PUBLIC PREFERENCES TOWARDS LANDSCAPE IDENTITY – A CASE STUDY OF RIPARIAN LANDSCAPES IN CROATIA

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The paper is premised on the idea that since environmental decisions are concerned with establishing rules over the sustainable use of land, water and air, such decisions should embrace substantial input from the general public: participatory environmental decision-making can improve the quality of decisions made. The paper therefore draws on the importance of perceiving the relationship between conservational requests (expressed as the social goals) and the search for the possibilities to fulfil these requests (as the professional task to be solved). The study is intended as an inquiry into possible differences in opinion or perception between three different social groups defined in relation to the tested landscape – the area of the Mura and Drava rivers confluence: the space users, people professionally connected to the area and the potential users. The public survey was employed to gain a new insight into the issues of possible differences in public preferences towards landscape identity, and the perception these groups have of the Croatian participatory spatial decision-making process. The results have shown that it is necessary to deploy the value system people attach to landscape in the evaluation phase of environmental planning and that there is room for such a need within the spatial decision-making process based on the sustainability paradigm.

Key words: landscape, values, public preferences

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INTRODUCTION

The Croatian society is currently undergoing a significant transition, resulting in increased development pressure and related landscape changes. At the same time, the protection of environmental and natural qualities is a social goal that is to be achieved along with the aforementioned development one.

This problem context (i.e. where does the conservational encroach upon developmental interest in a landscape, and vice versa) sets a course of action required in order to achieve the desired general social objective – the sustainable use of national space. The task of such environmental decision-making is complex and difficult. Chechile (1991, p. 4) says that this difficulty stems from the fact that environmental problems do not have single solutions: there is more than one possible alternative for attempting to obtain an objective. In such cases decision-making is involved since one has to select a course of action from a set of possible ones. Ogrin (1996, p. 6) pointed out that such problem-solving is most efficiently done in the sphere of problem anticipation; problem anticipation is a planning feature. Ogrin (1996, p. 6) concludes that conservational efforts are most efficient if built into mechanisms of spatial planning. The same assertion is present in the definition of the physical planning given by Marinović-Uzelac (2001, p. 12): physical planning is the optimum distribution of people, assets and activities over a territory for the sake of its optimum use. According to Kranjčević, (2005, p. 230) this distribution is harmonised on the basis of monitoring the situation in the space and the scientific research carried out by demographers, biologists, engineers and many other experts. But, as Richardson (2005, p. 344) says, "no longer does scientific rationality prevail in planning". Looking from the planning perspective at the issues of environmental assessment (being either strategic or for certain development activity[1]), Richardson (2005, p. 347) highlights the need to focus on value issues in participative environmental decision-making rather than to deal with it as a procedural one.

Watson (2003, p. 404) argues similarly: "planners and other agents of intervention continue to make assumptions about the values, beliefs, or rationalities of those for (or with) whom they plan, which frequently do not hold".

The presently acknowledged need to initiate a dialogue between the general public and planning experts actually dates from the 1960s when social concern with environmental and/or conservational issues came into focus.

The importance of revealing the social value system in relation to a landscape, relevant to this paper, is for example acknowledged in the concept of transactional planning intro-

duced by Friedmann, (1973). Also, the issues of broader public empowerment in spatial environmental problem solving were viewed from different standpoints and highlighted in literature. For example, Andresson (2000) and Arnstein (1969) justified such paradigm shift because of the political, knowledge-based and ethical reasons. Additionally, the role of public participation in general, that is, users of a certain space in particular, is rooted in the civil science concept[2] that has been recognised as important in any decision-making process (for example: Linehan and Gross, 1998; O'Riordan, 1995; Friedmann, 1987). The aspect of environmental ethics known as "The respect for Nature" that has been introduced by Taylor (1986) supports the articulation of general social interest in landscape as a prerequisite step in achieving the social aim – to protect it. In order to tackle sustainability properly, Taylor (1986, p. 51) proposes that "landscape values should be recognised through research and the equally important interpretation of divergent social attitudes and social interests concerning landscape, rather than through the research of intrinsic values of landscape or its physical component". The issues dealt with in this paper touch upon certain aspects of axiology. Relevant for this paper is the comprehension of values as given by Frondisi (1971, p. 23): "values are qualities *sui generis* of an object", the object in this paper being landscape. Moreover, relevant is the assertion about characteristics of values – that is their polarity and hierarchic order of importance, for example Hugh (2004); Frondisi (1971).

The motivation for the question on how the public perceives one of the values of landscape – identity and its role in participative spatial environmental decision-making arises from several observations and findings.

First, the numerous conflict situations that result from the development-protection relationship, or even failures in the implementation of spatial decisions that have been reported in national media[3] since the period of the research indicate the presence of value conflicts or social dissatisfaction in these particular problem contexts.

Spatial solutions of the environmental problems achieved by intuitive processes and based on the planner's expertise and moral authority, are viewed, for example, by Butula (2004) and Polič et al. (2000) as possible causes of such dissatisfactions.

The situation and, equally important, the very nature of landscape value judgements (complexity, inherent uncertainty and subjectivity) highlighted in literature (e.g. Marušič, 2002a; Marušič, 2002b; Davies, 2001; Boersema, 2001; O'Riordan, 1985; Simon, 1981) impose the need for a different approach and new knowledge on how to optimise spatial decisions containing both

aspects – developmental and conservational. The conservation activities of environmental planning recognised[4] as contribution to protection, management and enhancement of nature and environment play an important part in spatial planning. They can be described as the ones that provide a suitable solution for the creation of an environment that is pleasant and healthy as a human habitat, productive in the long run and, last but not least, naturally viable. This theoretical framework of environmental planning that has been introduced by Marušič (1996, p. 45) is based on the analysis of conservation claims. The typology of environmental problems proposed by Marušič includes: degradation of human habitat, irreversible exploitation of natural resources and loss of naturalness. From the methodological aspect of good decision-making (Chechile, 1991, p. 5) and system approach to planning issues (Chadwick, 1971, p. 121), it is important to differentiate between the three types because each environmental problem has to be distinctively formulated: to stress current difficulty and the goal to be achieved.

