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*Vladimír Ira\**

## **ENVIRONMENTAL PERCEPTION AND ENVIRONMENTAL AWARENESS AT THE AREA WITH DISTURBED ENVIRONMENT (UPPER NITRA REGION)**

Vladimír Ira: Environmental perception and environmental awareness at the area with disturbed environment (Upper Nitra region). Geogr. čas. 46., 1994, 2, 8 figs., 16 refs.

Environment is to some extent also a spatial manifestation of human decisions and many of these decisions are related to the manner in which we perceive the space, evaluate its individual elements and how we imagine their use. Behavioural-geographical research realized in chosen 25 communes of the Upper Nitra region made possible for us to obtain certain idea on environmental perception and to evaluate the level of awareness of environmental problems and their consequences suffered by the region's population with heavily disturbed environment, to evaluate their attitudes and proposals of solutions.

Key words: human geography, behavioural approach, critical environmental zone, environmental perception, environmental awareness.

### INTRODUCTION

Human geography gains new orientation of research of the forms to processes in the 60-ties. Orientation to forms was an expression of theoretical and quantitative revolution

in geography of the 50-ties and the beginning of the 60-ties. Accent of structure and forms facilitated tools like mathematical language, statistics, scientific explanation. But objective reality is too complex to be comprised by these means. Simplified mathematical modelling was based on an assumption of normative human being - economically and spatially rationally behaving man. Later occurs a shift of thinking in geography. Process-oriented research studies the fields of cognition of various aspects of our spatial existence. Behavioural research was aimed at the questions of learning and thinking, formation of attitudes, perception, feeling, opinion and value, imagination, representation and use of the spatial knowledge.

According to Golledge and Stimson (1990) for the behavioural approach in human geography the following characteristics are typical:

1. New model of man

Man is not interpreted any more as a totally rational being, whose decisions are influenced by external objective factors, which he also perfectly knows. Man is interpreted as a being whose rationality is limited (man as a satisfier of proper needs).

2. New model of environment

Concept of observable outer physical environment is substituted by the concept of multilayered environment (economic, social, political and legal). This environment is equally real as the physical one. This shift caused a growing interest in perception, cognitive, ideological, philosophical, sociological and other environment.

3. Orientation to microlevel

Behavioural approach transits from the sets of aggregate data, i.e. macrolevel obtained on the basis of discussions, questionnaires, eventually other interactive methods. In research there appear non-parametric analytical measurement, multidimensional and multivariate methods, presenting and analyzing certain phenomena, new cartographic and graphic models destined to presentation of mixed metric data, etc.

5. Basis for generalization

Behavioral research facilitated gradual generalization from the bottom - the individuals, through the groups up to the general social level, it facilitated modification, eventually creation of new theories.

Contents of behavioural geography and multidisciplinary character of the solved problems predetermines application of multiple methods, often carried over from other scientific disciplines. Currently used methods and techniques aim at the evaluation of statistical dependencies between the characteristics, analysis of spatial interactions, analysis of development and diffusion of changes, etc. Single pair correlations, as well as a number of more demanding methods of multivariate analysis are used. An important role in behavioural geography is fulfilled by the techniques used by sociologists, psychologists, as well as the social and cultural anthropologists - questionnaires and their use in the research of population. The questionnaires often represent the main source of the knowledge of so called "soft" data, subject to further processing (Drbohlav 1993).

## RESEARCH AIMS

Environment is question of relations between the totally conceived human life and totally conceived environs of man, i.e. question of interaction of both these wholes. It

means, that to certain extent it is a spatial manifestation of human decisions. Many of these decisions are related to the manner of perception of space, how we evaluate its single elements and to our idea of their use (Walmsley and Lewis 1985). In active deciding three thematic fields of behavioural-geographical research appear in the foreground:

Environmental perception, environmental imaginations and knowledge, and spatial behaviour (Kollár 1992). Our behavioural research touches all mentioned thematic fields and it is oriented above all to the study of their spatial variations.

The aim of our research was:

- to estimate the level of awareness of environmental problems in population of the region,
- to try to measure the changes in awareness of population on environmental problems,
- evaluate the ideas on possible migration in case of deteriorated environmental quality,
- to analyze subjective evaluation of health condition of population in relation to the deteriorated environmental quality,
- to analyze evaluation of the effects of chosen industrial plants on development of the region and environment,
- to evaluate proposals of population of the possible solution of environmental problems.

