Environmental Attitudes of Urban Dwellers on the Danube River in Vojvodina: Regional Aspects, Socio-Cultural Values and Social Mobilization[1]

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1. Introduction

1.1. The Socio-Cultural Context of the Study

Before we go into the theoretical dimensions of the problems at question, specifically the problematisation of the ecological consciousness, we would like to point out that one of the assumptions of this research is the *understanding of the problem of the ecological consciousness* in a broader perspective, namely as a consequence of the development level of the people's specific *ecological culture*, i.e. as a consequence of effects that their social and cultural environments have.

The understanding of the *ecological culture* as a part of the common culture of the people and, even more, of the spiritual dimension of the *ecological culture*, implies a special character of relation with the nature, environment and men; specifically, it "requires the understanding of the value systems and orientations" (Koković, 2008: 226). Thus, it may be said that the state in which the ecological culture is, depends of the state in which the common culture is (Koković, 2008: 227).

During the '90s – the period of war conflicts on territory of former Yugoslavia, international sanctions of the country, the crisis, and the slowed down, almost paralyzed, social and economic situation, as well as the afterwards political transition in Serbia (after the 2000) – ecological problems and working on their solving were completely marginalized. These social conditions have also effected the change and transfer of value orientations of the population. On one side, this created the fertile ground for "transfer from one (collectivistic) system of values to another (individualistic) system – which is unavoidable in the process of transition of socialistic societies to late capitalist societies" (Lazar, 2007: 13). Yet, as a consequence of broader social conditions, the entire system of values was disrupted. The values were reduced and situated into the basic survival framework – on "basic existential categories (health), reduced to the basic blood-related social group (family), and the most desirable character features became those more typical for autarchic communities (honesty, trustworthiness), than for medium developed societies (Lazar, 2007: 13).

[1] This research study represents the result of the of author's participation in a larger research project named "The role of the socio-economic and cultural attributes of Vojvodina as the factor of regional connecting and integration with Europe" conducted under the Department of Sociology, Philosophical Faculty of Novi Sad.
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Value orientations represent the part of wider cultural patterns of a society. In the context of Serbia, emerge the processes of "re-traditionalization" of culture and value orientations, largely present in the political arena, but also seen through the increasing affluence which the church and religion have on the social life, and which keep on spreading also in other areas. It seems that the long and complex process of the transfer of the value systems from collectivistic to individualistic – what the results of this study reflect in one its part on an example of the ecological consciousness of the population – is far from its realization.

Verification or falsification of this kind of processes - transfer of values system could be also problematized in the context of Inglehart's 'cultural map' (Inglehart, 2000). He talks about two key dimensions of intercultural value variations – first is the distinction between traditional and secular-rational authority and second is between survival and self-expressive values. First distinction, e.g. dimension reflects differences between societies in which religion plays important role, and those with decline of its influence. It reflects also the importance of individual achievement. Second dimension shows the differences in tolerance, degree of materialism, environmental activism and participation in social life (also in Adam *et al,* 2005: 63). Highest recognition for secular-rational authority and prevailing of self-expressive values, are characteristic for those European states and societies with the highest level of formal and functional literacy (Adam *et al,* 2005: 63), which is not the case of Serbia.

On a social, demographic and cultural level, Vojvodina represents a very specific region within Serbia. With a population of something less than 2 millions as well as a great number of nations in it, Vojvodina constitutes a special kind of a "cultural melting pot" (Lazar, 2007: 11). The cultural identity of its population and a special "regional identity can be – and it frequently is – crystallization of general values and characteristics of various ethnic groups and communities." (Lazar, 2007: 12). This special characteristic of the identity and the culture of cities in this region, the participating respondents of this research, is the basis of our assumptions and of the study of the development level of the respondent's ecological culture and consciousness.

1.2. Political and Institutional Character

It was recognized already in the 1960s that the solving of ecological problems constitutes a necessary and a political issue, but the discussions about the adequate political order that would facilitate sustainable development were not brought to their end.

Talking about the ecologically desirable political arrangement, Neil Carter states that the "Greens" mostly choose the model of participating democracy, for it leads to the creation

of forms of government that are more sensitive to citizens, and which enables higher autonomy of the individuals (Carter, 2007). Carter also talks about the problem of this type of a political model because, by itself, it does not necessarily lead to ecologically desirable outcomes. Particularly, this refers to the so called undeveloped and developing countries, where one can expect that the problems of unfavorable economical situation and poverty will result in ecologically unsustainable behavior patterns, actions and politics. Yet, the political and economical power structures, which can impede the ecologically desirable actions of the citizens, cannot be ignored. But, Carter states that the forms of government, created on the basis of inclusion of the interests of wide circle of people, make more possible the ecologically desirable outcomes (Carter, 2007: 56). Including the citizens into creation and realization of ecological politics is important for the recognition of the cultural context and mobilization of specific local knowledge, which is the key factor for creating any desirable social change. The need for this perspective has been acknowledged in the sustainable development strategies (*Burtland report, Agenda 21*), in which the democratic citizenship is the key factor for ecologically responsible politics. Discussing about socio-ecological changes, Michael Mayerfeld Bell points out that for the constitution of the sustainable society is necessary to overcome "bottom up" or "top-down" approach and to establish a dialogue between the top (the forms of social organization) and the bottom (local actors) [Bell, 1988: 258]. This means that the adequate political ground for establishing the sustainable society and solving ecological problems would be participating democracy, in which the institutional politics and programs would be formed in relation to (and enabled by) the actors of the civil society and the overall citizenship.