The endeavour to achieve all three environmental goals leads to the evaluation phase of the environmental planning process where a value is attached to the landscape or its component. As it has been argued at the beginning, there is no need for the evaluation of a landscape if a landscape is not subject to change. Two things should be considered in respect to the evaluation phase: The first – the inability, in the widest sense, to reconcile conservational intangibles with tangible development criteria. The second is the above-mentioned demand that the planners face: the evaluation process should be open and transparent, which leads to a model approach in the decision-making process, for example Steinitz (1990).

Thus, in order to alleviate the aforementioned obstacles (complexity, inherent uncertainty and subjectivity) that follow the evaluative phase of a planning process, a planner should first employ the apparatus of social interests and attitudes toward a landscape. As Golobič (2002, p. 197) points out, a landscape "is a reflection of socio-scape as it depends on the processes which regulate the choice of goals and aspirations and the ways of their materialization in space". The comprehension of a landscape[5] in this paper thus focuses on landscape as a social value construct of its physical components or a whole.

The orientation towards addressing methodological issues of conflict resolution is advocating broader public empowerment in defining possible solutions to specific problems (Bohnet, 2002).

Croatia's future integration into the European Union will increase these development-conservation conflicts. The reason

is that, although spatial planning is in the purview of each county and involves no elements of the *acquis*, the policies that will most significantly impact on Croatian spatial development and in some degree already do are, above all, environmental protection, nature conservation, agriculture, water management and rural development.

The problem of how much and to what extent conservation interest encroaches upon development interest in the national landscape, or vice versa, has not been sufficiently empirically researched and no possible scenarios have been offered. Layman vs. planning experts' potential differences in opinion and preferences in landscape have not been properly researched neither at the cognitive nor at the methodological level. As for the research on the issues related to added knowledge on methods of public participation in the planning process, it is still scarce.

METHODOLOGY

The questionnaire

The public survey method was used to obtain information on what respondent groups perceive as a value or quality of landscape identity, on the attitudes towards spatial planning and the involvement in it. The survey was carried out in 2002 and conducted by the author. In order to reveal the identity issue of a riparian type of landscape, the questionnaire contained questions asking respondent groups' opinion on (1) what cognitive elements determine the mental image of an ideal river course, (2) which is in their opinion the most attractive river in Croatia and (3) what is the first association they attach to the most attractive river course.

The cognitive elements of an ideal river course were disclosed by 9 items using a Likert-type five-point (1-strongly disagree to 5-strongly agree) scale. Five items were related to the typical hydro-morphological structure of pristine water course: oxbow, meander, waterbed sandbank, islet, tall vegetation along river banks; two items related indirectly to the water quality (swimming and fishing in the river) while the remaining two items were related to the typical structural elements of lowland riparian landscape adjacent to the river course (marshland, arable land and fields).

The preferred typology of the Croatian riparian landscapes and its respective associative meaning were obtained by asking the participants to quote the name of the river and write down their first association with the river they prefer. The preferred river was coded into two categories – continental lowland and karst ones. Associative comprehension of

the most preferred river course was coded into 6 categories – forms of recreational activities; geographical terms; hydro--morphological and physiographic features of the fluvial system; emotional approach; description regarding water quality and ecological/aesthetic connotations.

The group of questions aimed at disclosing attitudes towards the quality of present spatial planning, perceived both as a process and a final plan as product, was structured in the way to reveal: (1) the degree of personal content with the statutory solutions that can be found in spatial documents, (2) preferences for direct participation in spatial planning process.

The degree of personal content with the statutory solutions that are present in spatial documents was also assessed on the five-point scale (1-strongly disagree to 5-strongly agree).

The attitudes for broader participation in the process of spatial planning were assessed by close type questions (i.e. possible answers were offered in the questionnaire). The first was who is entitled to deal with spatial problems or take part in the problem-solving process (planning experts only, not planning experts only, no opinion). The second question was the one about the preferred form of participation. Six forms were included, some of which statutory[6] envisaged, such as direct ones (public hearings, public reviews) or indirect ones, such as participation through authorized persons vested with public power or political representatives. The additional forms included, although not obligatory in the present Croatian planning practice, were field activities (organisation of meetings), workshops and a public survey of preferences. The last two are of special importance because they represent participation forms that are positioned at the very beginning of the spatial planning process, as opposite to the statutory ones.

The preferences for participation were assessed from the aspect of willingness to be involved in a decision-making process on different planning levels that generally corresponds to actual territorial-administrative division of the country (state, county, municipality, city, settlement, town neighbourhood or street). Here again the preferences were measured by a Likert-type question on a five-point scale (1-strongly not willing to 5-strongly willing).

Respondents

The decision on the basic structure of the sample set was determined by the geographical location and landscape character of the viewed area, i.e. the area of the Mura and Drava rivers confluence. The basic sample, therefore, was structured to aim at people that have and/or potentially might have dif-

ferent interests in the tested landscape: the inhabitants of the area (local population); people that are professionally attached to the landscape, being involved in the decision-making processes of managing, planning and conserving landscape (experts); and finally, people that are potential visitors and/or users of the space (urban population).

The survey employed the convenient sample type for all three respondent groups and included 177 examinees in total. Local community surveys included 63 inhabitants of the following settlements within the area: Legrad, Veliki Otok, Kotoriba, Donji Vidovec, Đurđevac, Sveta Marija, Kalinovac, Imbriovec, Plavšinac, Hlebine, Koprivnica, Čakovec and Mursko Središće.