Research was based in similar salient points like, for instance, the research carried out in France (Institute National d'Etudes Demographiques 1991) and in USA (Brunn et al. 1980). It was realized according to the principles formulated in their work by Golledge and Stimson (1990). Research in chosen communes of the Upper Nitra region, utilizing the results of previous pilot study (Ira 1992, Ira and Kollár 1992, Ira and Szöllös 1993) made possible to obtain certain idea on environmental perception, evaluate the level of awareness of environmental problems in population of region with heavily disturbed environment, evaluate their attitudes and proposals of solutions.

## USED METHOD AND DELIMITATION OF REGION

Inhabitant of the region with disturbed environment (total of 25 communes in Upper Nitra) was chosen as a basic object of research. As a source of information we used one of the tools of field research - questionnaire. The questionnaire contained basic information on respondent, his attitudes, evaluations, eventually his potential behaviour. Selective procedure through which an investigated set of respondents originated, was a multistage one. The established criteria were so closely observed that the investigated set of 300 respondents corresponds in its basic social-demographic characteristics to the structure of population of the study region.

Obtained knowledge can refer in its full extent only to the studied set. In spite of it, we depart in the following analysis of an assumption that the pronounced, intensely structural specifics and trends will very probably indicate the characters of a set of the population of the region with disturbed environment and can be efficiently utilized.

For the purposes of our research we delimited a region of 25 communes of the district Prievidza (Bojnice, Bystričany, Cígel', Čereňany, Chvojnica, Kamenec pod Vtáčnikom, Kanianka, Kl'áčno, Koš, Lazany, Lehota pod Vtáčnikom, Malinová, Nedožery-Brezany, Nitrianske Pravno, Nováky, Opatovce nad Nitrou, Osl'any, Podhradie, Poluvsie, Poruba, Pravenec, Sebedražie, Tužina, Zemianske Kostol'any) with total area of 509.9 km<sup>2</sup> (see Fig.

1). According to census of 1991 in this territory lived 96 098 inhabitants. The study region has three communes of urban type (Prievidza - population 53 424, Bojnice - population 5084, and Nováky - population 4341). For the purposes of intraregional comparison we divided the region to three subregions. Each of the delimited three subregions was



Fig. 1. Situational scheme of study area.

represented by 100 respondents. Southern subregion is formed by 12 communes and it represents a 44.3 % of the area and 23.0 % of population of the study area. Almost the whole territory of southern subregion has a heavily disturbed environment. The central subregion is represented by the towns Prievidza and Bojnice (12.5 % of area and 60.9 % population of the study region). Northern region with 11 communes has more favourable environmental situation. It represents 43.2 % of area and 16 % of population of the study region.

## DEVELOPMENT OF THE REGION AND THE RELATED ENVIRONMENTAL PROBLEMS

Economic development of the region started in connection with the promotion of coal mining in the second half of the 19th century. A significant impulse for an increase of coal extraction, and the consequent development of the whole region was construction of railway in 1896. Along the coal mining industry also wood processing, food and tannery developed in the region.

The most remarkable development started in the years 1939 and 1940, when the chemical plant in Nováky producing chlorine was open and extraction of lignite was started in the Nováky coal basin. In the following years in Pravenec originated also the most important wood industry plant, as well as other industrial plants in the region.

Coal mining, power and chemical industries meant not only development of the region, but they simultaneously caused deterioration of environment that negatively affected economy and population's health condition. The following characteristics of the environmental problems is based in the works of Drdoš and Jakál (1992), and Drdoš and Székely (1994) describing the situation in the region by the end of the 80-ties.

In 1989 in Upper Nitra region 0.23 mill. t of pollutants (mainly SO<sub>2</sub>, ash and arsenic) were emitted in air. Almost 60 important sources participated in air pollution. The biggest polluter is the power station in Zemianske Kostofány, which together with the plant in Handlová (out of the study area) participate by 93 % in total amount of pollutants. The combusted coal contains 1.35-3.56% of sulphur and 20-40 % of ashes.

Among serious environmental problems belongs the storage of the industrial and communal waste. Annually 0.9-1.2 mill. tons of ash and cinder is stored in locality Chalmová, 0.3 mill. t is annually processed in the plant Pórobetón for the production of construction materials. There are 12 dumps of communal waste in the Upper Nitra region.