The problem of the institutional regulation of environment protection in Republic of Serbia has been regulated by the Constitution of the Republic of Serbia, as the highest legislative act, as well as by laws, special programs, politics and strategies. In the Constitution of the Republic of Serbia, environment protection is prescribed as one of the basic human rights and freedoms, as a right to a healthy environment. This part of the Constitution, apart the right to a healthy environment, holds also the right to "a complete information about the current environment state" and a responsibility for everyone to "preserve and improve the environment" (The Constitution of the Republic of Serbia, part 47). The institutional mechanisms in this area are the Department for Environmental Protection and Spatial Planning, The Agency for the Environmental Protection, and authorized Province Departments and the local governments. It can be said the process of the development of the ecological political paradigm in the context of Serbia has immersed on the level of juridical institutions and legislative, while the making and profiling of the wider "green" political ideology is still absent. On one side, this is shown in a relatively small number of "green"

political parties and their marginal political power and, on the other side, formal including of the ecological principles within the political agendas of almost all political parties in the state, regardless of their ideological direction.[3] In Serbia, as a country in transition approaching the entering to the European Union, the laws and sub-legal acts that refer to the protection of environment are being intensively brought. Thus, in 2009, over 16 laws on this subject were brought, along with the ratification of numerous international conventions. In the context of our study, it is especially important to point out the Act of the Confirmation of Convention on Information Accessibility, i.e. the ratification of Aarhus Convention. The trend of constitution of institutional mechanism in this are is followed by number of special programs, among which the latest is the project "Clean Serbia". The basic issue on which this is project is set upon is the large number of wild dumpsters in the country, but the target groups, the citizens, along with the poor infrastructure, are marked as one of the causes of the ecological problems. Politics and programs on the institutional level do not keep up with the updated studies that would reflect the capacities of citizens to adopt and follow the suitable ecological principles and adjust them to their everyday life practices. As mentioned by Ivan Cifrić, the ecological consciousness implies that the individuals and groups accept the existence of needs of other people, environments and groups, and that "they are aware that not all problems can be resolved by laws, i.e. that the legislative regulative is primarily needed where the norms and social values are less accepted as the ecological values" (Cifrić, 1989: 198). As important actors of programs and politics, appear the organizations of a civil society. According to unofficial records, Serbia has about 200 non-governmental organizations associated with the environment protection, while Vojvodina has 72 of this organizations registered. This number of organization, yet, does not mean that they have the actual power, for in the context of Serbia they still do not appear as a recognized actor on the socio-political scene. Thus, although on a institutional level there is an apparent recognizing of the need for the participation of the citizens and the civil society in the constitution of the sustainable society, it seems that the true connection between the solution of the ecological problems and a wider socio-political contexts is absent. To establish the participating democracy it is necessary to have the political will, stabile institutions, adequate public information, political decentralization, social justice as well as the developed civil society. The process of citizens inclusion into the began institutional changes in the area of environment protection in Serbia it will also imply, beside the changes of the socio-political arrangement, the basic changes of the socio-cultural patterns, particularly those patterns that refer to the capacities for

[3] In the official registry of the political parties in Serbia, from the total of 488 parties and organizations, only 14 can be classified under the „Greens". In the current constitution of the Assembly of the Republic of Serbia as well as the Assembly of the Autonomous Province of Vojvodina, none of the parties is the "green" party.

participation of citizens in the public life in general and, later on, the patterns constitutive for creation of an ecological consciousness.

In that sense, all strategies from the institutional level (ecological, economical and technological) for their basic assumption must have the distinctive ecological consciousness and active participation of the citizens, which will enable the connecting of the collective, general and particular ecological needs of the local environments. These processes are the basic condition for environment preservation and creation of long-term strategies.

2. Ecological Consciousness

2.1. Perspective, Definitions and Structure of the Ecological Consciousness

Before defining the ecological consciousness, it is necessary to explain the specific selected approach and, once again, to point out the importance of placing the studied subject into the adequate social, cultural, economical and political context. For this purpose, we will recall on the Bernd Baumgartl's analysis of the environmental problem in Eastern Europe. Explaining the particularity of solving the problem of the environment in this context, author says that: "In the Eastern European context, the meaning of sustainable development has to be seen in relation to the development these countries went through under communist regime, and to the necessary changes and adjustments the transition period brought about. In ideal terms, a sustainable development in eastern Europe would have meant a considerable jump ("leap-frogging") to western European standards and practices of implementation" (Baumgartl, 1997:351). Precisely because of that, it is not justified in the context of Serbia to regard the ecological consciousness as a *grassroots* appearance, nor relate it to the category of ideal types. Thus, nor the paradigm of *shift* thesis[4] would not be applicable in this place, the thesis that shows the negative consciousness of industry on the environment. Michael Mayerfeld Bell criticizes this thesis, as well as all research of the ecological consciousness based on it; it places the respondents into the frame of ideal type categories of the old paradigm ("dominant social paradigm", "human exceptionalism paradigm") or the new paradigm ("new environmental paradigm", "ecological social paradigm") (Bell, 1998:196).

In the context of Serbia, the ecological consciousness must be viewed as the result of more factors at play, from actual ecological problems and the level of influence that ecological activists have, as well as the "stimuli from the above", beginning with the conception of media reporting about ecological problems as a mediator, to the activity of organized social structures on the institutional levels, but also the global actors as the "stimuli from the above", all set in the specific social context.

[4] This thesis was formulated by sociologists Riley Dunlap and William Catton in 1970s.

Thus, in this place, the ecological consciousness was not defined by its content (i.e. adopting/not adopting the specific paradigm), for the assumption is the that the ecological consciousness still does not represent coherent whole, but more the insufficiently integrated *aggregate of knowledge, values and actions interrelated with the relationship of a man and his natural environment*.

