale (1 - completely disagree, 5 - completely agree) (Fig. 9). In general, less expressed environmental concern in students' future transport plans could be recognised. Comparing to the previous value about walking and riding a bike in everyday lives, almost the same attitude is valid about students' walk and riding a bike (or skate) in the future (3.8), although the highest grade would be expected considering environmental awareness. Their environmental awareness is even more prominent when considering future plans of using a car against public transportation (3.1 vs. 2.9).

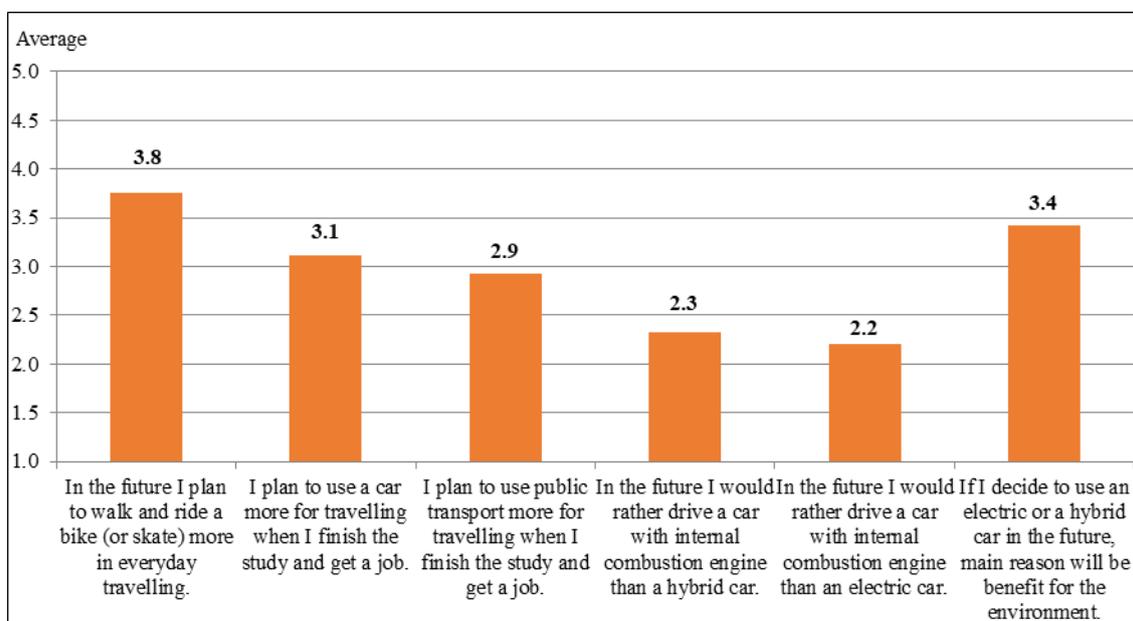


Figure 9. Respondents' future plans regarding transportation options

However, it could be related to students' living location and public transportation network developed in their living area, so car usage could be even more forced. Still, students are

aware of many positive sides of electric and hybrid cars, especially considering environment, so students expressed higher positive perception of electric/hybrid means of personal transport for the benefit of the environment.

CONCLUSION

This paper deals with an adoption of Environmental Citizenship concept amongst university students in Croatia. The paper presents students' attitudes about perceived environmental impacts of tourism and transportation, their personal choices in tourism and transportation related to the environment, and their willingness to change tourism and transportation options for the benefit of the environment. Students expressed high perception of environmental problems and environmental impacts of tourism and transportation (e.g. waste, gas emissions, landscape degradation). Still, students have indifferent or mildly conscious attitudes toward present practices in tourism and transportation. Their willingness to change behaviour in the future is expressed only in small extent where they only showed potential orientation to electric/hybrid cars.

It could be concluded that Environmental Citizenship is crucial for addressing current environmental and sustainability issues. It should be emphasized that this is a necessary condition for sustainability and has been identified as one of the EU's priorities [23], [24]. Educating people to become Environmental Citizens is one of today's challenges if sustainable growth and environmental awareness want to be achieved. Considering aim to achieve more sustainable and environmental aware societies, youth need to be taught to overcome important gaps or challenges in being part of a sustainable society.

The research presented in this paper has some limitations. One should be aware that it was impossible to implement more questions in the questionnaire, so some topics remained unexamined or somewhat unclear. However, this research contributes to a better understanding of relationship amongst youth and Environmental Citizenship, and their attitudes and awareness regarding environment. By this research some serious questions have been opened, and it could be a pledge for more detailed researches in the future.

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