The experts in the following institutions and professional associations participated in the survey (with 53 out of the initial 75): Croatian Waters, Ministry of Environmental Protection, Physical Planning and Construction, State Office for Nature Conservation, State Office for Environmental Protection, Croatian Business Council for Sustainable Development and Croatian Chamber of Economy – Transport, Constructions and Utility Services Departments. The discrepancy was caused by the fact that some experts did not submit the answered questionnaire to the researcher.

The landscape of the research area is predominantly rural. Therefore, as mentioned previously, the group of potential visitors or space users was marked as urban population – citizens of Zagreb. The group total was 61.

The data were processed using SPSS® software and analysed using the following statistical methods:

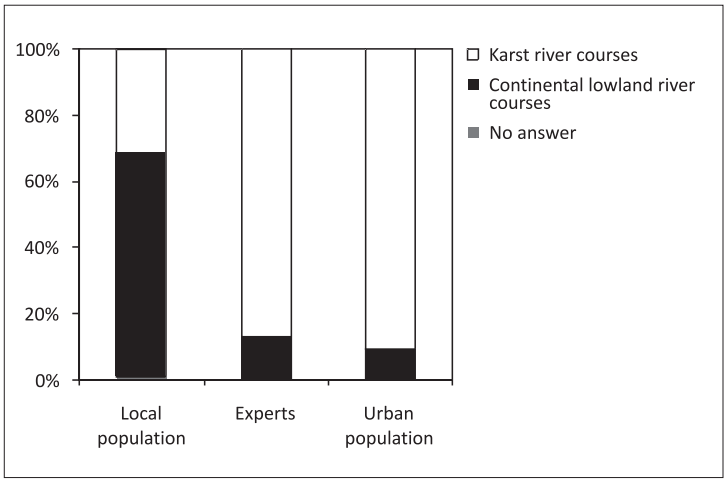
Mean values of scales are calculated as arithmetic means. Examinees who did not give an answer were rejected from further analyses. One-way analysis of variance was used to test the significance of differences between groups (arithmetic means of scales). Dunnett T3 test was used for post hoc comparisons, due to its robustness (no need for equality of variances). Significance of differences between frequency distributions of nominal variables was proved by chi square test (χ^2).

RESULTS AND DISCUSSION

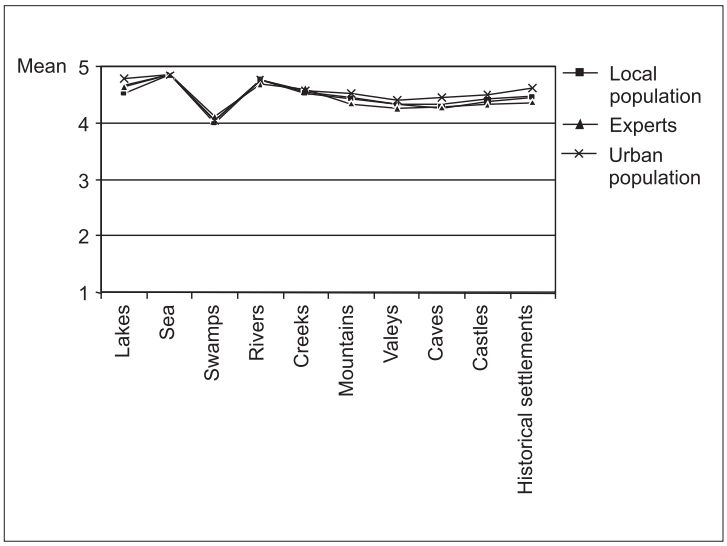
Identity of riparian landscape

The preferred type of riparian landscape differs between the groups, (χ^2=58.259, p=0.000). The contribution to this significant difference is due to the local population's higher esteem of lowland river type as opposed to experts and urban population among whom this river type is in lower esteem (Figure 1).

Apart from the obtained heterogeneity in the preferable type of river course, all three respondent groups agree that among Croatian spatial assets, rivers are highly positioned for protection. As indicated in Figure 2, rivers are considered, after the Adriatic Sea, to be the second important asset that should be protected.