Some of the elements of the ecological consciousness were tested through some assumptions of the *new ecological paradigm*, but the end results were not interpreted in reference to ecological consciousness. In defining and studying the ecological consciousness it was used the socio-psychological approach, while its structure was determined on the basis of the Rosenberg and Hovland's difference among the three components of attitudes – the cognitive, affective and behavioral component (Rosenberg, Hovland, 1960). This tradition of studying of ecological consciousness relies on the work of Maloney and Ward, who were first to point out the existing discrepancy between the three mentioned components of the ecological attitudes (Maloney, Ward, 1973).

Components of the ecological attitudes were not tested only by standardized question, but also by questions adjusted to the given socio-cultural context (for example, the questions about the level of public information on the actual problems of environment pollution in the local and regional surrounding).

Ecological knowledge means the knowing of global, regional and local ecological problems as well as the process that create them. In that sense, it may be said the ecological consciousness does not "only mean the awareness about the limitations of the nature and every existing power in it and on it, but also the *awareness* that the existing energy sources and current life conditions of men may for a longer period of time, or even forever, be altered or disappear" (Cifrić, 1989: 198). Knowledge, information, believes, opinions, skills and habits, may be viewed as the *constitutive part of the rational sphere* of the ecological consciousness (Kundačina, 1998: 38). They are the basis and the condition of all human activities, including ecological activities. To nourish the believes and knowledge about the possibilities of the environment protection means also the understanding that the environment can be protected, that it is worth to protect it, and that the efforts in that direction may have effect, and can be realized with the successful outcome.

Theoretically, the universal (global) problem of the construction of the ecological knowledge also may be pointed out, especially through the construction of the notion of the nature itself, ecology and environmentalism, mediated by the knowledge contained within the science, the concept of risk and the media (Hannigan, 1995).

The question of the ecological knowledge and the way of their creating may be crucial for the sociological understanding of the ecological consciousness, especially in the socio-

political context we mentioned previously. Taking into account the insufficient number as well as the lack of the recognition of *grassroots* initiatives, the ecological findings are in a great part related with the systematic political-institutional activities, based on the formal adopting and implementation of the western European principles and practices.

Ecological values, generally speaking, represent the expression of certain feelings towards the environment. Joseph R. Desjardins states that the introduction of the concept of the ecological values within the consideration of the ethics and philosophy has in some part "pushed" their borders, for the ecological questions do not belong in the domain of the traditional morality (Desjardins, 2006). Some questions belonging to the field of the ecological values also relate to the traditional ethical norms, i.e. the norms that regulate the relationships among men, but there also the questions about the relationship of a man and the "un-living" Nature. In that case, for ecological values to even become the subject of ethics and philosophical consideration, the object of evaluation (the Nature) must posses the moral significance and be consistent in the consideration. De Jarden says that the philosophers have mostly sought this moral significance in the inherent purpose, the "value and dignity, independent of the values that other human beings attribute to it" (Desjardins, 2006: 214). Thus, the distinction between instrumental and the intrinsic values is especially important, particularly in relation to the Nature. "The object with the instrumental value has this value only because it can be used to fulfill some other value" (Desjardins, 2006: 214), while "some other object has the inherent value when it is worth by itself, and not just by the way it can be used" (Desjardins, 2006:215). This distinction of values in relation to the Nature represents the crucial "breaking point" regarding the values that are interpreted as more or less ecological.

The ecological values cannot be regarded independently of the dominant value systems, which are accepted as desirable within the way of life of particular social groups, statuses, and whole societies in a given historical context. That implies that the ecological consciousness contains "certain elements which are differently perceived in one society" (Cifrić, 1989: 200). Considering the fact that different value systems coexist in one society – but, which depend on the *dominant* values – these dominant values have a great influence on the ecological consciousness and the development of the ecological values. Thus, ecological consciousness presents "a section of the system of social values of a group, class, culture, and alike, but which largely determine the 'quality' of the ecological consciousness" of men (Cifrić, 1989: 201). Also, the value system of the individuals is considered to be a very important element of "the rational processing of the information about the environment". Based on this fact, we can discuss about the value dimension of the ecological consciousness,

although to some, this dimension – as an attitude *dimension*, cannot be viewed independently, but spoken about in the context of the cognitive dimension (Kundačina, 1998: 40).

In the conclusion about the value dimension of the ecological consciousness, we may say that the attitude of the individual toward the ecological values decisively depends of how much they belong to him, in what degree he can *identify* itself with them, and how much he can link his existence, life style and a way of life with these values. This is certainly one of many factors that affect on the dimension of willingness and readiness for a certain way of behavior that would be consistent with the mentioned orientations, with a purpose of environment protection.

Ecological behavior is the inseparable part of the ecological consciousness and it represents the practical level of the individual and social behavior. It implies the intention of conducting the certain acts, acting in accordance with the ecological knowledge and values. At this point it is important to point out that it implies the intention of an ecological behavior, not the behavior itself. For these reasons, sociologists talk about the *latent* and the *manifest* dimensions of the ecological consciousness – on a latent dimension, it is possible to distinguish the gradations in the meaning, but here is primarily thought about the existence of the ecological consciousness that does not have to appear manifestly (Cifrić, 1989: 207). Range between the intention of the behavior and the actual behavior poses a serious problem in predicting the ecological behavior based on the intention of the respondents. Although we mentioned that the attitudes and knowledge, i.e. rational and value dimensions of the ecological consciousness, affect the behavior, it should be added that the behavior is also affected by human needs – biological, economical, social, etc. Yet, our intention is not to predict the needs and the behavior, but the *mapping* of the intentions itself, so the results of the study will be interpreted in accordance with that. Behavioralistic approach in the ecological psychology is on a standing point that the behavior is determined by the stimuli of the environment, which means that the change of the stimuli leads to the change of the behavior (Winter, Koger, 2004). Ecological behaviors always represent a part of the wider life style, which is, in present circumstances, largely shaped by the consumer culture and its spatial organization. The question is how to alter someone's behavior towards the ecological responsibility (for example, how to less use cars), when the behavior is mediated by the spatial – town planning organization (life in the suburbia) and the promotion of consumers behavior patterns (for example, in motorist industry) [Pušić, 2001]. Apart the factors from the natural surrounding, the analysis of the intention of the ecological behavior must take into the account the spatial social organization and life styles, mediated by the global consumer culture (domination of the rational and the pragmatic in the system of values and behavior).