Environmental degradation manifests especially in the pollution of surface and ground waters. The worst situation was on river Nitra beyond Nováky, where the stream is classified in the 4th category. The chemical plant in Nováky released in the river Nitra 11 mill. m<sup>3</sup> of waste water (chlorides, chlorinated carbohydrates, active chlorides, oil substances and other insoluble substances).

Soil devastation is caused by mining activity, pollutants, as well as agricultural technologies. Pollutants affect in total 19 thousand ha of agricultural soil. More than 500 ha of soil is jeopardized by mining activity (collapses, fissures, surface extraction, dumps) including 229 ha of definitely devastated areas.

Forests are affected by pollutants in the whole Upper Nitra region. Needle-leaved, as well as broad leaved growths (beech and oak) are affected. Oak growths (approx. 3 thousand ha) are affected in the area of Tušina and Chvojnica, beech growths (approx 4 thousand ha) in the area of Vtáčnik.

Disturbed environment affects the health condition of population. Number of healthy population in heavily contaminated area is by 7.3 % lower in comparison with relatively healthier environment. This ratio is even higher in children population.

## ENVIRONMENTAL PERCEPTION AND AWARENESS OF POPULATION

Environment belongs among the concepts difficult to define. It is characterized by numerous natural, economic, social and cultural factors influencing man. The role of human geography though, is not only to know these factors, but also to view the environment by the eyes of man and his value orientation (E. Jones and J. Eyles 1977).

Democratic society is based in generally and collectively perceived values. Stances, stimulating an effort to solve, for instance, also environmental problems, are formed according to them. Among the traditional ethical values, that have preserved their efficiency also today, belongs openness, i.e. free access to information, to be informed. Results of our research showed that the inhabitants are insufficiently informed on environmental problems of the region. Not even one respondent considered his acquaintance with environmental situation in the region sufficient. Almost half of respondents (48.0 %) estimated their acquaintance on environmental situation as average. Less then one third of the inquired had a feeling of insufficient acquaintance with the environmental situation. One tenth of respondents have no information on environmental situation in the region (see Fig. 2).

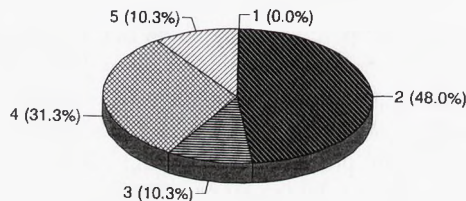


Fig. 2. Acquaintance on environmental situation.  
1-very good, 2-good, 3-average, 4-insufficient, 5-none

Characteristic feature found out in the analysis of environmental perception of Upper Nitra population is its negative dimension. Almost 9/10 of respondents believe that they live in unsound environment. In the towns and in the vicinity of risk localities (power plant, chemical plants, mines, waste dumps) is this proportion even higher - 92.5 %, eventually 90.0 %. Environmental situation has deteriorated in the past several years according to the opinion of the inquired inhabitants. Several years ago only 34.3 % of respondents considered environmental problems pronounced to very pronounced. In northern subregion this ratio was even lower - 21 %. At the present time 62.3 % (Fig.3), and in the vicinity of risk localities 72 % and in towns even 75 % of inquired estimated environmental problems pronounced to very pronounced.

53.0 % respondents and 61.0 % respondents in the vicinity of risk localities are daily aware of environmental problems. 38.0 % are occasionally and only 5.3 % are seasonally aware of environmental problems.

In connection with the deteriorated environmental situation respondents in the Upper Nitra region consider the following questions as the most serious: polluted air (89.3 %, 92.0 % in southern subregion and 95.0 % in towns, poor health condition of the population (52.3