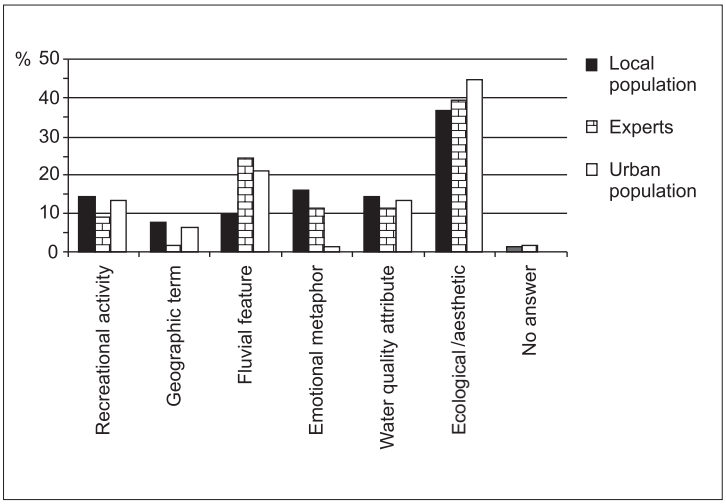


➲ FIGURE 1
Preferable typology of riparian landscapes



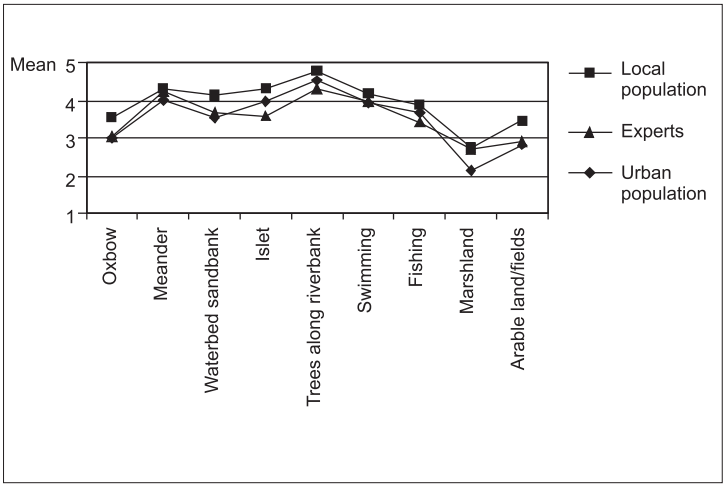
➲ FIGURE 2
National assets – order of priority for protection

The results of the associative comprehension that respondent groups attach to the most attractive river course are shown in Figure 3. The most frequent category represented by all three groups is the ecological/aesthetic one (local population=36.5%; experts=39.6%; urban population=44.3%). The most attractive river course was described by attributes such as green, fresh, unpolluted, of divine nature, diverse, unique and natural.



➲ FIGURE 3
Share of categories of the ideal river associative concept

The elements of the mental image of an ideal river course included an oxbow, meander, waterbed sandbank, islet, trees along riverbank, swimming, fishing, marshland and arable land/fields adjacent to river course. Their relative preferences are presented in Figure 4. The most pronounced element in all three groups is tall vegetation along the riverbanks. Meanders and hydro-morphological features (islets and waterbed sandbanks) were identified, again by all groups, as the second most appreciated cognitive element. Thus it might be concluded that an ideal river is, irrespective of a group, mentally pictured as a river course with the longitudinal and cross section waterbed profile in natural condition. The results obtained also indicate that the local population attaches relatively higher values to all elements of the mental image of an ideal river course than the other two groups. Such a finding was expected, riparian landscape being their living environment.



➲ FIGURE 4
The cognitive elements of the ideal river course mental image

Determined differences between the groups (Table 1), indicate that the immediate environment is the factor that contributes to the local community's higher cognitive preference for sandbank, islet, trees along riverbank, marshland and arable land/fields than it does to either of other two groups.

TABLE 1
Evaluation of mental image elements – analysis of variance between the groups

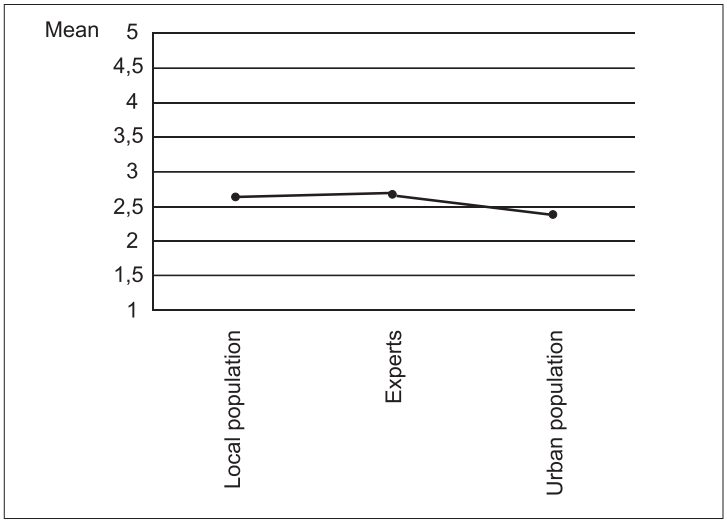
	M_L	SD_L	M_E	SD_E	M_U	SD_U	F	p≤	Groups
Oxbow	3.55	1.37	3.06	1.09	3.00	1.38	3.091	n.s.	
Meander	4.30	0.89	4.23	0.87	4.02	0.97	1.556	n.s.	
Sandbank	4.14	1.01	3.70	0.99	3.56	1.13	4.620	0.05	L-U
Islets	4.34	0.94	3.58	1.02	4.00	0.98	8.392	0.00	L-E
Trees along riverbank	4.78	0.56	4.32	0.96	4.53	0.84	4.506	0.05	L-E
Swimming	4.20	1.16	3.98	1.09	3.95	1.21	0.819	n.s.	
Fishing	3.88	1.13	3.44	1.38	3.69	1.28	1.655	n.s.	
Marshland	2.74	1.25	2.71	1.14	2.16	1.20	4.249	0.05	L-U; U-E
Arable land/fields	3.47	1.17	2.90	1.32	2.84	1.34	4.136	0.05	L-U

M (mean); SD (standard deviation); F (F test); p (probability value/significance of differences between groups); L- local pop.; E-experts; U-urban pop.
Example: L-E marks the difference between local population and expert group

The perception of the spatial environmental decision-making and the preferable participants

The degree of personal contentment with regulatory decisions in spatial plans (Figure 5), is very low for all groups.

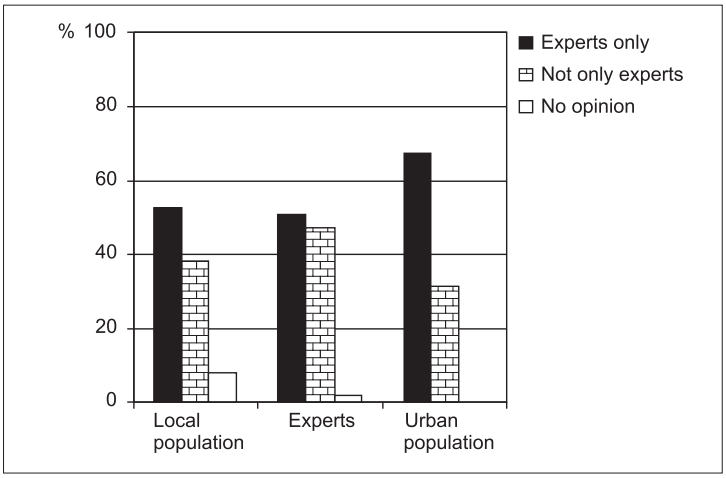
FIGURE 5
To what degree are your interests concerning the space represented in decisions that regulate permissible and inadmissible use of space?



