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SATISFACTION AND RESPONSIBILITY THE ATTITUDE OF HOLIDAY COTTAGE OWNERS TOWARDS THE ENVIRONMENT

Bernadett HORVÁTHNÉ KOVÁCS
Kaposvár University, H-7400 Kaposvár, Guba S. 40.

ABSTRACT

The influence of human activities and the resulting social conflicts are widely studied in social science. In the recent study, the authors examine this issue from the aspect of holiday cottage owners on the Southern catchment area of Lake Balaton[1]. The questionnaire used in the research assessed the attitude and partaking of holiday cottage owners towards the environment and their experiences in various related conflicts within the society on the Southern catchment area of Lake Balaton. It was found that the respondents have various forms of behaviour regarding the protection of environment; they think about their local or global environmental problems differently and blame different stakeholders, including themselves, and clear patterns of this can be detected at the settlement level, too. All the above mentioned issues go beyond and call attention to the potential conflict situation between settlements living from tourism at the southern watershed of Lake Balaton in aspects of both the future development priorities and – as an effect of the afore mentioned – the status of the local natural and built environment.
Keywords**:** tourism, Balaton, social conflicts, environment

INTRODUCTION

The influence of human activities and the resulting social conflicts are a widely studied area in social science and have always been in the focus of policy making, both in Europe and world-wide. Without going into detail, regarding the wide literature, the author acknowledges that there is a robust and intensive research background; the priorities are linked by climate change, energy sources, biodiversity and greenhouse gas emission (*FAO*, 2008; *OECD*, 2001; 2008; 2010). The recent study looks for the relationship between the attitude and behaviour of local stakeholders situated in an environmentally sensitive area of Hungary, in the South-Transdanubian region. Lake Balaton and its environment went through a fundamental development in the last one and a half centuries due to the recognised demands for 'tourism' (*Kovács*, 2007). The theme is more recent in the aspect of the Balaton Development Strategy (*Office for National Economic Planning*, 2014), having been designated an area of outstanding landscape value.

1The project was supported by the EU (TÁMOP-4.2.2.A-11/1/KONV-2012-0038 id. 'Complex analysis of effects of anthropogenic activities and the relating social conflicts on the example of an ecologically sensitive region of shallow lake (Lake Balaton and its water shed)'

The author focused on the answers on questions which were parallel with the questionnaire used for assessing other actors involved in the whole of the survey (*Csonka et al.*, 2013; *Horváthné and Nagy*, 2013). In the course of the analysis of the answers, the attitudes influencing the human activities for environmental protection, the satisfaction with the environment and the views of cottage owners regarding responsibility were examined. The further analysis will aim to reveal the factors behind the behaviour and attitude of the actors of the so-called "space of environmental conflict" in order to investigate the relationship of it with the status of the environment.

MATERIAL AND METHODS

In the course of the research, a randomised questionnaire survey was conducted by interviewers in June 2013 with 250 owners of holiday cottages in the following settlements: Balatonvilágos, Zamárdi, Balatonföldvár, Balatonkeresztúr, Balatonmáriafürdő, Fonyód, Siófok, Balatonfenyves, Balatonszemes, Balatonszárszó, Balatonberény, Balatonboglár, Balatonlelle, and Szántód. The survey was randomised on a predefined quota of the population of the settlements on the banks of the lake. The database of the answers was analysed for extreme values and missing values, afterwards it was processed with SPSS.20.

Hierarchical cluster analysis (squared Euclidean distance) was used in order to create homogenous groups of the respondents from the aspect of their environmental attitudes. Relationships were looked for between the respondents' a) motivations and attitudes, and, b) the satisfaction and views on the responsibility of various institutions. ANOVA was used to test (F-test) and measure (eta) the influence of the attitudes of different clusters on the answers given regarding satisfaction and responsibility questions.

The Likert-scale was applied in the questionnaire survey to assess the degree of agreement of respondents from 1 (least) to 5 (most). Cross-table analysis (chi-square test, Cramer value) was used to reveal the association for the influence of settlement or attitude on the degree of agreement with certain statements.

In order to study the factors determining the various activities of individuals for the protection of the environment, factor-analysis was also conducted (Main Component analysis, Varimax method) to analyse the satisfaction with environment.