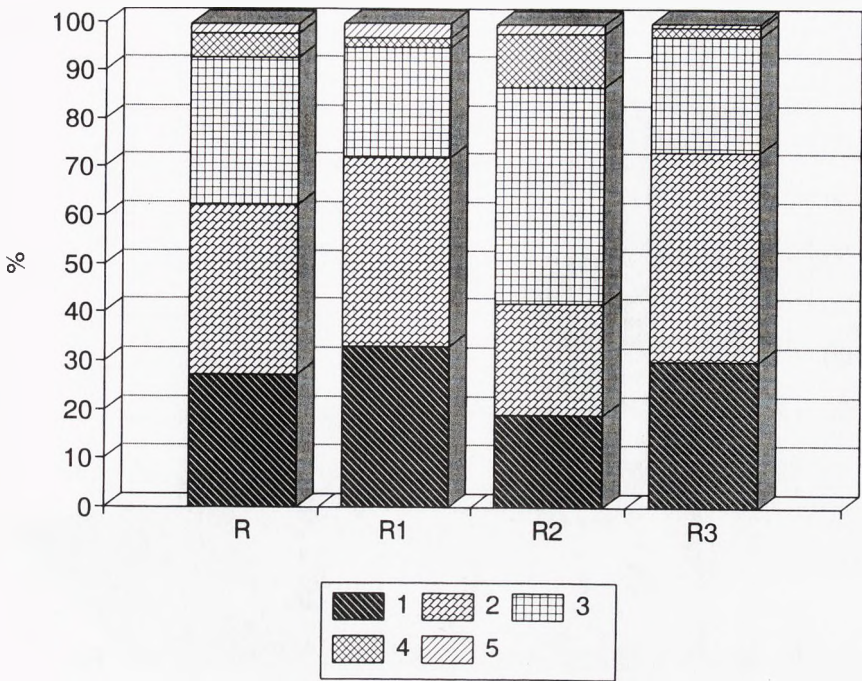


Fig. 3. Evaluation of environmental problems (at present).

R-whole region, R1-southern subregion, R2-northern subregion, R3-central subregion.

%, in the vicinity of risk localities 57.0 % and in the towns even 64.2 %), water pollution (50.7%), damage to forest growths (28.7%) problems with communal and industrial wastes (24.0 % in southern subregion), devaluation of soil 19.7 %), noise (12.7 %) and occupation of soil by extraction (9.7 %). Comparison of the values for the total Upper Nitra regions with the values in single subregions shows Fig. 4.

From the point of view of environmental perception and spatial behaviour of man, hierarchy of values is interesting. Some environmentalists even suppose that certain type of values, eventually its changes will represent a basic condition of sustainable way of life (Vavroušek 1993). In our research we asked our respondents to order 7 chosen values (wages, health, work environment, property, family, politics) according to importance. Answers were ordered in scale from 1 (the most important values) to 7 (the least important value). Out of the detected numerical values we obtained by means of calculation of weighted average the weight co-efficients of importance of the chosen values. Graphic analysis of chosen values for the whole region and single subregions are offered in Fig. 5.

The most important values at the present time for the respondents of study region is health (weight co-efficient for the whole region and for the central subregion is 1.70 and 1.56 respectively). The second most important value is represented by environment with weight co-efficient 3.38. Respondents living in the vicinity of risk localities (chemical plants, power plant, waste dumps) ascribe higher value to environment (3.13) than the

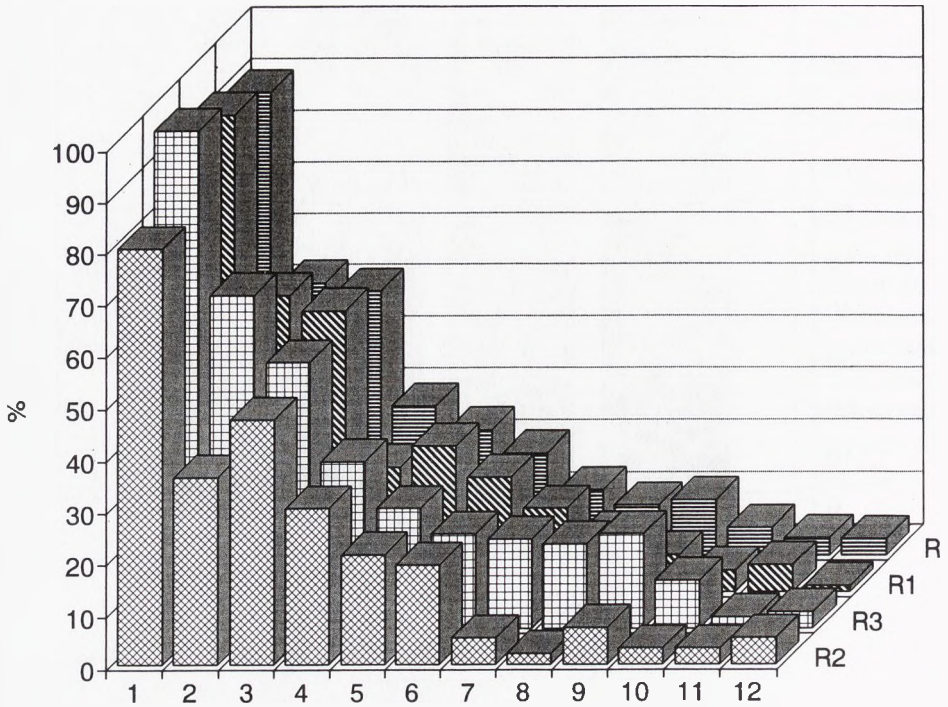


Fig. 4. The most serious questions of the region's environment.

