

## **Perception of regional development processes by local inhabitants on the example of The Třeboňsko Biosphere Reserve**

RENATA KLUFOVÁ<sup>1</sup>, MICHAEL ROST<sup>2</sup>, JIŘÍ ŠÍP<sup>3</sup>

University of South Bohemia, Faculty of Economics,  
Department of Applied Mathematics and Informatics<sup>1, 2</sup>  
University of South Bohemia, Pedagogical Faculty, Department of Geography<sup>2</sup>

### **Abstract**

The main goal of this paper is to create a simple review of the regional development processes perception by local inhabitants. Results of the questionnaire survey realized in the period 1999–2001 could serve as a source of potential topics to solve and for municipal governments (or civil service) strategic development plans. The design of the questionnaire used in the survey was adopted from the survey realized in the Kocába region in the period 1995–1997 (Bičík, Perlín and Šefrna, 2001). There is also a need to analyse the results relating not only to natural conditions, limits and barriers arising from the status of The Protected Landscape Area but also from the geographical location of the area and the consequential long-term development. The Attention is also paid to the development tendencies in the connection with the tourism development as the phenomenon whose intensity has been recently increasing.

**Key words:** questionnaire survey, statistical analysis, regional development

### **Introduction**

The Třeboň Biosphere Reserve (hereafter Třeboň Basin BR) is situated in South Bohemia near the Austrian border, about 25 km far from the city of České Budějovice. The extraordinary natural significance of this region was recognized by its inclusion in the UNESCO/MAB system of biosphere reserves in 1977. In November 1979, the entire Biosphere Reserve (700 km<sup>2</sup>) was declared as a Protected Landscape Area (thereafter PLA). Třeboň Basin BR differs from other protected areas in the Czech Republic and in Europe. The main message from the past for our modern society is the harmonious relationship between nature and humans activities in the landscape of the Třeboň basin, a model example of a successful human intervention into natural processes and finding a new balance between nature and human society development (what we today call the sustainable development existed in the Třeboň region for centuries).

Every place in the landscape has its own cultural history that is the result of traditional ways of management and utilization. Even in the Třeboň region, however,

as elsewhere, the second half of the 20<sup>th</sup> century showed how the long-term balance between humans and nature might be distorted – and thus the historical landscape become degraded under the excessive pressure of “modern” civilization and its technologies. Several traditional sectors of production, that had used the Třeboň landscape in a sustainable way up until then, turned into detrimental sectors when intensified. The whole earlier functioning landscape became increasingly degraded and endangered under the socialist form of large scale-production. What are the changes after 1989 – how do they affect the landscape, what trends and risks may we expect? How do the local inhabitants percept these changes? The answer could be partially realized from a questionnaire survey.

Where and how to direct human activities in populated areas – such as the Třeboň region – so that the present development would follow on from the sensitive management practices of our ancestors, and thus enable our descendants a quality of life and sustainable development? The most important is to find ways of a sustainable development of local economy under the new conditions of unified Europe at the start of the third millenium. The local inhabitant view of the regional development could serve as a small but not unsubstantial part of this “finding”.

### Emotional linkages

Several facts have emerged from the evaluation of the answers to the question what binds respondents mostly to their community. The respondents could express their emotional linkages to these categories: family, home place, habitation, job, friends and life style by choosing one of five ordered grades (very intensively, significantly, it doesn't matter, it does not attract me rather than does, it does not ever attract me). All the assessed categories have been evaluated by the two highest grades as it is shown in the Table 1.