Some authors use different and wider terminology in the classification of the factors influencing the ecological consciousness. The ecological knowledge is subsumed under the frameworks of the *rational dimensions*; the values are singled out on other side, as well as the *emotional* and *willing* dimension (Kundačina, 1998). The category of ecological behavior is interpreted as the practical dimension, and as the consequence of the selected elements, with the accent that the upbringing and education have on the development of the ecological consciousness.

Our theoretical work is in some part concentrated and simplified on the selection of the elements of the *ecological knowledge, values and behavior* – consistent with the assumptions and the operationalisation of the theoretical thoughts for the purpose of an empirical research.

2.2. Formatting Factors of the Ecological Consciousness

From the previously mentioned arguments and theoretical approaches comes our understanding of the concept of the ecological consciousness as a *dynamic* but also as a cultural-historic category, which is formed in a specifical historical process, and which depends on the given state of the society. We should not ignore the general dimension of the problem within which the ecological consciousness can be interpreted as a consequence and the result of the civilization's crisis, marked by the more or less developed capitalistic way of production and, successively, the "consuming mentality", materialistic values etc. Nevertheless, any research of the formatting factors of the ecological consciousness must take into account also the local contextual level of the society on which the problems are studied.

One of the assumptions of this study was that the basic formatting factors of an ecological consciousness, whose effects can be tested in this research, are: *natural geographic factors, local ecological context, the state of development of the ecological activism*, as well as the *presence of the ecological issues in the respondent's everyday life*, their education and *level of information* about this subjects through school, media, as well as the relationship to the given political/administrative and institutional structure.

The study of the ecological consciousness is limited to the selection of the respondents living in the cities geographically located by the flow of the Danube river through Serbia. The beginning point is that the problems of the pollution of this river result from the influence those local, regional and international levels have on it; thus, the attempt to test these factors is directed towards the determination of different characters, causes and the levels of the pollution of Danube river.

More, our intention was to question also the local ecological context and the problems of the pollution (wild dumpsters, industrial plants without safety filters, the building of the

ecologically "hazard" fabric areas, etc.), i.e. the perception of this questions in the mind of the respondents. This is linked with the degree in which the ecological issues are represented in the *everyday* life of the respondents, for this problems are located in their closest milieu, i.e. in the cities themselves, and in the parts of the town where the respondents live (problems of drinking water, the air pollution, and alike).

The important formatting factor of the ecological consciousness most certainly is information, i.e. keeping the public informed about ecological problems. "The facts are the precondition of every action, even ecological" (Kundačina, 1998: 38). The formatting factors, in that sense, are all potential sources of information – from ecological activism, "word of mouth", public discussions on this subject, to education and mass media. Keeping the public informed means that they are aware of the problems, and the awareness, as mentioned previously, is the necessary step towards the development of the ecological consciousness. For this reason, the conducted study contained the questions related to this dimension of the problem – how much are the respondents informed.

3. Analysis and Interpretation of the Results of the Study

The project **"**Environmental Attitudes of Urban Dwellers on the Danube River in Vojvodina" was conducted on the territory of five cities in AP of Vojvodina (Sombor, Apatin, Bačka Palanka, Novi Sad, Pančevo) from January until June of 2008. The study was conducted using a *structured questionnaire*.

One of the main objectives of this research was to test the hypothesis on the role of the ecological consciousness and explore the potentials of social actors for active social engagement in solving local, i.e. regional ecological problems.

3.1. Sample Specifications

The study used combined sample. Cities were selected intentionally, using criteria of their geographical location by the bank of Danube, while the respondents were selected by accidental sampling. The number of the respondents in one city was determined according the total number of inhabitants in each city. The interviews were conducted in Apatin (48), Sombor (71), Bačka Palanka (60), Novi Sad (100), and Pančevo (85). The total sample included 364 respondents.

Demographical structure of the sample in some extent includes more women than men (50.5% compared to 49.5%, respectively), while by age the most included are the respondents 21-29 years old (22.8%), and than from 50-59 years old.

The most percent is among the employed respondents (40.6%), and then come the unemployed (24.16%), and retired (23.9%), while there is the least respondents who have no

personal income (9.3%). The most frequent *occupations* among the respondents are workers (19.5%), and workers in educational system and housewives (5.7%), while the 5.5.% of the respondents belong to the occupations in trading and technical services (electro, medical, mechanical services).

Educational structure of the sample consists from 48.3% of respondents with finished high school and 19.l2 % of college graduates. In some larger part, there also the respondents who have not finished elementary school (11.5%), while there is the least of qualified and highly qualified workers (10.7%).