1-air pollution, 2-poor health condition of population, 3-water pollution, 4-damage to forest growths,, 5-communal and industrial waste, 6-devaluation of soil, 7-noise, 8-occupation of soil by extraction of ores, 9-construction of little functional and non-aesthetical buildings, 10-risk technologies, 11-animal large-scale production, 12-monocultural, large-area agriculture, R-whole region, R1-southern subregion, R2-northern subregion, R3-central subregion.

respondents of the northern, less deteriorated subregion (3.76). The third value in the order is work with weight co-efficient 3.49. The following positions were occupied by the wages (3.52), family (4.11), property situation (5.41), and politics (5.88).

Respondents were asked to go back five years in their memory and order the corresponding values according to the importance they ascribed to the mentioned values then. Environment was placed at the third position following the health and wages with weight co-efficient 3.55. The questioned inhabitants of the regions were also confronted with the task to go several years beyond, to future and to order the chosen values according to their importance. Environment was ordered by the respondents in several years' perspective as the second most important with weight co-efficient 3.20.

One of the major components of the decision-making process is represented by the value system. It determines the function of the individual's values in a role of filter between the aims and resulting decisions. In the context of value analysis and perception of environmental quality, evaluation of the present state of environment sounds interesting. Almost 9/10 of respondents believe, that they are living in unsound environment. In spite of this unfavourable evaluation 58.0 % would never move out of this region (in northern



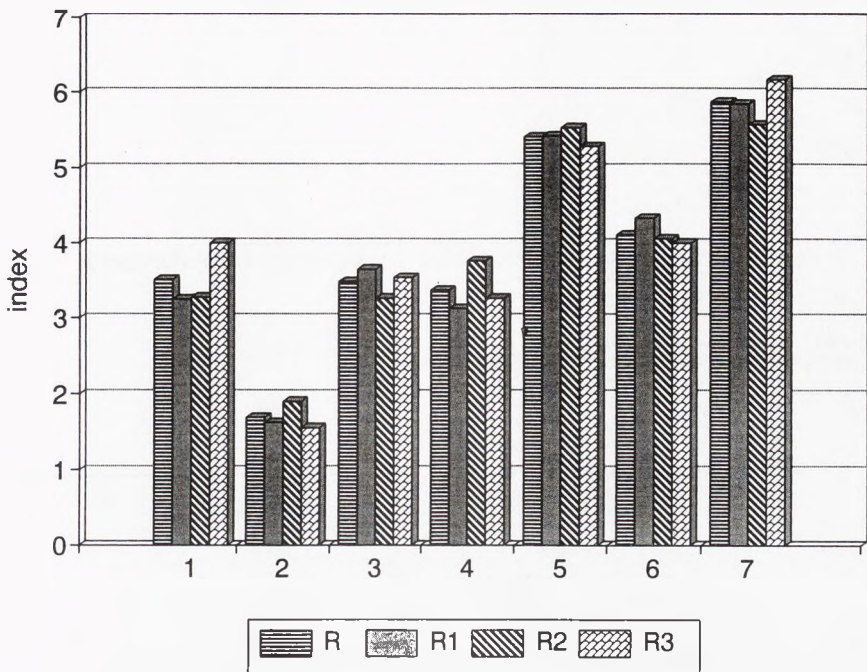


Fig. 5. Importance of the values.

1-wages, 2-health, 3-work, 4-environment, 5-property, 6-family, 7-politics, R-whole region, R1-southern subregion, R2-northern subregion, R3-central subregion.

subregion it is even 73 %). One fifth (in the towns even one third) is prepared to move only if the environmental situation worsens. At the present state of environment only one tenth of the inquired (in towns 17 %) were willing to move out. In case of improvement of environment only 6.3 % of respondents is willing to leave the region.