Tab. 1 Emotional linkages of local inhabitants (overall assessment)

What does you mostly attract to the community? (%)					
	very intensively	significantly	it doesn't matter	it does not attract me	it does not ever attract me
	intensively			rather than does	
family	25.2	59.5	4.5	2.9	3.3
emotional relationship to the place	35.1	33.1	12.8	6.6	3.3
habitation	45.9	36.4	6.2	4.5	1.2
job	25.2	26.9	7.4	5.0	21.9
friends	21.1	38.4	13.6	9.1	6.6
life style	20.7	30.2	15.7	13.6	7.9

There are almost no differences in the responses among chosen places (communities). Likewise in the overall assessment, almost all most frequently indicated grades also fall into the two highest categories. These findings affirm good life conditions affecting the emotional attitudes of local inhabitants. We have find out a few exceptions: job represents the least important factor of attraction the place in Smržov and Klec (both of them belong to small villages with a prevailing recreational use), the respondents from Kardašova Řečice consider the life style as a factor not so much affecting their emotional linkages to the place and also in Ponědraž this factor plays no role in the emotional attitudes.

### Living conditions

The term living conditions is used for the overall assessment of culture, environment, technical infrastructure, shops and services. Likewise in the emotional attitudes assessment, the evaluation of living condition also uses an order scale of five degrees of satisfaction (as it is shown in the Table 2).

Tab. 2 Living conditions (overall assessment)

The assessment of culture, technical infrastructure, shops and services in the community (%)					
	<b>quite satisfied</b>	<b>almost satisfied</b>	<b>partially satisfied</b>	<b>almost unsatisfied</b>	<b>quite unsatisfied</b>
shops and services	12.8	25.6	36.4	12.8	9.9
duct and sewage	25.6	30.6	21.9	8.7	10.3
gas line	36.0	19.4	7.0	2.1	13.2
electric distribution	44.6	30.2	15.7	3.3	0.4
telecommunication	54.1	24.8	13.2	2.9	1.2
local communications	10.3	12.4	33.5	26.9	14.9
roads	7.0	11.2	33.9	28.1	16.1
cultural actions	9.1	25.6	22.3	18.2	19.0
sport	10.7	27.3	19.4	14.0	19.0
environment	33.9	31.0	24.0	1.7	4.1
education	23.6	30.2	14.5	6.6	10.3
medical care	21.1	28.9	18.2	5.0	14.5

Majority of the monitored living conditions categories were evaluated as the quite or suspiciously satisfying the local inhabitants. Shops, services and transport infrastructure were perceived as the categories which satisfy local inhabitant only partially. This finding indicates certain problems in a local accessibility. Such problems were also found out in the tourism research realized in the period 1997–2002 (Klufová, 2003).

Focusing on assessment of the living conditions among chosen localities we can point out more different opinions relating to the geographical location, community

size, quality of local authorities operation etc. Electrical lines and telecommunications satisfy local inhabitants in all localities. Positive assessment also predominates in the opinion on the environment, school and medical care with exception of Ponědraž and Smržov (quite dissatisfied with the conditions of education) and Lužnice, Majdalena and Ponědraž which are dissatisfied with the medical care. All of these cases represent smaller villages which have a common attribute – relatively intensive recreational use. These villages were afflicted by an emigration of residents to towns or larger villages in last fifty years. A decline of schools and medical rooms accompanied the residents outflow. Problems occurred in the field of transport infrastructure, sport and culture. Respondents from Chlum u Třeboně expressed quiet dissatisfaction in all these areas which affirm also the results of the questionnaire survey aimed at area visitors (Klufová, 2003). Residents of Ponědraž were also completely dissatisfied with the duct, sewage and gas line situation. There are of course more villages where the situation with gas line (Smržov, Hamr, Klec, Kardašova Řečice) or with duct or sewage (Chlum u Třeboně, Staňkov) is not yet properly solved. Hamr, Chlum u Třeboně and Staňkov established an association for the sewage disposal plant building.