3.2. Ecological Knowledge, Values and Behavior

3.2.1. Ecological Knowledge

The study of the attitudes about the ecological problems and the level of development of the ecological consciousness, through three of its dimensions (knowledge, values and behavior), has been conducted using partially standardized questions. The questions were formulated in forms of sentences/attitudes, while the responses were measured using a Licert scale. The most of the attitudes in the questionnaire were formulated on an affirmative way. This enabled to interpret the level of respondent's agreement with the given statements as an existence of ecological knowledge, values and behavior. The dimensions were also tested by un-standardized questions that were not formulated in form of an attitude, but were adjusted to the given social context (exploring the level of awareness about the concrete ecological problems). This enabled the testing of attitudes (formulated in a generalized way) on a level of practical problems of the cities and the region. The results are presented through the dimensions, i.e. elements of the ecological consciousness. For the purpose of a simple overview, the data in *Table 1* show only the percent of the respondents who agree with the given statements, which reflects the level of their cognitive, value and behavioral orientation.

	COGNITIVE LEVEL	**VALUE LEVEL**	**BEHAVIORAL LEVEL**
Average percent of agreement	85.30%	66.20%	57.30%

Table 1. Average percent of agreement with the dimensions of the ecological consciousness

The most of the respondents (85.3%) have an affirmative attitude (agree or are informed) with the familiarity with certain "ecological truths" (for example, that when burning, fossil fuels produce carbonic acid anhydride).

Before asking the respondents a number of questions about ecological problems of the local community as well as of the region, they were asked to write down what they believe is the *biggest global ecological problem.* The most common response was that this is the problem of *global warming*, i.e. "the hothouse effect", which mentioned 31.9% of the respondents. On the second place, there is the problem of "air pollution", mentioned by the 21.8% of the respondents, and on the third, the problem of "water pollution" mentioned by 10.1% of the respondents.

Although the respondents show high awareness about global ecological problems, on the question "Are you informed about any ecological problem in your local community?" 49% stated that they are not informed. Although the answers to the previous question show that most of respondents have high awareness about *global ecological problems*, the responses about the problems in the local community show the lack of the same global awareness, as well as the lack of knowledge about more "local" problems of their and other cities in the region. Almost half of the respondents cannot name any specific ecological problems of their local environment, which shows us the necessity of the "transfer" of the ecological subject on the level of local community and the everyday life.

There is a statistically significant correlation between the responses to this question and place of residence of the respondents. Thus, all the respondents from Pančevo answer affirmatively, which shows the absolute awareness about the existing ecological problem in Pančevo.[5] It may be asked does every ecological problem has to have the proportions on that large scale so that the citizens would be informed about it; maybe other ecological problems in the cities deserve more media and other kinds of attention? The responses on these questions per place of residents, i.e. the cities in which the study was conducted, are shown in the following table (*Table 2*).

City		**NO**	**YES**	**Total**
Novi Sad	*Frequency*	***74***	***25***	***99***
	% of responses per place of residents	74.70%	25.30%	**100.00%**
Sombor	*Frequency*	***42***	***27***	***69***
	% of responses per place of residents	60.90%	39.10%	**100.00%**
Apatin	*Frequency*	***31***	***14***	***45***
	% of responses per place of residents	68.90%	31.10%	**100.00%**

[5] It refers to the important ecological problem of air pollution, caused by the oil manufacturing facilities, located near the city, and inadequate ecological protection.

Bačka Palanka	*Frequency*	***30***	***30***	***60***
	% of responses per place of residents	50.00%	50.00%	**100.00%**
Pančevo	*Frequency*	***-***	***85***	***85***
	%of responses per place of residents	-	100.00%	**100.00%**
TOTAL	*Frequency*	***177***	***181***	***358***
	% of responses per place of residents	49.40%	50.60%	**100.00%**

Table 2. Are you aware of any ecological problem in your local community/place of residence?

The most visible discrepancy in the responses to this question is found between the respondents from Novi Sad and Pančevo. The smallest percent of the respondents who are *familiar* with ecological problems of the local community is found in Novi Sad (25.3%), while the most (100%) is in Pančevo. The percent of urban dwellers that are *not familiar* with ecological problems, proportionally, is found in Novi Sad, while in Pančevo there is none.

One of the questions asked the respondents to list which of the mentioned ecological problems are present in the Vojvodina region. These problems did not refer to the specific residence/city; the question was formulated on a generalized way. The respondents mostly listed all of the mentioned ecological problems as present. *Table 3* shows the percent of the respondents who agree that the problems are present (refers only to the response *YES*).

Are the following ecological problems present in Vojvodina?	**The percent of the responses *YES***
Insufficient amount and the short supply of drinking water, as well as often presence of harmful elements in the water	83.4
High pollution of surface waters, insufficient control and punishment of the polluters	89.8
Lack of facilities for filtrating waste waters, before dropping them into the surface waters	86.4
Large number of wild dumpsters	92.5
The problem of the National park "Fruška gora", especially the forest cutting, without revitalizing and replanting the trees, and the problem of the turf lake	69.4
The issue of Vojvodina as the least afforested area in Europe	53.9
High air pollution in the area of large factories	93.9
Illegal and uncontrolled hunting, careless behavior of users in hunting areas and over exceed killing of wild animals	84.5
Uncaring for the bio-diversity and the lack of rules guarding the presence of genetically modified organisms	58.8

Table 3.

The following questions referred to the specific problems of the pollution in the Vojvodina region and the included cities. The responses to these questions are presented in the *Table 4*.

Question	Percent of the responses	
	Yes	**No**
Have you heard about the pollution of Veliki Bački Kanal in Vrbas?	42.80%	**57.20%**
Are you familiar with the air pollution in Pančevo?	**88.70%**	11.30%
Have you heard about the building of the burning facility for the secondary waste in Apatin?	20.20%	**79.80%**
Are you familiar with the pollution of channels and river flows caused by dumping wastewaters from the factories?	63%	37%
Are you familiar with the pollution of the Danube river in Bačka Palanka?	31%	**69%**
Are you familiar with the air pollution in Novi Sad?	37.30%	**62.70%**
Are you familiar with the air pollution in Sombor?	14.10%	**85.90%**

Table 4.