RESULTS AND DISCUSSION

Activity of individuals for the protection of the environment

This block of statements analysed the degree of agreement of respondents with various activities in the field of environmental protection by individuals.

Factor analysis (main component analysis) – a method suitable for ranked data – was used to define the determinant factors behind the answers (*Table 1*). The Eigen-value of the first three factors was higher than 1; the total variance explained by the three of them is higher than 60%, which is acceptable in social surveys (*Figure 1*).

Table 1

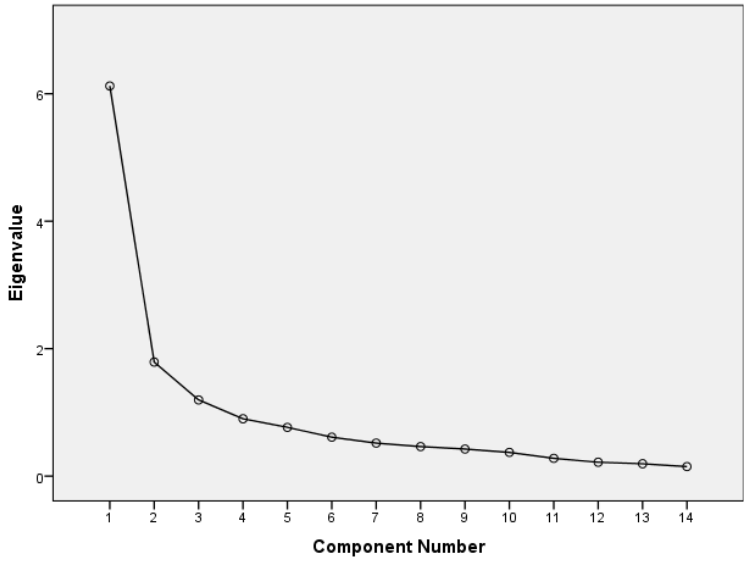
Criteria of Main Component analysis of individual motivations and the Total Variance Explained

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.862
Bartlett's Test of Sphericity	Approx. Chi-Square	1927.307
	df	91.000
	Sig.	0.000

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	3.729	26.638	26.638
2	2.814	20.104	46.741
3	2.564	18.312	*65.054*

Figure 1

Eigen-values of the main components in the analysis of individual motivators



According to the explanatory power within the components, the *answers 1, 2, 4, 5, 11* belonged to one factor, *answers 6, 7, 8, 9, 10* to another, while *answers 3, 12, 13, 14* to the third one (*Table 2*).

These factors were the motivators of the individuals' typical activities in environmental protection.

Table 2

Components and factor matrix of individual motivators

Answers	Component		
	1	2	3
1. Whenever I can, I buy organically certified food products.	.140	**.852**	.127
2. Among the products of similar functions I choose the one with eco-labels.	.244	**.847**	.031
3. I take care of purchasing energy saving electronic equipment, bulbs.	.340	.152	**.713**
4. I rather choose re-fill products to decrease waste.	**.437**	**.489**	**.391**
5. I do not accept free nylon bags offered at stores.	.000	**.744**	.194
6. I try to save water and do not use running water for dish-washing.	**.705**	.202	.321
7. I prefer showering to bathing.	**.747**	.199	.404
8. I rather put on extra clothes instead of putting heating on.	**.670**	.140	.425
9. I turn off the TV if nobody is watching it.	**.870**	.121	.014
10. I turn off the light if nobody is in the room.	**.903**	.102	.072
11. Instead of using the stand-by function, I turn off the TV, radio.	.170	.566	.358
12. I like hiking in the nature.	.289	.232	**.520**
13. I recycle my household waste.	.387	.215	**.649**
14. I compost the organic my household waste.	-.054	.110	**.759**

Basically, the motivators for individual activities in environmental protection have three directions: *a) thrift, b) conscious choice, c) activism*.

The hypothesis that the respondents can be grouped according to their motivations was analysed with hierarchical cluster analyses. Four clusters were defined (the motivators of these people differ from each other's at $p<1\%$); these are called 'Environmental Attitude' Clusters. *Figure 2* indicates the difference of the pattern of the three motivators in the clusters, where the reference line (at 0.00) showed no difference from mean; plus values reflect a higher role of the motivator than the average, and negative values could be interpreted as less determinant motivators for the given cluster.