#### **Relationships between people and local authorities**

Relationships between local inhabitants and authorities can be derived from responses to two questions. The first aimed to a satisfaction level of local inhabitants with a municipality functioning and a quality of its communication with the inhabitants. The second asked local inhabitants whether they attend local authority sessions. If we are assessing the satisfaction level of the local inhabitants for the whole area, we will obtain following consequences: the majority of convictions come under the middle categories of the scale; almost one half of respondents (46.3%) are suspiciously content with the municipality operation. On the other side, people are not interested in an involvement in municipality sessions. Exactly one half of respondents answered that they never attend the sessions. We can thus conclude that involvement of the local inhabitant in local authority decision processes is relatively low. Consequently, a confidence of local inhabitants to their officials is not too high (especially in the larger municipalities, as it is shown in the Figure 2). This fact can be also affirmed by the results of the tourism research (as mentioned above).

#### **Local inhabitant interrelationships and attitudes to visitors**

Interrelationships among local inhabitants were generally appraised as “on the whole good” (57%). Three exceptions appeared in the comparison of the responses among the chosen municipalities: Kardašova Řečice, Majdalena and Chlum u Třeboně. However, these results have to be considered as controversial

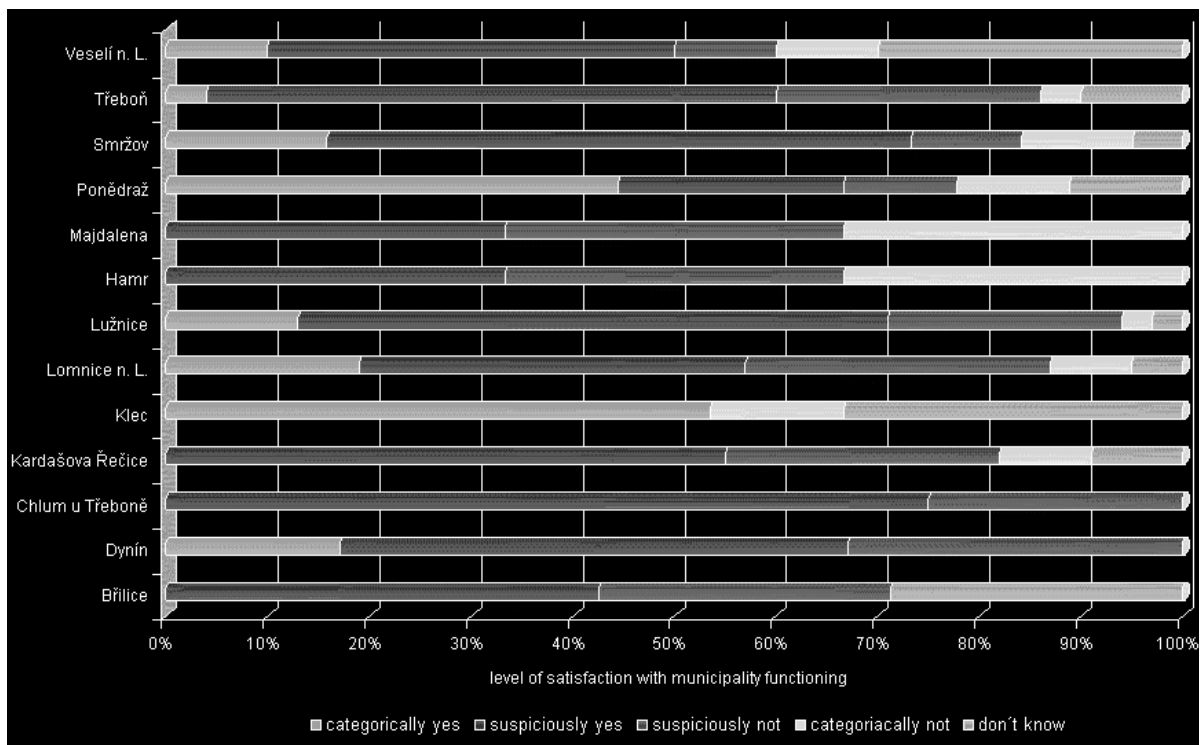


Fig. 1 Satisfaction of local inhabitants with local authorities functioning – municipalities comparison.