The responses to most of the questions (5 of 7) show that more than half of the respondents are not aware of the mentioned ecological problems in the cities of the region. The least known problem is the air pollution in Sombor (85.9%), while the most known ecological problem is the air pollution in Pančevo (88.7%). Insufficient knowledge of the respondents about the specific ecological problems on a local and regional level is still largely present, although the general results of this study show that from the three tested dimensions of the ecological consciousness precisely this, cognitive dimension, is most developed.

The purpose of the next question was to determine do the respondents perceive the pollution of the Danube river (as an important international river) as a strategical or as a local problem. The results show that more than half of the respondents (68.9%) see pollution as an important issue, and believe that it is needed to solve this problem on an international level. The question was "In what extent the ecological problems of the Danube represent the problems that need to be solved by mutual and international action of organizations and state institutions in countries where its flow goes?" The question offered four possible answers. The following table (*Table 5*) shows how they have answered.

Possible answers	%
Yes, this represents an international problem and it should be solved on an international level	68.9
Yes, this represent an international problem, but it should be solved by each country by herself, on her territory	25.3
No, this does not represent an international problem, but the problem of some countries through which the Danube goes	2.5
I do not know	3

Table 5.

Going from general and regional to local ecological issues and problems, the next set of questions supposed to determine the level of ecological knowledge in the domain of respondents' everyday life. The example is shown the *Table 6*. Yet, it should be noted that, based on this questions, without deeper investigating, i.e. testing do the respondents actually know the answers to these questions, or do they just state they do, any conclusions must be taken with reserve. Nevertheless, the results show that the respondent largely agree with or know about the problems implied in the offered questions.

Question	**Answers**	
	YES	NO
Do you know where your household gets its supplies of fresh water?	72.90%	26.90%
Do you know where goes the wastewater from your households?	63.00%	37.00%

Table 6.

The answers to all mentioned questions (shown in the *Tables 4*,*5*,*6*) are cross tabulated with the respondent's socio-demographic characteristics, and then with the place of their residence, in order to analyze the level of their awareness about ecological problems.

When talking about cognitive dimension of the respondents' ecological consciousness, we can present the following conclusions:

The level of information and the knowledge about specific ecological problems are related with the respondents' place of residence. Most of the respondents are not aware of the problems of other environments (other cities) in the region (*Table 4*), while half of the respondents cannot name any specific ecological problem in their own environment (*Table 2*). The only exception is the ecological problem of air pollution in Pančevo; this problem is known to most of the respondents (regardless of the place of theri residence). In some extent, the exception is found among the respondents from Novi Sad, who are in a large percent familiar with the ecological problems in other cities/settlements.

Although all of the respondents live in the same region, where the Danube geographically and ecologically links their cities, they do not perceive the ecological problems in relation to the common river, but as an isolated phenomenon. Still, as shown in the *Table 5*, large number of respondents (68.9%) is aware of the need to solve the problems of pollution of Danube on an international level, using mutual efforts of institutions and organizations in more countries.

The main hypothesis of the research was that the respondents have wider knowledge and awareness of ecological problems on a regional level, which derives from a geographical and ecological connection between the cities of their residence. But the results of the study show just the opposite – ecological knowledge of the respondents is to a large extent

"localized" and limited to aspects of their everyday experience and environment. Ecological knowledge of the respondents comes from the concrete environmental conditions in their cities.

3.2.2. Ecological Values

The presence of ecological values as elements of an ecological consciousness was tested on the same way as the cognitive factors, namely, testing the level of awareness and willingness of the respondents to do something concrete about ecological problems.

The respondents were presented with the table, which included standardized set of questions, and they were supposed to express their opinion about it (as agreeing/ not agreeing). Average percent of agreement with the presented attitudes (which show the ecological values) is 66.2% (shown in the *Table 1*).

Attitudes which refer to ecological values (for example, *All beings have an equal right to life and are worth of preservation*) in some extent have a lower percent of agreement compared to attitudes referring to ecological knowledge (85.3%). It should be pointed out that the two attitudes, referring to *animal rights*, have lowered the overall percent of agreement on this level for, compared to all other attitudes, have a lower percent of agreement. Thus, for example, the attitude *Keeping the animals locked in the cage should be prohibited* has 32.6% of agreement; while the attitude *Animals should have rights regulated by law* has 50.4% of agreement. It is interesting to see that the average percent of agreement descends when the attitude is formulated reversely. For example, 77.2% of respondents agree with the statement *Men do not determine the importance of the Nature, it is important by itself*, while with the statement *People have always used the Nature, and this is as should be*, in some extent agrees 54% of the respondents, while 15.4% completely agrees.

The results of the study show that the ecological values still do not constitute a coherent whole and are not integrated in the ecological consciousness of the respondents. Although present, ecological values are insufficiently developed, and represent the consequence of a conformist orientation, insufficiently developed values of *individualism* and, for that reason, cannot be the base for ecologically responsible behavior and a way of life. The results also show that the ecological values do not depend in a significant extent of the socio-demographic characteristics of the respondents (gender, age, educational level, occupation, place of residence).