According to the revealed pattern, the 'Environmental Attitude' clusters can be described with their motivators as follows:

Cluster 1: Economic reasons dominate as motivators for the individuals' activities in environmental protection; these people are rather active, but without consciousness in choices. *'Thrift and active environmental protectors'*

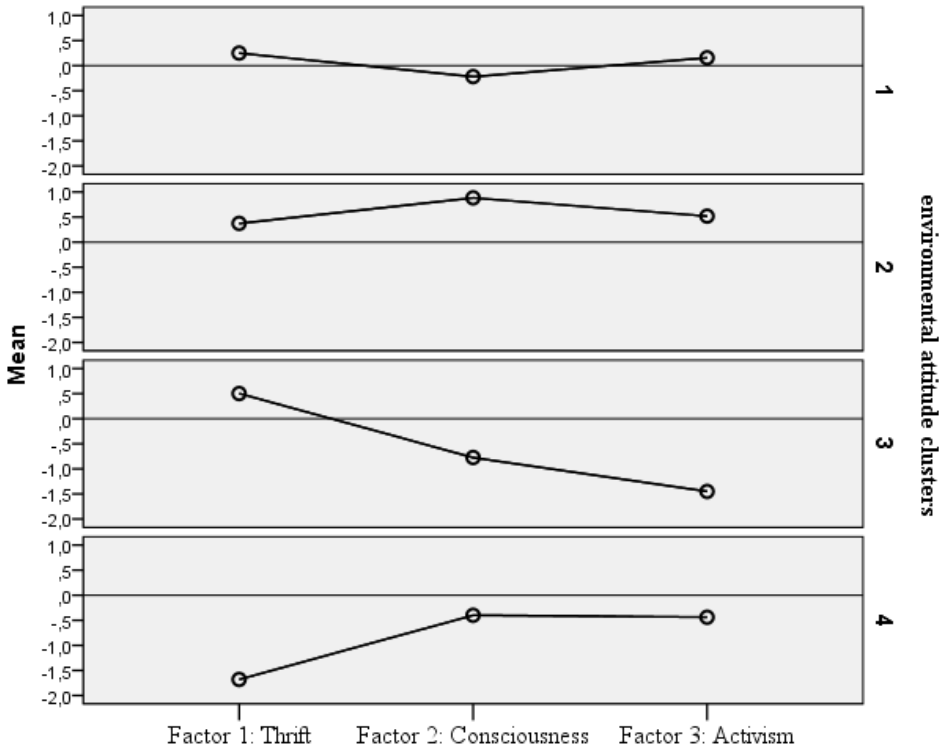
Cluster 2: These respondents consider environmental issues, they are motivated and more committed than the members other clusters. '*Conscious in their choice and active environmental protectors'*

Cluster 3: There is a neutral behaviour towards choice, but reasonability is noticeable. Nevertheless activism is rare among them, which can be explained by both living conditions and family status. *'Thrift only'*

Cluster 4: Comprises the group of people "absolutely not-caring". *"Not-caring"*

Figure 2

The pattern of evidence of individual motivators in the clusters of holiday cottage owners



Satisfaction with elements of environment

An individual's satisfaction with their environment can be explained relative to their motivation, not only for individual activities but also regarding pressing factors various actors think to be responsible for environment-related development of the settlement where they live.

Five components were defined as the factors of satisfaction (*Table 3*) with the status of the environment (either natural or built).

According to the factor matrix, the following factors can be differentiated as crucial to satisfaction with environmental elements:

Factor 1: Elements related to public institutions
Factor 2: Public cleanliness and transportation
Factor 3: Natural environment and water

Factor 4: Waste management, pollution
Factor 5: Elements related only to certain settlements

Table 3

Rotated Component Matrix for Main Component analysis of satisfaction with various environmental elements