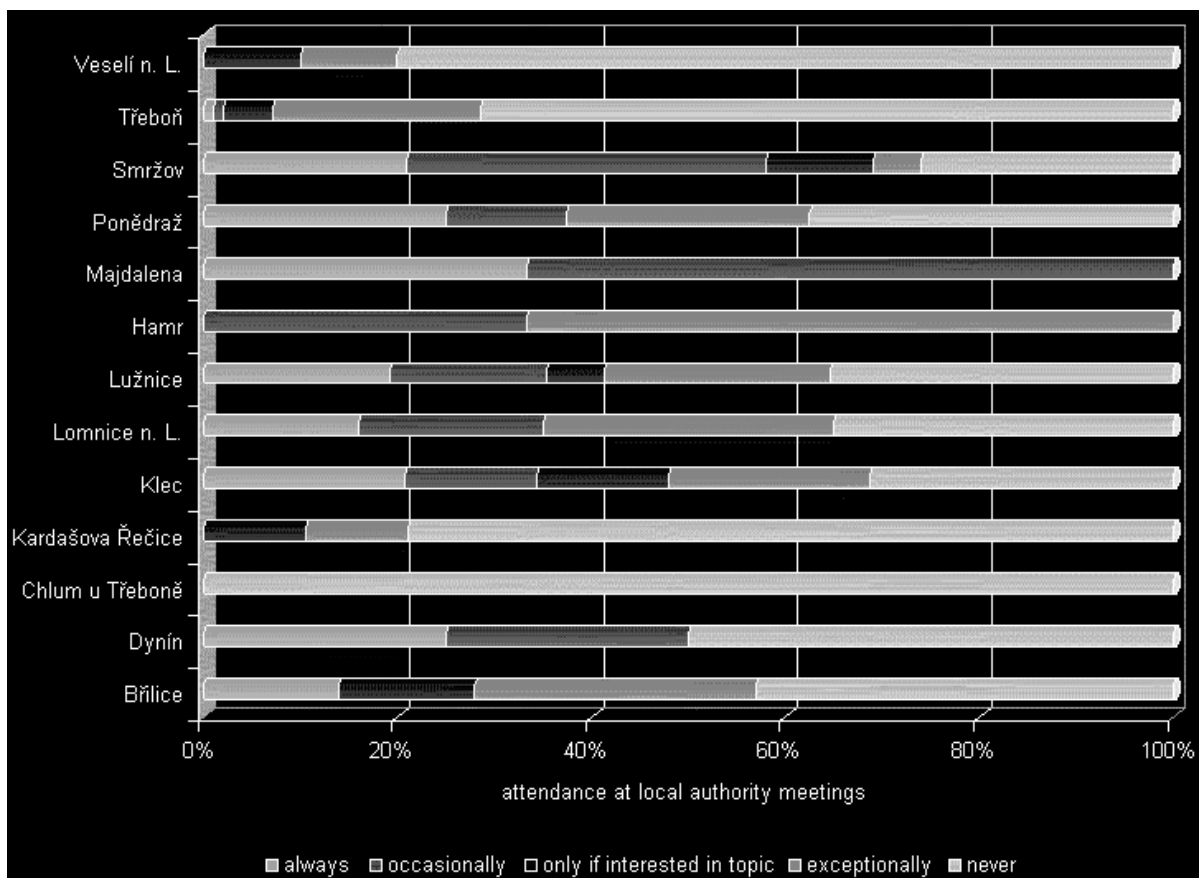


Fig. 2 Attendance of local inhabitants at local authorities meetings.

because of the number of respondents in each monitored municipality. Similarly the attitudes of local inhabitants to visitors (vacationers) have been generally appraised as “on the whole good” (59.1%). Only respondents from Chlum u Třeboně regard the interrelationships among the residents and the vacationers as suspiciously bad (50%) or bad (50%). The respondents from Chlum u Třeboně also believe that visitors disturb the environment most of all. Some feelings of overcrowding were also found in other questionnaire survey focusing on visitors profile identification (Rost, Klufová, 2002; Klufová, 2003). Recently, relatively high number of local inhabitants complained the noise from discos and the noisy behaviour some visitors. Local authority is preparing a notice which would to solve these problems.