Character of the values and character of social interactions manifests in the level of potential mobility. Potential mobility is in this case influenced by the character of accepted appraised values. More than a half of respondents continues living in the region because of family and kinship, (in central region even 65 %), 25.6 % because of favourable housing conditions, 23.3 % because of employment (in central region 32.0 %) and only 13.3 because of strong emotional bonds to the commune, eventually region. Those, who would be willing to move to other, from the viewpoint of environment more sound region, quote most frequently individual regions, eventually localities of the central (10.3 %) and eastern Slovakia (13.3 %), especially the regions of the Tatras, Liptov and Orava. What most attracts them in these localities is pure air, sound environment (11.3 % of all respondents) and nice nature, mountains, forests (15.3 % of all respondents).

In case of serious accident in one of the industrial plants in the vicinity of the place of living of respondents, willingness to move expressed 57.0 % of the inquired, among the urban population even 76.6 %.

Behavioural-geographical research in critical environmental zone of the Upper Nitra region offered us a possibility to analyze also subjective evaluation of the health condition

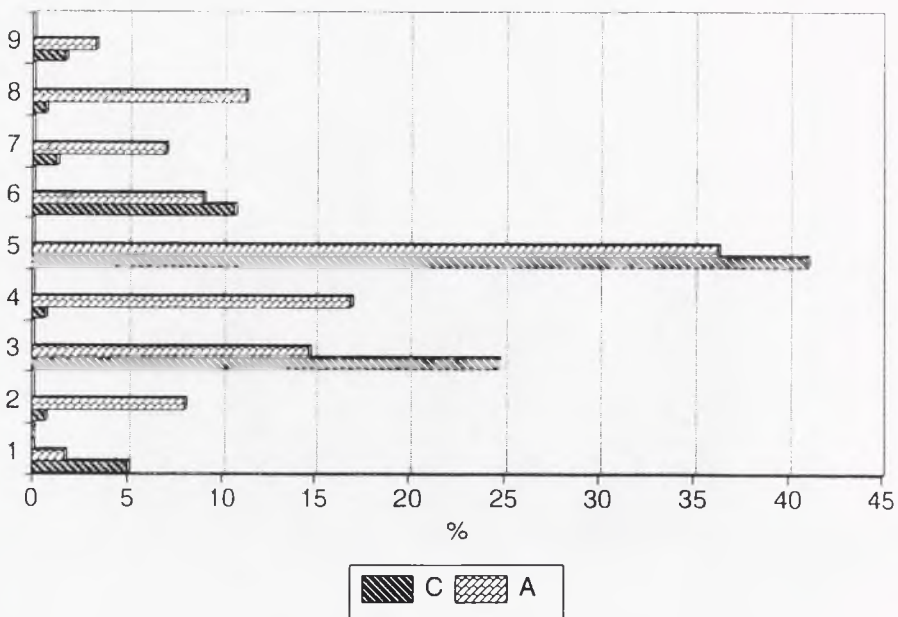


Fig. 6. Subjective evaluation of health situation of the population. C-in children, A-in adults, 1-infectious diseases, 2-tumours, 3-allergies, 4-vascular diseases, 5-respiratory diseases, 6-skin diseases, 7-gastroenteric diseases, 8-nervous diseases, 9-haematological diseases.

of population (Fig. 6). An overwhelming majority of the inquired population of the region agrees in the fact that they are living in an unsound environment. In spite of different evaluation of environmental problems of the region as viewed several years ago and at the present (several years ago only 34.3 respondents compared to 62.3 % at present estimated the environmental problems as pronounced or very pronounced), even 54 % of the questioned considered health problems in their household approximately identical to those several years ago. One fourth believes that they intensified in the past three years. More than one tenth believe that the health problems in their households are intensifying in the course of the past 10 years. In this connection 37.7 % expect deterioration of the health conditions in the next five years. On the contrary 14% of respondents believe that they will not worsen.

According to subjective estimation among the most serious health problems of children in the families of respondents belong the respiratory diseases (41.0 %) allergies (24.7 %) and skin diseases (10.7 %). Higher values 48.0 %, eventually 36.0 % and 14.0 % characterized subjective evaluation of health conditions of children of the respondents of central subregion (Prievidza and Bojnice). As the most serious health problems in the families of respondents of adult population, the respiratory diseases (36.3 %, in towns even 45.0 %) then vascular diseases (17.0 %), allergies (14.7 %) and nervous diseases (11.3 %) were quoted.