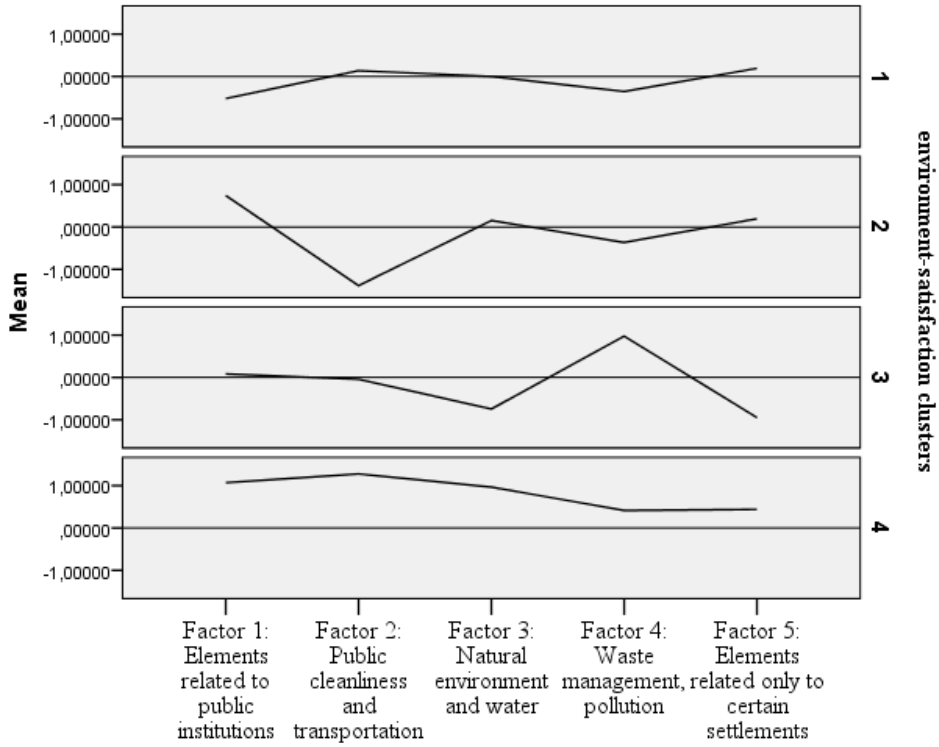
	Component				
	1	**2**	**3**	**4**	**5**
D.3.a. 1. Quality of air	.666	.013	-.065	.445	-.042
D.3.a. 2. Noise	.748	.229	.018	.218	-.123
D.3.a. 3. Waste transport	.655	.173	.095	-.027	.295
D.3.a. 4. Illegal waste disposal	.574	.475	.159	-.153	.203
D.3.a. 5. Weeds causing allergy	.290	.745	.140	-.022	.280
D.3.a. 6. Untidiness of sites (neglected areas)	.239	.806	.051	.190	.104
D.3.a. 7. Storm water management on streets, roads, other sites	.447	.397	.046	.178	.288
D.3.a. 8. Animal keeping	.648	.340	-.083	.196	.063
D.3.a. 9. Maintenance of buildings, appearance	.132	.771	-.023	.298	.076
D.3.a. 10. Natural values, landscape	.463	.256	.108	.563	-.014
D.3.a. 11. Drainage for inland waters of outskirts	.572	.205	.090	.291	.345
D.3.a. 12. Quality of waste water treatment	.313	.264	-.028	.392	.372
D.3.a. 13. Quality of running water supply	.207	.204	.068	.437	.416
D.3.a. 14. Condition of pavements, streets	.322	.542	.181	.216	.022
D.3.a. 15. Bicycling facilities	.385	.169	.394	.266	.316
D.3.a. 16. Education in environment	.523	.160	.424	.222	.211
D.3.a. 17. Attitude of inhabitants towards environment	.572	.248	.187	.436	.056
D.3.a. 18. Facilities of selective waste collection	.257	.131	.117	.201	.574
D.3.a. 19. Public cleanliness	.453	.260	.283	.144	.450
D.3.a. 20. Mosquito control	-.110	.100	.195	.044	.821
D.3.a. 21. Local and interurban public transportation	.130	.447	.281	.292	.184
D.3.a. 22. Facilities on beach	.244	.221	-.044	.708	.054
D.3.a. 23. Water quality of Balaton	.021	-.001	.033	.752	.220
D.3.a. 24. Low water level of Balaton	.160	.197	.047	.739	.084
D.3.a. 25. Fuel or ammunition, explosive reserves of earlier or still existing army bases	.004	.067	.930	.081	.094
D.3.a. 26. Brown fields of earlier industrial or agricultural facilities	.076	.071	.954	-.026	.096
D.3.a. 27. Waste disposal without soil protection	.048	.095	.948	-.048	.133

The regression coefficients of individual observations with the factors gave different patterns of satisfaction factors, which was the basis of the cluster analysis.