A sense of safety is also partially connected with the interrelationships among residents and visitors. More than a half of respondents (64%) feel safely. The results obtained in the single municipalities are the same – the main category chosen in the single municipalities is safely, too.

#### **Satisfaction with habitation**

The respondents expressed also their sense of satisfaction with their habitation conditions. Main results for the entire area are comprised in the Table No 3. The most frequent answers of component questions come under the category “completely satisfied”. Probably more circumstances influence the sense of satisfaction with the habitation conditions in the area, particularly the quality of the environment.

In comparison among the chosen municipalities, the respondents were completely satisfied with the flat/house area and also facilities in almost all of them. Only a few exception have been found: Chlum u Třeboně – 75% of respondents were satisfied with their flat area only partially, 67% respondents from Majdalena were suspiciously dissatisfied with their flat area and the same proportion of respondents in Majdalena were satisfied with their facilities only partially. Nevertheless, it should be noticed that the results of the survey probably have statistically debatable evidence because of the number of respondents in some of chosen municipalities.

Responses to another component question in municipalities are relatively similar. The respondents were most frequently “completely satisfied” with component habitation conditions categories.

#### **Every day life and supplementary needs answering**

If we are assessing the data for the entire area, we will get following results: one third (34.3%) of respondents work in the municipality where they live, 15.7% in Třeboně and only 2.1% in Jindřichův Hradec. The low portion of respondents employed



Tab. 3 Level of satisfaction with habitation conditions

	<b>completely satisfied</b>	<b>almost satisfied</b>	<b>partially satisfied, partially not</b>	<b>almost dissatisfied</b>	<b>completely dissatisfied</b>
flat/house area	58.3	20.7	7.4	3.3	3.7
facility (toilet, bathroom etc.)	55.0	20.2	9.9	3.3	2.5
sunniness, loudness, smell from homestead	37.6	28.1	13.6	5.8	5.8
house convenience	39.7	22.7	14.0	6.2	6.2
garden ownership	49.6	14.5	5.0	5.8	14.0
domestic animals breeding	39.7	16.5	9.9	3.3	13.6
flat/house situation (in the municipality)	52.9	21.5	12.0	4.5	0.0

in Jindřichův Hradec indicates prevailing linkages to České Budějovice which is also affirmed by the results of the issue of a destination of greater shopping (more than one third of respondents do their shopping in České Budějovice and 20.7% in Třeboň, whilst in Jindřichův Hradec only 7%). The local inhabitants do their common shopping in the municipality where they live (83.2%) and they usually use bicycle (44.8) which is typical transportation mean for the Třeboňsko area.

The commute to cultural events (37.2% of respondents visits Třeboň) affirms the Třeboň position as the centre of microregion. We also found out an interesting fact: 36.3% of respondents take part in no cultural events, they stay in. The investigation of sport activity got similar result confirming the passivity of local inhabitants. They were asked where and how often they engage in sports; 60% of respondents who answer this question do sports nowhere. The result is probably influenced by the predominant life style and by a lack of suitable sport places especially in small municipalities (which was also found out in the tourism research as mentioned above).

Possibility to answer every day life or supplementary needs is intimately linked with the transportation accessibility which is generally (for the entire area) deemed as “on the whole sufficient” (37.6%). If we are evaluating the public transport accessibility in the municipalities, we will found that it depends on the size of the municipality and its position relating to the system of transport lines. The respondents were dissatisfied with the situation in more than a half of chosen municipalities. Figure No 3 confirms these results to a certain extent.