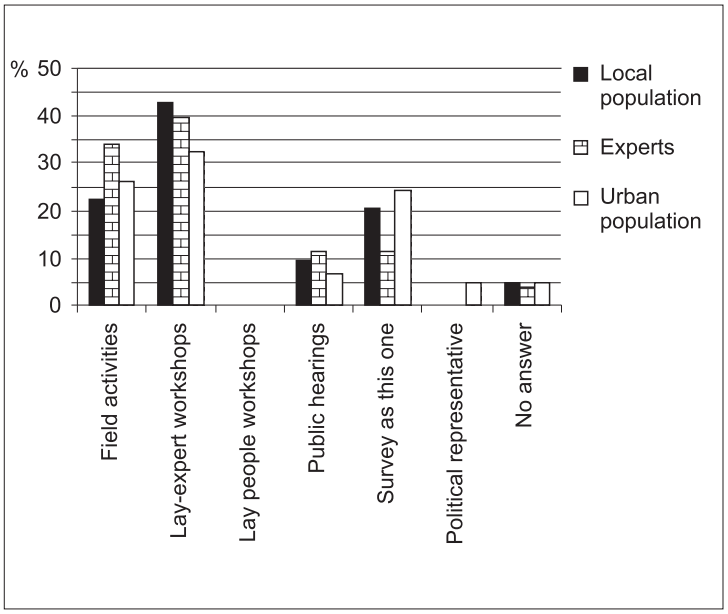
The result that all three groups agree that spatial planning should be exclusively in the hands of planning experts (Figure 6), demands consideration. It might be understood as the reflection of the usual and frequent dispute between the less informed public and knowledgeable experts. Marušič (2002c, p. 124) describes such dispute as the one that usually ends up

with the request: "let's leave it to the experts". This attitude Marušič (2002c) sees as the consequence of an oversimplified planning goal comprehension and subsequent definition of the problem in hand. It seldom occurs in the spatial environmental planning. Quite the opposite, different people have different interest in landscape, and value conflicts within the planning process are best dealt with by the development of alternative solutions (for example Johannesen et al., 1998). The research findings of Golobič and Marušič (2007, p. 1008) show that the combination of tools used (public survey, participatory workshops, cognitive mapping, statistical analysis and suitability modelling) proved to be effective means to synthesise layman and expert knowledge for viable alternative for the development-conservation problem. From the Croatian legislative point of view, the development of viable alternative solutions is not obligatory (The Law on Physical Planning and Construction, 2007, article 80).

➲ FIGURE 6
Do you agree that spatial planning, as an activity that prepares decisions on future land use, should be conducted exclusively by planning experts?



The results of preferable form of participation, Figure 7, indicate all groups' affinity towards those active forms and means of involvement whose main characteristic is the position within the planning process – the initial stage. The participatory workshops (communication between laymen and planning experts) were assessed as the most preferable form, while the next on the list were field activities – such as engagement in preparatory work and distribution of material. The participation form of obligatory public hearing where the public is actually faced with proposal of the plan – which is in fact more than proposal and minimally subject to change – was relatively low valued. Indicative too is that only 5% of the urban sample preferred a political representative as the means of the inclusion of their interests into the process of spatial planning decision-making.



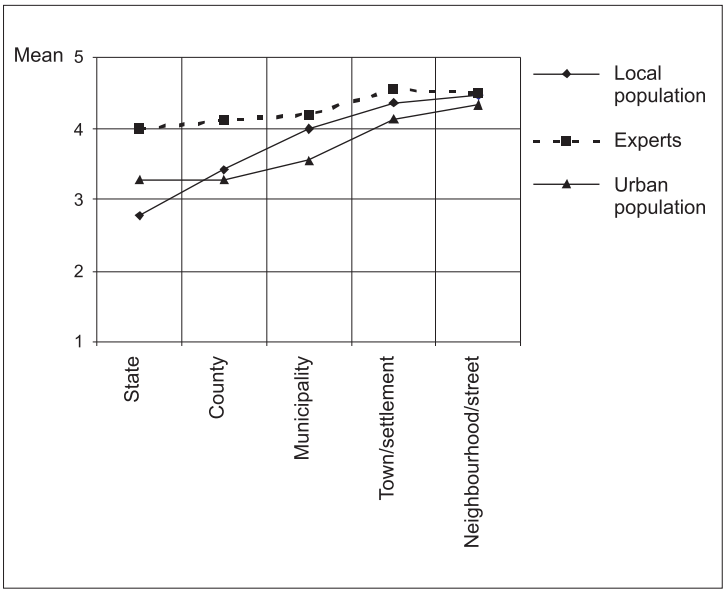
➲ FIGURE 7
Preferred forms of participation in spatial planning decision--making process

The results of readiness to participate in preparation stages of the spatial planning decision-making process, Figure 8, show that the willingness of all groups rises in proportion to the level of spatial planning documents: the lower the level, the higher the participation. Local and urban population marked the neighbourhood or street level as the highest; the town or settlement level was marked as second best. As opposed to that, experts are more ready to take part in the town/settlement planning level; the neighbourhood or street level follows. Overall, the experts show the highest predisposition for participation in all levels. Such a finding was expected due to their professional involvement in the activity. Urban population, on the other hand, shows the lowest tendency for participation in all spatial levels, except for the state level. The results of analysis of variance point out the differences between the groups, Table 2, endorsing the obtained heterogeneity in willingness for active participation on different plan scales. Namely, the local population is significantly less willing to be actively involved at the state level than experts; also, there is the difference between urban population – who are less willing than experts to take part at the state level, ($F=13.740$; $p \leq 0.01$).