3.2.3. Behavioral Level of the Ecological Consciousness

Behavioral level, i.e. the “practical element” of the ecological consciousness, was tested using a standardized set of questions, and it has the lowest percent of agreement

compared to the previous two levels (57.3%). The respondents agree the least with the attitudes that refer to actions directly associated with their everyday life. Thus, for example, only 24.3% of the respondents agree with the statement *I support more expensive parking fees.*

This set of attitudes, which refers to the behavioral level of the ecological consciousnesses, was tested also by questions that are more general. One of these questions referred to the respondent's perception of possibility/impossibility to solve the ecological problems on an *individual level*. On the question "In your opinion, can a man like an individual effect on solving/reducing ecological problems", 70.6% respondents have answered yes. Mostly, all of the respondents give the same answer, i.e. there are no significant differences among respondents of different socio-demographic characteristics.

Further more, on a specific question how the respondents see their personal contribution in solving ecological problems, the answers show that a large percent of them believes that the individual can make a difference (82.5%). Those who believe that on a personal level cannot do anything, which would help solving these problems, are present in 17.5% (*Table 7*).

Personal contribution in preventing and solving of ecological problems in my enviorment I see as:	**Percent of answers**
Activity within an ecological organization	7.2%
Teaching and informing my children	43.7%
Influencing the decision-makers	13.6%
Voluntary working activities	13.9%
I cannot contribute to it on any way	17.5%
Something else	3.9%

Table 7.

Yet, although the respondents largely believe that the individual can effect the solving of ecological problems, personal engagement mostly see as something passive – as passing on the knowledge and values, in upbringing of their children – 43.7%, while the motivation for actual engagement in eco-actions is rare. 13% of the respondents are willing to put the ecological attitudes into action either through voluntary working activities or by influence on the decision-makers, while 7.2% would do that by activities within some ecological organization. The analysis of this question leads to a conclusion that the ecological attitudes of the respondents mostly *are not directed toward the activism*, that is, that the ecological questions still are not the part of an everyday public life on a local level. In the context of

analysis of this question, it is interesting to point out also the answers about the *main cause of the existing ecological problems*. Namely, as the main cause of the ecological problems, respondents see in an insufficient enforcement of law and regulations in this area (44.7%). So, as the main source of the problems they identify the institutional level and the level of decision making, yet, the influence on the decision makers as a desired solution they mention only by 13.6%.

The conclusion that ecological behaviors is the least developed dimension of the ecological consciousness among the respondent does not firmly stand when it comes to the question "Would you, personally, be willing to do something in order to clean the Danube river?". 57.5% of the respondents say yes, while 42.5% no. If we interpret this answers as an *intention* of an ecological behavior, and not as the *behavior itself* (which is confirmed in the previously mentioned answers about the willingness to act on a personal level, *Table 7*), we can say that looking at the dwellers of the Danube cities, ecological behavior, as a consequence of adopted knowledge about the environmental problems, is insufficiently developed.

3.3. Formatting Factors of Ecological Consciousness - the Level of Awareness of the Respondents

It has been already mentioned that there are different formatting factors of ecological consciousness. In order to determine the way in which the respondents acquire information about general ecological subject and ecological problems, one part of the questionnaire included the questions about the sources and the needs of the respondents for this kind of information. Solving of the pollution problems and protection of the environment implies also the informed individuals. The level of information in this area also includes awareness about the ecological endangerment and the resulting consequences, possibilities for environment protection, personal responsibility, etc.

The respondents used scale from 1 to 5 in order to estimate to what extent the mentioned sources are relevant in formation of their ecological knowledge. Average scores are presented in the following table (*Table 8*).

On what way have you acquired the knowledge about ecological problems?	**%**
In family/in the process of upbringing	3.64
In school/on faculty	3.55
Via media (Radio, TV, Internet)	3.85
By getting information from activist in the local community	1.86
Personal gathering of information (by books, magazines, etc)	3.58

From friends and acquaintances	3.12
I am not well informed about ecological problems	2.61
Something else	1.07

Table 8.

Highest score as the source of the information and knowledge about ecological problems have the media (3.85), while the lowest average have the eco-activists (1.86), which raises the question how much is the ecological thematic present in the respondents everyday life and the environment. The gap between the average scores for these two answers is extremely high. School (3.55), family (3.64), and personal acquiring of information about the ecology also have a high average compared to this question. All of these represent significant factors in the development of the ecological consciousness, as the source of informing and educating the people. Yet, to our belief, the lack of the attention paid to the eco-activism is the consequence of insufficient engagement of people in concrete actions on a local level as well as of the existing discrepancy between the *ecological knowledge, values and practices*. Nevertheless, media represent an important source of information about ecology and ecological problems; although "local activism" (public discussions, round tables about ecology, campaigns) mostly does not represent the source of information to the respondent, its part in the development of the ecological consciousness cannot be ignored.

This problem is also visible within the respondents' answers to the following question (*Table 9*). The results show that the respondents expect from the media to get the most of the information about ecology (almost half of the respondents - 45%). Thus, they perceive the media as the main source of getting information and knowledge about ecological problems, which shows us that there is a more *passive* orientation, as well as lack of the formed needs for getting information "face to face".

I would like to get more infromation about the issues and problems about ecology:	**%**
Via media	45
Through different types of informal educations	6.9
From politicians and other officials from the public government	3.9
From local organizations and municipalities	9.4
In schools and other educational institutions	4.1
All of the above	23.1
I have enough information	5
I do not have enough information and I am not interested in this subject	1.9

Table 9.

Low percents of other sources of information (politicians, public discussions, activism, and alike) can also mean that there is a low level of *confidence* of the respondents into this sources of information. This indirectly leads to the conclusion that un-media sources of information are not perceived as important, for which the respondents do not expect to get more information and knowledge from them. The results also show that the respondents, generally interested for ecological questions and problems, more form their attitudes based on passive consuming and adopting media information, and not actively (for example, participating in public discussion, round tables, or in some other way).