When were the local inhabitants asked whether they had been ever thinking about the moving from their municipality, almost one half of them (47.5%) answered “absolutely not”. This attitude affirms the predominant component results of satisfaction with habitation and living conditions and also emotional linkages to the area. We calculated Pearson product-moment correlation for chosen variables and found out negative correlation between a mind-set to move and emotional linkages to the place, habitation, job, local authorities functioning and in-

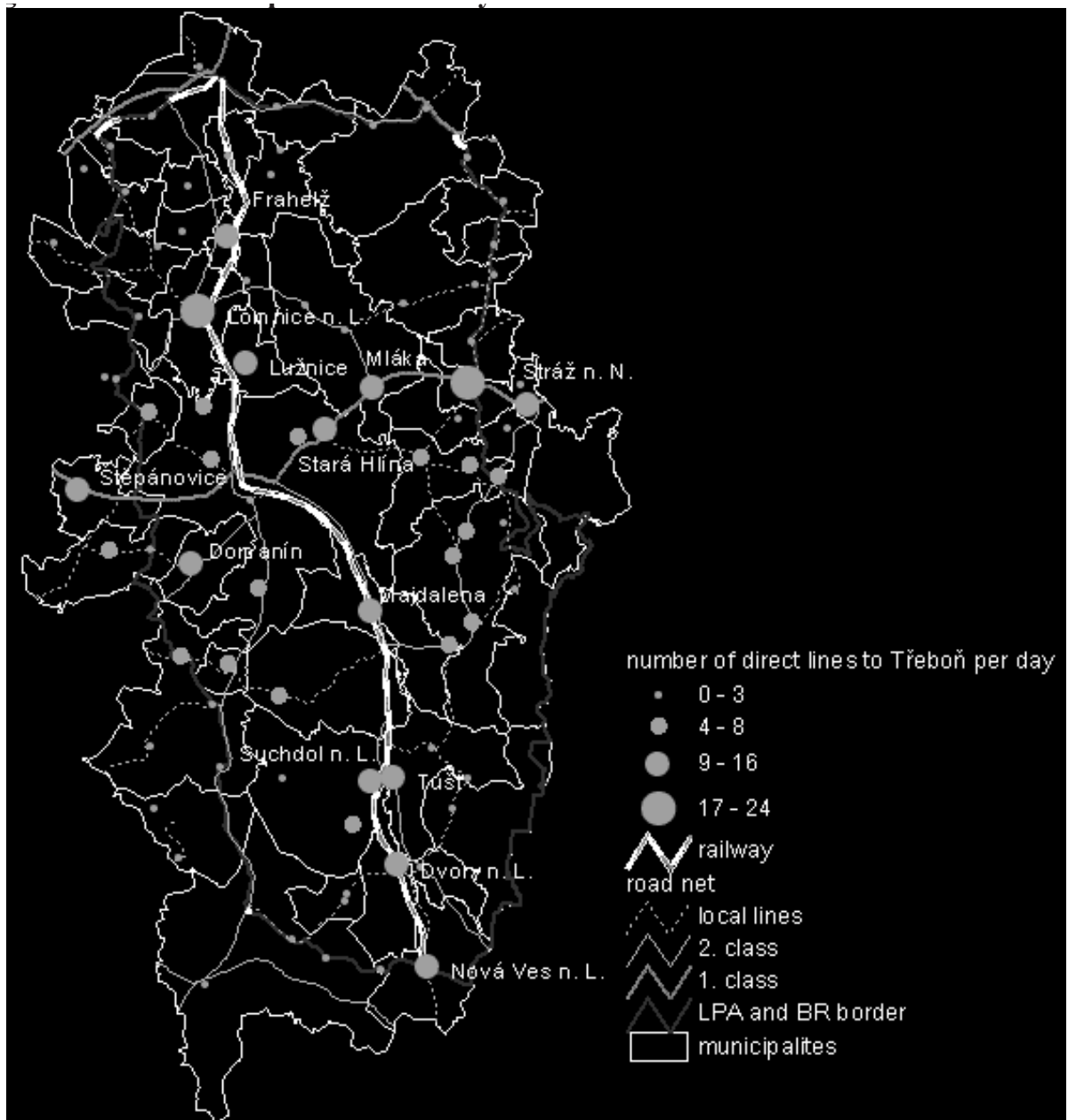


Fig. 3 Public transport accessibility

terrelationships among people (on the level of 95% credibility as it is shown in the Table 4).