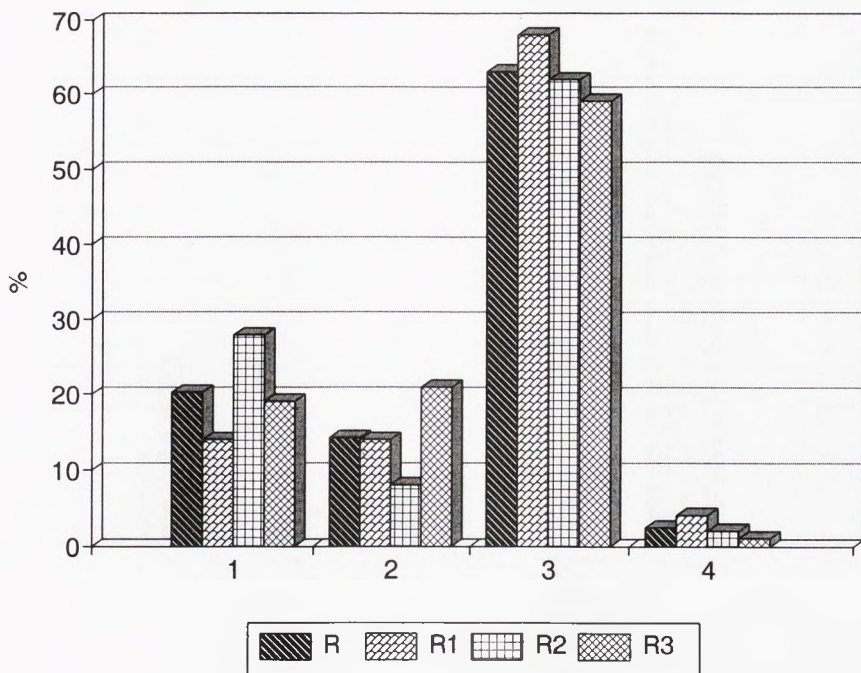


Fig. 7. Possibilities to influence the solution of environmental problems.

1-communal authorities, 5-district office, 3-Government of the SR, R-whole region, R1-southern subregion, R2-northern subregion, R3-central subregion.

Mining, power and chemical industries were in after-war period not only the main elements of the regional development, but they also distinctly influenced and still influence the environmental quality and population's health condition. Individual dimensions of environmental quality can be objectively measured or we can depart from the subjective estimation that reflects the environmental perception of the region's population. Analysis of subjective evaluations brings the following interesting information.

Extraction of brown coal in central part of the Upper Nitra region is not perceived as significant factor of degradation of environment, in spite of the fact that hundreds of inhabitants (especially in case of the commune Koš) had to leave their houses in consequence of expansion of coal extraction. The impact of the mine Cígel' on environment was evaluated by 35.7 % respondents as unfavourable to very unfavourable. Similar evaluation manifested in judgment of the impact of mine Nováky - 42.0 % evaluate its environmental impact by identical characteristics. Urban population evaluates the environmental impact of mines more negatively.

Impact of power station and heating plant in Zemianske Kostol'any and the impact of chemical plants in Nováky was estimated substantially more unfavourably. Negative effect of these industrial activities, especially air pollution has a considerably greater spatial impact. It is confirmed also by the finding that almost 9/10 of the inquired consider air