The results of this hierarchical cluster analysis were called the 'Satisfaction Clusters" of the respondents. The members of 'satisfaction clusters' were satisfied or dissatisfied with the factors in different patterns, which is shown by *Figure 3*.

Figure 3

The mean explanatory power of factors in the 'satisfaction-clusters'



Members of Cluster 4 were more satisfied with all factors, with the exception of waste management/pollution. Respondents belonging to Cluster 3 were more satisfied with waste management/pollution than the others, but less so with natural environment and water. The people in Cluster 2 were most critical regarding public cleanliness and transportation and more satisfied with factors related to institutions. The Cluster 1 members were not typically more or less satisfied than the average level.

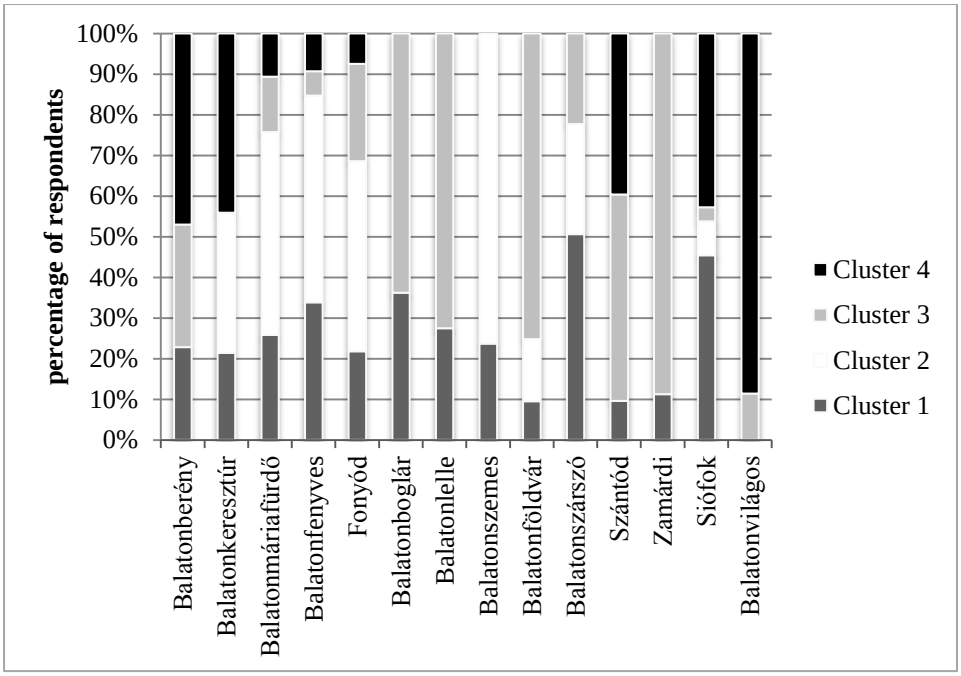
Satisfaction clusters were named according to their characteristics as follows:

Cluster 1: Average
Cluster 2: Critical to cleanliness and transportation
Cluster 3: Critical to natural environmental status
Cluster 4: Critical to waste and pollution load

The question was whether the opinion of respondents from various settlements was different from the aspect of their satisfaction factors (*Figure 4*).

Figure 4

Distribution of respondents of "satisfaction-clusters" by settlements, n=250



There is an uneven regional distribution of the 'satisfaction clusters': The people belonging to Cluster 1 were situated mostly in Siófok and also had a quite fair share (5-10%) in Balatonfenyves, Balatonszárszó, Balatonmáriafürdő and Fonyód; Cluster 2 was dominant (critical to cleanliness and transportation) in Balatonmáriafürdő, Balatonfenyves, Fonyód and Balatonszemes. The members of Cluster 3 (positive in waste management/pollution; negative in natural environment and water) were situated mainly in Zamárdi, Balatonlelle and Balatonföldvár, Balatonboglár, but could be found in significant share in Balatonszárszó and Fonyód; while Cluster 4 (mainly satisfied with everything) constituted holiday cottage owners of Balatonvilágos, Balatonberény, Balatonkeresztúr and Siófok.