As for the regional – county level, the detected differences between groups are the same as the previous ones: the local population is significantly less willing to be actively involved at the regional level than the experts; the urban population is again less willing than the experts to take part at the regional level ($F=7.793$; $p \leq 0.01$). Considering the local level

of spatial planning, the only detected difference between the groups is on the municipality scale. Here the experts show to be readier to participate than the urban population (M_E=4.19, M_U=3.55, F=4.869, p≤ 0.01).

➲ FIGURE 8
Readiness to participate in spatial planning decision--making process – from the national to the local level



➲ TABLE 2
Willingness for active participation in the spatial decision--making process regarding levels of spatial planning documents – analysis of variance between the groups

	M_L	SD_L	M_E	SD_E	M_U	SD_U	F	p≤	Groups
State	2.78	1.21	3.98	1.12	3.27	1.23	13.740	0.01	L-E; E-U
County	3.41	1.16	4.1	0.97	3.27	1.27	7.793	0.01	L-E; E-U
Municipality	4	1.06	4.19	0.90	3.55	1.28	4.869	0.01	E-U
Town/settlement	4.36	0.95	4.53	0.74	4.12	1.19	2.413	n.s.	
Neighbourhood/street	4.47	0.90	4.5	0.77	4.33	0.99	0.537	n.s.	

M (mean); SD (standard deviation); F (F test); p (probability value/significance of differences between groups); L- local pop.; E-experts; U-urban pop.
Example: L-E marks the difference between local population and expert group

CONCLUSIONS

The obtained data clearly indicate that positive perception of a riparian landscape identity is connected with the natural state of the river watercourse. Moreover, the finding of the most frequent comprehension category of an ideal riparian landscape – the ecological/aesthetic one – supports such a conclusion. From the water management activities perspective, specifically water regime management,[7] such a finding might be of relevance when technical solutions are considered. Considering the length of the river watercourse network in Croatia,[8] which is 3795 km, the share of unregulated river courses is 32% out of the total (Marušić et al., 1999).

Based on the obtained different typological preferences between local population on one hand and experts and urban population on the other, the environmental problem might be located geographically. The indicator for such mitigation measures or, even more important, protection by prevention is the degree of morphological changes in river courses[9] due to man-made interventions. According to Bagić et al. (1995) the morphological change is higher in the continental part of the hydrographical network of Croatia (river basins of the Sava, Drava and Danube river) than in the coastal part (river basins of Istria, Primorje and Dalmatia regions).

If the preferred river type is perceived as the indicator of the quality of human habitat, then in the case of local population preferring lowland river courses, theirs is the result of affection for the living landscape, despite the fact that the rivers Mura and particularly Drava, of their immediate habitual residence, are reduced in their natural morphological characteristics due to the construction of the hydropower system.

Considering the finding that all respondent groups identify their ideal watercourse according to the natural structural elements of the riparian landscape in relation to the key attributes of the continental part of the hydrographical network (higher degree of branching and larger area of watershed), it can be concluded that lowland rivers, as one of the main physiographic elements of continental landscape structure are losing the elements that people associate with positive identity. Regarding future developmental aims and planning orientation in the sector of water management[10] the trend of further antropogenisation is present.

Dissatisfaction with the position of their personal interests among all respondent groups in the actual spatial planning regulation and their negative attitude towards politicians who should be upholding public interest might be considered as a trigger for shifting the paradigm of statutory mechanisms for participation in planning. Davies (2001) has described the problem as the one where society values are no longer sufficiently and adequately safeguarded by the judgement of professional planners and democratically elected politicians.

The expressed discontent along with the markedly expressed preference for the layman and expert workshop form of inclusion show the direction of the necessary shift: from the present situation, where the lay public is engaged in the phase where certain degree of decisions is already made, to the initial phase of the planning process. For example, Ažman Momirski and Dimitrovska Andrews (1997) and Marušič and Mlakar (2002) reported that layman and expert workshop as a method of public inclusion into the initial planning phase

functions well as an incentive for the public to start articulating the problems on their local territory and to search for solutions through open discussion between local community and professionals.

If considering the stakeholders involved into the initial phase of the enacted elaboration-adoption mechanism[11] in Croatia – that is, the drafting of plan proposal – they are the state, regional/local authority bodies and authorized persons vested with public power, as Šeparović (1995) observed.

Beierle (1996) named public reviews and public hearings as forms of the traditional participatory mechanism, because they follow a certain amount of land use decisions already done. In fact, this forms of participation are reduced to the role of giving legitimacy to predetermined plans. This problem is observable in the actual conflict situations in the Croatian planning practice, either on regional or on local level. Pravdić (2003, p. 301) describes domestic conflicts that arise from the demand for sustainable development, e.g. in the tourism sector, as "unresolved, undefined and ambiguous". Butula (2003) dealt with the problem when analysing the Final proposal on the physical plan (County of Istria, 1999). In that example, the nature and content of opinions expressed by laymen in the report on public proceedings showed that: their individual interests concerning a landscape were considered irrelevant to the plan and thus not taken into consideration. Similar observation was reported by Bartol et al. (1998, 99) who tested the participation form of public survey in the spatial planning process and the ways of its implementation. It was pointed out that "laymen participation at the stage of public hearing of plan proposal resulted in their passive involvement or unconstructive proposals or opinions".