More than one third of respondents mind that many changes realized in the last 10 years: suspiciously towards to a better situation (37.2%) and 33.1% markedly towards to a better situation. The residents' opinion to recent change is positively correlated (on the 95% level of credibility) to emotional linkages to the place, job and friends, to local authority functioning and human interrelationships (Table 4).

The inhabitants of the Třeboňsko area are not pliable to have one's own firm – 43.8% the respondents are not thinking of being in business or being a farmer.



Tab. 4 Pearson product-moment correlation (calculated for chosen variables, marked correlations are significant at  $p < 0,05$ )

	variable	attitude to move	recent change	plans to be in business
emotional linkages to	family	-0.11	0	0
	place	<b>-0.26</b>	<b>0.19</b>	-0.05
	habitation	<b>-0.28</b>	0.01	0.09
	job	<b>-0.17</b>	<b>0.27</b>	0.01
	friends	-0.05	<b>0.25</b>	0
	local authority functioning	<b>-0.17</b>	0.20	0.06
	human interrelationships	<b>-0.21</b>	0.18	0.05

### Conclusion

There could be noticed consequences and development tendencies which have arisen from the establishing of the centralized system of the settlement in the 60ies and also from a peripheral location near the Austrian border. The results obtained from a questionnaire survey thus affirm general characteristics of peripheral areas at present: a smaller progressivity of the economic structure, lower number of businessmen, a lower level of investments, a lower number of high schools and a lower criminality (Marada, 2001) and also a higher part of forest which is connected with a recreational use. The situation in the Třeboňsko area fits in general assessments of transformation changes as it is described by Hampl (1996). The accession into EU seems to be an opportunity to use the potential of the area and its local inhabitants to improve quality of life here and the area position in the sociogeographic system of the Czech Republic.

### References

- ARNOLD, K. (1990): Ökopark Waldviertel – Südböhmische Teichplatte. Wien, Wiener Universität.
- BIČÍK, I., PERLÍN, R., ŠEFRNA, L. (2001): Rozvoj povodí Kocáby. Praha, Přírodovědecká fakulta UK.
- DYKYJOVÁ, D. (2000): Třeboňsko. Příroda a člověk v krajině pětileté růže. Třeboň, Carpio.
- Třeboňsko – Jindřichohradecko – Nördliches Waldviertel (1997): Regionální rozvojová strategie, dílčí výstup z multidisciplinárního projektu "Cross-border Regional Planning". Praha, Fakulta architektury ČVUT.
- GNANADESIKAN, R. (1997): Methods for Statistical Data Analysis of Multivariate Observations. New York, John Wiley & Sons.
- HAMPL, M. (1996): Geography of Societal Transformation: General Question of Study. Geography – Journal of Czech Geographic Society 101 (2), 82–91.
- HEBÁK, P., HUSTOPECKÝ, J. (1987): Vícerozměrné statistické metody s aplikacemi. Praha, SNTL.
- JANDA, J. (1994): Třeboň Basin Biosphere Reserve. In: Jeník, J., Price, M. F. (1994): Biosphere Reserves on the Crossroads of Central Europe, Czech Republic – Slovak Republic, Czech National Committee for UNESCO's Man and Biosphere Programme, 66–80.
- KLUFOVÁ, R. (2000): Výzkum rekreační zatíženosti Třeboňska. In: Sborník příspěvků z konference „Třeboňsko 2000“, Třeboň, 289–292
- KLUFOVÁ, R., ROST, M. (2002): Second homes in the Protected area and Biosphere Reserve Třeboňsko. In: Collection of Scientific Paper, Faculty of Agriculture in České Budějovice, Series for Economics, Management and Trade, Vol. 26 (1), 5–11.