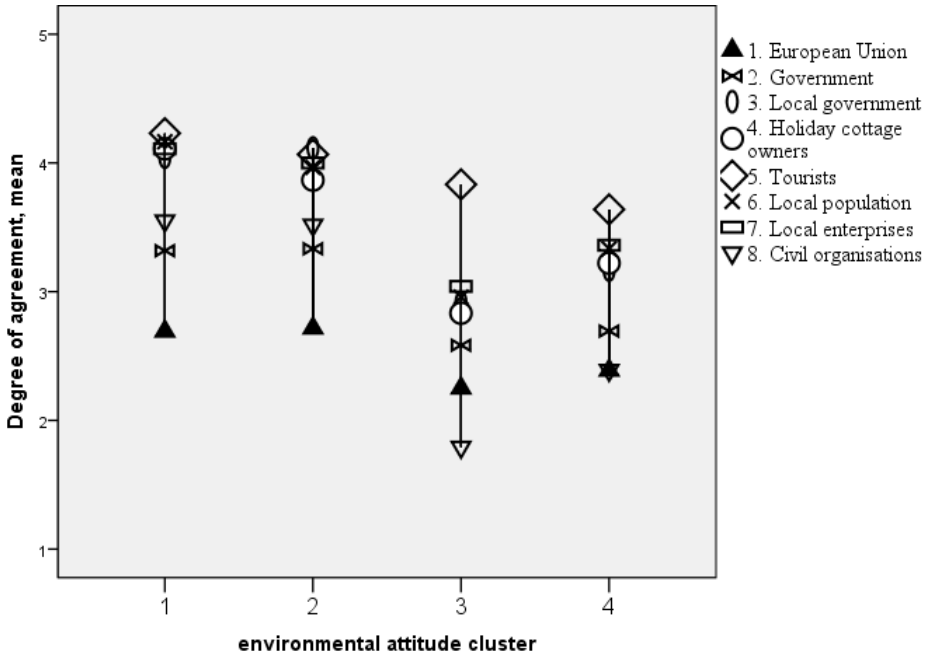
There was a clear difference in the opinion of holiday cottage owners of different settlements regarding the elements of satisfaction with environment, which indicates a potential incoherence or conflict area between the enterprises living from tourism on the southern coastal settlements of Lake Balaton.

The relationship between membership in environmental attitude clusters and the opinion of responsibility of various actors for environmental problems

The hypothesis was that the respondents' environmental attitude influenced how they think about the responsibility of various stakeholders. *Figure 5* also points to a potential relationship.

Figure 5

Relationship between 'Environmental attitude' and opinion on the responsibility for environmental problems; n=250



Only the opinion regarding the responsibility of the EU was even (ANOVA, p=0.282). The analysis proved that attitudes towards the environment influenced how different respondents think about responsibility (p<1%).

The Cluster members of *'Thrift and active environment protectors* believed that the role of tourists, local companies and local-governments was the most important and their opinion was stronger than that of the other clusters. Those people who represented the Cluster of people *Conscious in their choice* and *active environment protectors* believed that local-governments were the most responsible and rate the role of similar stakeholders as a little bit lower than Cluster 1. According to the members of the Cluster *'Thrift only',* the tourists were responsible. Members of this cluster could not decide on the responsibility of the other stakeholders, but civil organisations were the least responsible according to them. The members of '*Not-Caring'* cluster rate the responsibility of all stakeholders around 3 – so they did not really know.