A limited public inclusion into the beginning of a planning process, and even more important – the public influence on the overall direction of the plan – are highlighted as general problem areas that surpass any national framework (for example Healey, 1996).

In particular, a proposal for research might be in the area of the planners' knowledge base disclosure. Based on requests that are imposed on the spatial environmental decision-making – transparency of the process and systematic approach to the process itself – it would be worthwhile to determine possible differences between layman and expert attitudes on concrete spatial problems in Croatia. For example, the research undertaken in Slovenia revealed that there is a difference in opinion between laymen and professionals. While professionals consider illegal construction as one of the most prominent problems in their country, lay opinion ranks it lower, Marušič (2002c, p. 151). Such findings might show, a-

mong other things, that every spatial development–protection problem can be overlooked or relegated.

The expressed willingness for participation according to the planning level clearly indicates the presence of an overall trend in spatial policy-making: lay people are more ready to participate at lower plan levels – that is, at local level. Their willingness is obviously due to the factor of individual interest for the immediate living space (the legitimate dominant role), regardless of being real or potential.

On the other hand, the factor that influences the experts' relatively higher inclination for the participation at the state and county levels might be professional comprehension of hierarchy between spatial planning documentation: provisions from higher scale have to be obeyed in each corresponding lower scale or level of spatial documents. Also, the experts' higher inclination for involvement at the town/settlement scale in relation to the other two groups echoes the assertion in *the spatial situation report* (MEPPPC, 2003, p. 46): "urban areas represent the very essence and the basic subject-matter of physical planning".

Since the fact that the national landscape is predominantly rural,[12] such a concept of physical planning seems inappropriate. The sustainability concept implementation into specifically rural areas is at least equally important. The need for further research is seen in the area of methodological support. We can opt either for research orientated methods for early acquisition of local communities' preferences and their incorporation into the planning process, or for so-called action planning or planning for real method (Steiner et al., 2000; Wates, 1996) that assumes more active involvement of laymen and is directly aimed at the spatial development-conservation conflict resolution. Looking at the issue of public participation from Croatian perspective and that of procurable information coming from projects focussed on institutional capacity building (for example CARDS, 2006, p. 13) it can be noted that in the example of public participation in the decision-making process for areas already evaluated as valuable and thus designated as protected ones, more active public participation is expected in the management planning. The steps of public inclusion into the process of management plan preparation and reported in the CARDS project are: public notification of the beginning of plan preparation; identification of stakeholders; presentations and workshops; public debate on management plan.

Due to the tuning process of the legislative framework concerning the Croatian accession to the EU and specifically the second pillar of the Aarhus convention,[13] Ban (2004, p. 242) describes the recent situation as "the one where there seems

to be no radical innovations in administrative practice. The common requests for information are for data about land use. The vigour with which the public takes part depends on the given matter. In most cases there is not a lot of interest – there are no written comments and there are few participants at public debates. The cause of this is held to be in the previous authoritarian culture that, in spite of a relatively high degree of interest in politics, inculcated the idea that members of the public had no very great influence in the creation of policy. These convictions get in the way of any motivation for participation and have to be opposed with an enhanced system of information by an appropriate education system".

Progress in the field of participatory environmental planning can be achieved through real-life application studies. Such a task requires a lot of knowledge and effort on the part of the planners and, above all, support from the decision-makers. Both are perceived as a challenge for Croatian planning professionals.

NOTES

[1] Both impact assessments along with suitability modelling are instruments for optimisation of land use decisions in environmental planning.

[2] Kai Lee's definition of the term is that civic science is the process through which scientific analysis, threading its way through uncertainty and vast areas of uncharted territory called "social judgment to future options" opens its activity to public involvement and responsiveness, in O'Riordan (1995, p. 11).

[3] The articles in: *Jutarnji list* (2002), in Croatian: "Vransko jezero: lovno područje ili park prirode?", Archive of 4/11/2002; *Jutarnji list* (2003), in Croatian: "Zbog skijališta na Medvednici trebali bi ukloniti previše stabala, a učinak je upitan", Archive of 26/2/2003; *Slobodna Dalmacija* (2003), in Croatian: "Donja gora bez otpada do Božića", Archive of 20/12/2003; *Jutarnji list* (2004), in Croatian: "Zagorje i službeno protiv centra za azilante na svom području", Archive of 3/7/2004; *Večernji list* (2008), in Croatian: "MEDVEDNICA Zbog administrativnog smanjivanja zone parka prirode nemir pod Sljemenom", Archive of 12/07/2008; *Jutarnji list* (2008), in Croatian: "Zbog ilegalne gradnje smanjili prostor parka", Archive of 11/7/2008.

[4] Environmental planning is a relatively new discipline aiming at merging the practice of urban/regional planning with the concerns of environmentalism. Environmental planning concerns both urban/metropolitan and rural/natural areas. Environmental planning considers a full range of environmental regulations from the European to the local level. The most common expression of environmental planning is the realisation of rigorous environmental impact assessments of projects and programmes concerning land-use, economic development, transportation, housing development, air, noise, water, wetlands, endangered species and habitats, ecosystems, flood zones, coastal zones, visual aspects, etc. After: CEMAT (2006).

[5] Landscapes are a significant part of European heritage and a witness of the past and present relationships between man and his natural and built environments. Developments in production techniques in agriculture, forestry and industry and changes in town planning, transport, other types of infrastructure, tourism and leisure time behaviour are accelerating the transformation of European landscapes and can also have a negative impact on their quality and use. After: CEMAT (2000).

[6] At the time of the research public participation was provisioned by The Regulation on Public Hearing in the Procedure of Enacting Spatial Plans, *NN* 101/98.

[7] The water regime management comprises flood protection, torrent and erosion control and protection, drainage of melioration surfaces and watercourse management and planning for navigation, after Bagić et al. (1995).