- KLUFOVÁ, R. (2003): Cestovní ruch Třeboňska. [Disertační práce]. Praha, KSGRR, PřF UK.
- KLUFOVÁ, R., ROST, M. (2003): Využití GIS pro analýzu intenzity cestovního ruchu a rekreace v území. In: Sborník 10. ročníku konference GIS Ostrava 2003.
- KLUFOVÁ, R., ROST, M. (2003): Využití kvantitativních metod pro regionalizaci území z hlediska jeho využití cestovním ruchem. In: Proceedings from 2<sup>nd</sup> International Conference Aplimat, Slovak University of Technology, Bratislava, 435–440.
- KODLOVI, F. a J. (1982): Staňkov – kronika čtyř století. Chlum u Třeboně: MNV Chlum u Třeboně.
- KODLOVI, F. a J. (2001): Stříbřec nad hladinami rybníků. Třeboň, Carpio.
- KOLÁŘOVÁ, M. (2000a): Třeboňsko a cestovní ruch – naděje a možnosti, Sborník referátů z 5. mezinárodní konference Cestovní ruch, regionální rozvoj a školství, ZF JU, Tábor, 200–201.
- KOLÁŘOVÁ, M. (2000b): Třeboňsko a cestovní ruch – naděje a možnosti. In: Pokorný, J., Šulcová, J., Hátle, M., Hlásek, J. (eds.) (2000): Třeboňsko 2000. Ekologie a ekonomika Třeboňska po dvaceti letech. Třeboň: UNESCO, ENKI.
- MARADA, M. (2001): Vymezení periferních oblastí Česka a studium jejich znaků pomocí statistické analýzy. Geography – Journal of Czech Geographic Society 106 (1), 12–25.
- ROST, M., KLUFOVÁ, R. (2002): Využití kvantitativních metod pro analýzu socioekonomických aktivit v území Třeboňska. In: Sborník vedeckých prác z mezinárodnej vedeckej konferencie Matematika vo výučbe, výzume a praxi 2002, Polnohospodárska univerzita, Nitra, 213–217.
- ROST, M., KLUFOVÁ, R. (2003): Využití kvantitativních metod pro hodnocení intenzity socioekonomických aktivit v území. In: Proceedings from 2<sup>nd</sup> International Conference Aplimat, Slovak University of Technology, Bratislava, 611–618.
- ROST, M., KLUFOVÁ, R. (2003): Modelování rekreačního potenciálu území pomocí kvantitativních metod v prostředí GIS. In: Ročenka časopisu Geoinfo, Computer Press, 50–51.

## Résumé

### **Regionální rozvojové procesy z pohledu místního obyvatelstva na příkladu CHKO a BR Třeboňsko**

Cílem příspěvku je předložit jednoduchý přehled vnímání regionálních rozvojových procesů těmi, kteří jsou s nimi v nejužším kontaktu – místními obyvateli. Jako zdroj dat posloužilo dotazníkové šetření uskutečněné v letech 1999–2001, které mělo zároveň posloužit i jako zdroj pro další plány místní správy a samospráv. Při průzkumu byla použita podobná forma dotazníku jako v šetření realizovaném v oblasti Kocáby v letech 1995–1997 (Bičík, Perlín a Šefrna, 2001). Analýza získaných dat byla vedena s ohledem nejen na přírodní podmínky, limity a omezení dané statutem chráněného území, nýbrž i na geografickou polohu oblasti a vyplývající dlouhodobý vývoj. Důraz byl kladen na vývojové tendence ve spojení s rozvojem cestovního ruchu, jako fenoménu, jehož intenzita se v poslední době velmi významně zvyšuje.