This interpretation of expectations and the need for getting information among the respondents about the problems of ecology and environment protection, raise one more important question. Information from the social environment and the media can sometimes have the opposite effect on the ecological upbringing and education – they may be disinformation. Here is not only meant on the creation of false and manipulative contents and their distribution via media networks, but also on the possible *constructions of the ecological problematic*, which is more in line with the needs of media companies (so called, *sensationalism*, information which help raise the ratings), and which are not in line with the actual state – real ecological state of the environment (see Hannigan, 1997: 73). On this way, the public can be deprived of true information. From this comes the need for different sources of information about the problems of environment pollution, as well as the need for different social factors formatting the ecological knowledge and values (family, educational system, eco-activism, etc) and last, for the development of the ecological consciousness.

4. Conclusive Considerations

Identification of the attitudes of urban dwellers toward the ecological problems in this study has included the sociological analysis of the ecological consciousness, through its basic dimensions - ecological knowledge, values and potentials for social mobilization, i.e. for participation in the solving of the ecological problems in the studied environments, cities located by the banks of Danube in Vojvodina.

Theoretical point of view in this work was the observation of these dimensions within the broader cultural and particular social context of Serbia, as well as understanding of the ecological consciousness within the *ecological* culture, as the part of the common culture, i.e. as the consequence of the development of specific cultural patterns in this area.

Ecological consciousness was not defined by its content, by adopting a certain paradigm or a theoretical perspective, for we have started with a hypothesis that, in the mentioned context, ecological consciousness does not represent a coherent total, but still insufficiently integrated aggregate of knowledge, values and actions, linked to the relationship

of a man and his natural environment, which has proven as true in the analysis of the study results. Although the respondents largely believe that the individual can contribute to the solution of the ecological problems, they mostly see personal engagement in solving these problems as a passive transfer of knowledge (by raising their children), while motivation for actual engagement in eco-actions is very low. The answers to questions about the ecological problems of the Danube show that respondents have enough information about it, they realize that this is a regional, i.e. international problem, but almost half of them are not willing to do something, that is, to get personally involved in solving the problem. The study did not confirmed the consistency between the awareness about the ecological problems and the willingness for action toward their solving. This discrepancy is already theoretically confirmed; Michael Mayerfeld Bell calls it the "attitude-behavior split", or "A-B split" (Bell, 1998). The incompatibility of knowledge about the environment (awareness about the existence of the ecological problems) and the behavior to it (un-ecological behaviors), represents the source of inner discomfort and conflict. This internal conflict is hard to awake and even harder to overcome, for it requires the changes in the everyday life, which is largely shaped by the conformism, habits and routine. Beside that, the problem, as seen by Bell, also lies in the *social organization of life,* which individual choices makes more or less possible. To Bell, the solution of the problem is to be found in the "social reorganization of the social organization" (Bell, 1998:247), so that it can be in the function of empowering the ecological behavior of the individuals.

This kind of "reorganization" should include all relevant actors ("bottom" and "top") with a purpose of establishing the "ecological dialogue". Socio-cultural and political context in Serbia can represent the initial point for establishing this dialogue. The relative economical and political stabilization as well as the institutional initiatives towards the integration of Serbia and Vojvodina in Europe have helped to create the grounds for the *strategy approach* in solving ecological problems. Recognition of the importance of the sustainability concept, particularly in the domain of the technological development, has confirmed the need for inclusion of an ecological aspect in all strategies, politics and programs for the development of Vojvodina as a province and of whole Serbia. The constant efforts for encouraging the social mobilization of the individuals and strengthening civil society organizations are also needed for building ecologically desirable future.

Insufficient integration of the elements of the ecological consciousness is also shown in the results referring to the respondents' ecological values. Although respondents largely respect the intrinsic values of the Nature, i.e. attribute to it "value by itself", these values show to be loosely grounded and changeable due to the changes of the context and the situation. Regarding the attitudes that affirm the intrinsic values towards the Nature,

respondents agree almost the same as with those that affirm the opposite, instrumental values of the Nature. This finding also shows that the ecological values of the respondents are mostly shaped by social conformism, and do not represent the fundamental part of their identity. This partially explains the existing problem of "A-B split", for the unsubstantiated values cannot represent the necessary behavior motivation.

Besides the fact that the data show insufficient integration of the elements of the ecological consciousness, they also pose the larger question of *change* of the *value system* and value orientations, greatly affected by economical, political and social processes in Serbia, particularly during last 20 years. In that sense, the example may be already mentioned lack of developed values of individualism, which could, in a wider, theoretical sense, help the development of the civil consciousness, the need for various forms of participation in the public life, solving of certain political, social, as well as ecological problems.

Various studies have shown that the level of participation in formal organizations depends on the different social factors, such as the urbanization level, socio-economic structure of the society, cultural tradition, etc. (Pušić, 1997: 399). Therefore, this work has emphasized the wider, socio-cultural dimension of the problem, starting from the hypothesis that the ecological problems and the awareness about them are not a separate and isolated social subject, but arise and form in a special social context. Ecological problems and crisis, in their base, have the social dimension, the same as many dimensions of social crisis are, above all, the reflection of a wider relationship that society has towards nature. Therefore, ecological problems can reflect all the deepness and wideness of the social crisis (Malešević, 2004: 40, 41).

All of the presented results of the study show fundamental significance of social factors in forming of the ecological consciousness. The basic assumptions are found on the individual psychological level, but for their shaping into the consistent orientation, embodied in the life style and the ecological culture, it is needed to have systemic "support" of the social structures and social organization. Social aspects and social causes of the ecological problems, therefore, can be perceived as most important in this type of studies. Overcoming of the ecological problems, by solving concrete ecological problems of the environment, thus, is not possible if the society does not undergo fundamental reforms.

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