[8] The hydrographical network of running waters in Croatia consists of 29 rivers, their individual length exceeding 50 km, after Marušić et al. (1999).

[9] The data is based on the 1993 situation, source Bagić et al. (1995).

[10] Anticipated aims and measures for water regime management are listed in the *Spatial Planning Strategy of Croatia* (1997, p. 131-134). Implementation activities are aimed at the river waterbed, for example regulation by canalisation or water steps.

[11] The Regulation on Public Hearing in the Procedure of Enacting Spatial Plans, *NN* 101/98, regulated the elaboration-adoption process of spatial planning documents up to 2007 when The Physical Planning and Construction Act (*NN* 76/07) came into force, introducing the preliminary hearing of a plan draft (general public excluded) while retaining public review.

[12] There are many definitions of rural areas. Here used is the OECD classification of rural regions as implemented in the Project of Rural Development Strategy for Croatia, UN FAO and Ministry of Agriculture and Forestry (2003). Also used are the definitions of rural/countryside areas as given in CEMAT (2006): Rural areas are sparsely settled areas, without significant large city or town. The countryside refers to certain forms of landscapes and land uses where agriculture and natural areas play an important part.

[13] Convention on access to information, public participation in decision-making and access to justice in environmental matters, Aarhus Convention, (*NN* 1/07) entered into force for Croatia on 25 June 2007. The second pillar of the Convention relates to public participation in the decision-making process when this is related to specific activities, plans, programmes and policies, and executive regulations and/or generally applicable binding instruments.

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Vrijednosne predodžbe javnosti o identitetu krajobraza – slučaj riječnih krajobraza u Hrvatskoj

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U radu se polazi od pretpostavke da prilikom donošenja odluka o okolišu koje se odnose na uspostavu zahtjeva da održivu upotrebu i namjenu sastavnica okoliša (ozemlja, voda i zraka) treba uključiti u vrijednosni sustav šire javnosti prema okolišu, i to zato što takve informacije mogu pridonijeti kvaliteti stručnih odluka. Rad obrađuje problematiku isticanja važnosti odnosa: zahtjevâ za zaštitu kvaliteta krajobraza (što je društveni cilj) i mogućnosti za ostvarivanje tih istih zahtjevâ (što je stručni zadatak u okolišnom planiranju). Predstavljeno istraživanje ima cilj utvrditi razlike u mišljenju i stavovima društvenih skupina o pitanjima (1) prepoznatljivosti riječnoga krajobraza; (2) potrebi za sudjelovanjem u procesu donošenja prostornih odluka u vezi s okolišem. Anketnim istraživanjem obuhvaćeni su stalni korisnici istraživanoga prostora (lokalno stanovništvo područja ušća rijeke Mure u rijeku Dravu) te potencijalni korisnici (stručnjaci s područja zaštite, planiranja i upravljanja riječnim krajobrazom; gradsko stanovništvo). Dobiveni rezultati upućuju na to da se participativna narav planerskoga postupka koji ima zadaću riješiti određeni razvojno-zaštitni problem ogleda u količini i vrsti ulaznih

informacija dobivenih od laičke javnosti. Potrebnost tih informacija za pripremu i oblikovanje kriterija vrednovanja krajobraza potvrđena je željom grupa ispitanika da se aktivnije uključe u proces donošenja prostornih odluka o okolišu.

Ključne riječi: krajobraz, vrijednosti, predodžbe javnosti

Wertvorstellungen in der Öffentlichkeit zur Landschaftsgestaltung – Das Beispiel kroatischer Flusslandschaften

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Der Ausgangspunkt dieser Arbeit ist die These, dass bei Verfügungen zur Landschaftsgestaltung, die bei der Zweckbestimmung einzelner landschaftlicher Komponenten (Boden, Luft und Wasser) der Forderung nach Nachhaltigkeit Rechnung tragen, auch diesbezügliche in der Öffentlichkeit bestehende Wertvorstellungen mit einbezogen werden sollten, da dies nach Ansicht der Autorin die Qualität der Entscheidungen steigern würde. Untersucht wird die Problematik eines äußerst wichtigen Bezuges: der Forderung nach Landschaftsschutz (als gesellschaftlich relevanten Zieles) und der Voraussetzungen zur Erfüllung dieser Forderung (als wichtiger Aufgabe bei der Landschaftsplanung). Die hier präsentierte Untersuchung soll ermitteln, worin sich die Meinungen verschiedener gesellschaftlicher Gruppen unterscheiden, wenn es um die Problempunkte (1) Visuelle Identität von Flusslandschaften und (2) Teilnahme an Entscheidungen zur Landschaftsgestaltung geht. An der Meinungsumfrage nahmen die Bewohner eines untersuchten landschaftlichen Raumes teil (die Lokalbevölkerung des Einzugsbereiches des Zusammenflusses von Murr und Drau) sowie potenzielle Nutzer und Besucher (Fachkräfte aus dem Bereich des Landschaftsschutzes, der Landschaftsplanung und -verwaltung; Vertreter der Stadtbevölkerung). Die Umfrageergebnisse lassen darauf schließen, dass Landschaftsplanung, die auf die Einbeziehung des von der Öffentlichkeit mehrheitlich getragenen Wertesystems angelegt ist, sich auszeichnet durch eine bestimmte Art und Menge von Informationen aus Laienkreisen. Der Bedarf nach solchen Informationen, um Kriterien zur Landschaftsbewertung zu erarbeiten, bestätigt sich in der Absicht der Umfrageteilnehmer, sich aktiver am Prozess der Entscheidungsfindung in der Landschaftsgestaltung zu beteiligen.

Schlüsselbegriffe: Landschaft, Werte, Vorstellungen in der Öffentlichkeit