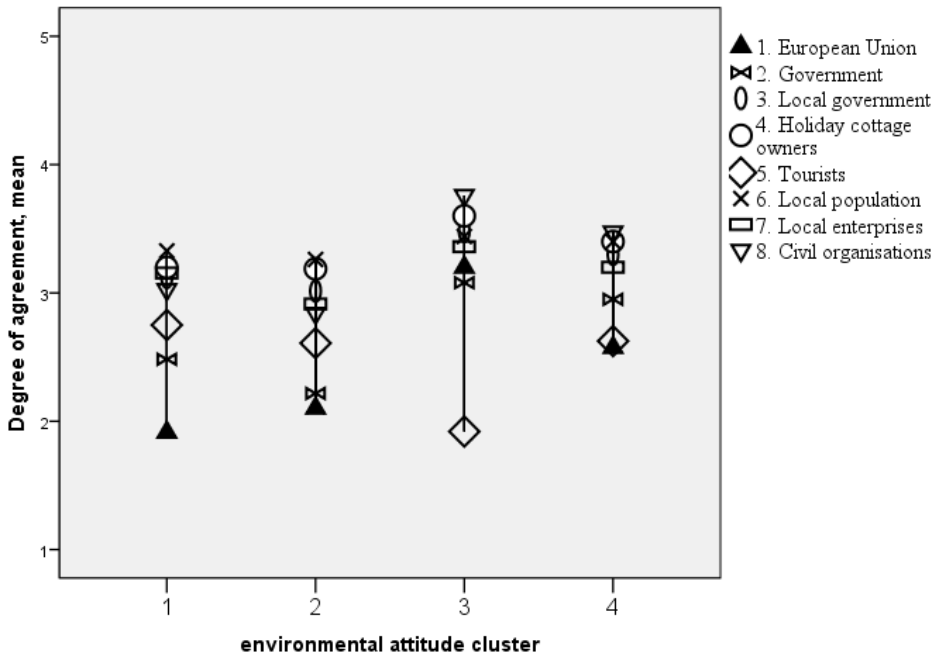
In the following, the opinions of respondents regarding the real activity of these stakeholders were analysed from the point of 'environmental attitude'; the potential relationship is denoted by *Figure 6*.

With the exception of local enterprises, the different attitudes toward environment result in different opinions on the activity of these actors (p<1%). All

of the clusters thought that the most active groups in environment protection was local population.

Figure 6

Relationship between 'Environmental attitude' and opinions on environmental protection activity of stakeholders; N=250



The members of the clusters *'Thrift and active'* and '*Conscious and active'* thought that the listed actors exerted less activity to protect the environment than the other clusters believed. They were also critical of the tourists; as previously, tourists were mentioned as having a higher responsibility; here they were also said to be not active enough. The members of the Cluster "Only thrift" thought that all actors were active enough – especially the local governments – with the exception of the tourists. The '*Not-caring'* cluster members emphasised the lack of activity of civil organisations.

All these mentioned above indicate that the attitude of the people (holiday cottage owners) influences the way they think about the environmental protection activity of various actors – the figures indicated how much they were acquainted with this work; therefore, a change in attitude may result in better involvement, or even embedment.

The personal value system and the opinion on the responsibility for environmental problems

Of course, an individuals' value-system may have a clear influence on the more direct environmental attitude. If it is so, then the differences in the value system

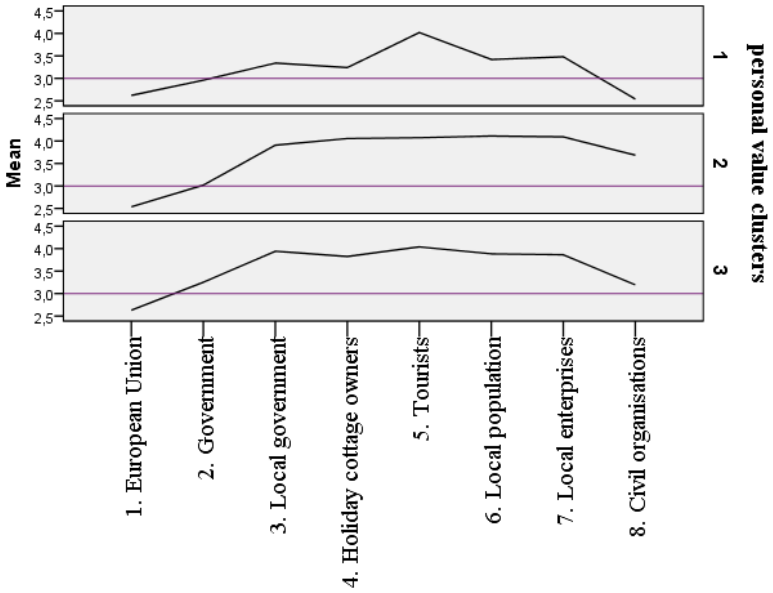
also give answers to why the respondents assess differently the role and activity of various actors. The hierarchical cluster analysis of the respondents on the basis of their answers for personal values resulted in three differentiable groups:

Value Cluster 1: Family-centred
Value Cluster 2: Extroverted
Value Cluster 3: Job oriented

Figure 7 denotes some patterns in the relationship of personal values and the opinion regarding the responsibility for environmental problems.

Figure 7

Patterns in the relationship of personal values and the opinion on the responsibility for environmental problems



Significant differences were not found between the opinions of various clusters on the responsibility of civil organisations, local population and tourists.

The details showed that for those who were *Family-centred* the responsibility was not important in any case of the actors; the *Extroverted* people's opinion was that these actors were not responsible for environmental problems, while the *Job-oriented* respondents rated responsibility higher than any of the other clusters, so they had a much stronger opinion about the responsibility.

In parallel to their opinion about responsibility, the cluster *Job-oriented* was critical of the activity of these actors. They prefered the two lowest categories in the question: "How much these actors do for the protection of the environment". The *Family-centred* people had opinions on the tourists' activities, which they rated at a lower level, and the *Extroverted* cluster was satisfied with the activity of all actors.

In general, the respondents' view regarding the responsible actors or institutions for environmental problems, as well as their opinion on the contribution of these actors to the solution of environmental problems, was moderate. They believed that the most responsible group was the tourists and that these actors did the least for the protection of environment. However, an opposite picture was drawn of themselves.

Summarising, the overall knowledge of the people on the real activity of the stakeholders in environment protection has a great impact on their positive or negative opinion; and because it is limited, they can declare their opinion on only few actors.

The answers were analysed in comparison with the settlements where the holiday cottages of the respondents were situated. Significant patterns ($p<1\%$) could be seen in the following:

- respondents from Balatonlelle, Szántód and Zamárdi thought that the activity of the local government was more outstanding,
- respondents from Balatonberény, Balatonkeresztúr, Balatonfenyves, Balatonszemes considered the role of holiday cottage owners positively,
- respondents from Balatonföldvár, Zamárdi, Siófok considered the role of local population positively,
- tourists were seen in a negative light in Balatonberény, Balatonmáriafürdő, Balatonfenyves, Fonyód, Balatonszemes and Siófok.

The whole of the research on various actors of the southern water shed of Lake Balaton covered the local governments, too. The results of this part-research could be compared to the results of the current study, as the recognition of representatives of local governments by holiday cottage owners was analysed, too. In general, it was found that there is a relationship between the personal-value order of the respondents as well as their attitude toward the environment and the level of recognition of local governmental actors and policies. Respondents belonging to the '*Family-centred*' Cluster had less knowledge of development and environmentally significant policies of the settlements compared to the other two clusters. Cluster '*Extroverted*' was not only much more familiar with the representatives of the local governments but was homogeneously well informed about the development policies, too. Those respondents that were more active in environment protection and more conscious in their choices were also more familiar with the development planning policies than those only motivated by economic reasons.

The holiday cottage owners believed that the objectives of local government better serve other actors' interests than those of their own group. Their opinion was that local development mostly addresses investors concerns and least those of the tourists.

The analysis of the opinion of holiday cottage owners on local government development policy revealed that the geographic situation of the settlements influenced the target groups of development: tourists 47.8%, holiday cottage owners: 52.7% (eta).

Summarising, the geographic situation of the settlements (west-east) influences the development measures of local governments according to the respondents.

CONCLUSIONS

It was found that the respondents had various forms of behaviour towards the protection of their local environment. They thought about their local or global environmental problems differently and blamed different stakeholders, including themselves, regarding which clear patterns were detected at the settlement level, too. All the above mentioned go beyond and call attention to the potential conflict situation between settlements living from tourism in the southern watershed of Lake Balaton in aspects of both the future development priorities and – as effect of the aforementioned – the status of the local natural and built environment. By revealing the factors behind the behaviour and attitude of the actors within the so-called space of environmental conflict, the author's further aim would be to investigate the relationship of it with the status of the environment.

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Corresponding author:

Bernadett HORVÁTHNÉ KOVÁCS
Kaposvár University, Faculty of Economic Sciences
Department of Regional Studies and Statistics
H-7400 Kaposvar, Guba S. 40.
email: kovacs.bernadett@ke.hu