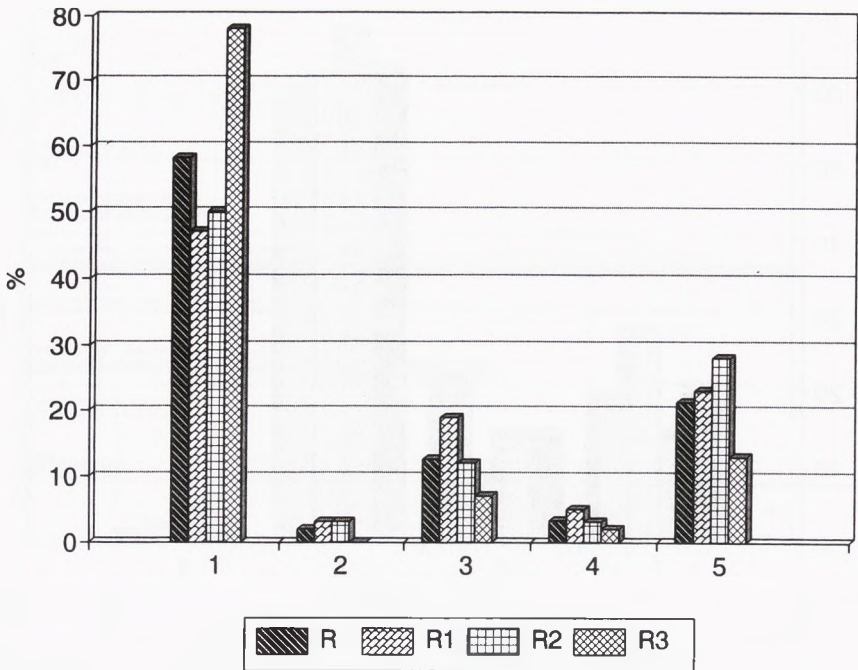


Fig. 8. Active groups participating at the improvement of environment.

1-voluntary groups of protectionists, 2-church associations, 3-political parties and movements, 4-other, 5-none, R-whole region, R1-southern subregion, R2-northern subregion, R3-central subregion.

pollution one of the most serious problems in region's environment. In case of power and heat plants 86.0 % of respondents and in case of chemical plants 90.3 % respondents consider their environmental impact unfavourable to very unfavourable.

Development of main activities of mining, power, chemical complex distinctly manifested in regional development of Upper Nitra. This fact partially reflects also analysis of subjective evaluation on part of respondents. Of the economical viewpoint the impact of mines and power plant on region's development is evaluated by 31.3 % respondents as positive in the past and in the present. Almost one fifth of the inquired believe that in the past it was a contribution to the development and at the present it is a loss. Only 7.3 % estimated this impact in the past and in the present as a losing one. According to one third of respondents the impact of chemical plants was and still is a contribution to the economic development of the region. Only 5 % evaluates this effect negatively of the viewpoint of the past and the present.

Behavioural-geographical research made possible to obtain also certain image on the ideas of the population about the solution of environmental problems. Many respondents are aware of the meaning of the individual economic activities, as sources of jobs and income of an important part of population. In case of coal and lignite mines 44.3 % of respondents believe, that it is necessary to maintain them in operation until the total extraction of the stocks, with simultaneous application of efficient measures for the

environmental protection. 23.7 % and 3.7 % of the questioned are in favour of the gradual and immediate close down respectively.

Power plant in Zemianske Kostol'any is seen as perspective after modernization, reconstruction, increased efficiency and lowering of the harmful environmental impact by even 66.6 % of respondents. Only 15.0 % believe that the power plant does not need modernization, they support minimum investment in most urgent repairs and then a gradual close down, 4.3 % are in favour of immediate close down.

In spite of very unfavourable evaluation of chemical plants from the point of view of environmental problems, 65.0 % respondents believe, that the used technology in Nováky must be modernized and maintained in operation. The ratio of those who support modernization is higher (75.0 %) in southern subregion.

After the opinion of 63.0 % of respondents the greatest possibility to participate in the solution of the environmental problems of the region is on part of the Government of the Slovak Republic. According to 20.3 % of respondents (in northern subregion 28.0 %) the biggest possibilities are on part of communal authorities and after the opinion of 14.3 % (in Bojnice and Prievidza even 21.0 %) on part of the district office (Fig. 7). The most active in the effort for improvement of environment are after the respondents (Fig. 8) the voluntary groups of protectionists (58.3 %, in central region it is even 78 %) and political parties and movements (12.7 %).

## CONCLUSION

In the framework of behavioural-geographical research aimed especially at the environmental perception and awareness of the population of the Upper Nitra region, we succeeded in the effort to estimate the level and changes in the awareness of environmental problems of the region, resistance against moving out of the area with disturbed environment, ideas about possible migration, analyses of subjective estimation of population's health condition in connection with the deteriorated environmental quality, estimation of the impact of industrial plants on the development of the region, as well as the present situation of environment and to evaluate the proposals of the population of possible solutions to the environmental problems.

Comparative analysis of intraregional differences showed differences in perception, attitude and evaluations conditioned by the character of environment, even though part of these differences was caused by different cultural factors, personal motivations and emotions, as well as the effect of the function of different information and decision filters. Besides different values detected within three delimited subregions, analysis showed certain differences in environmental perception and evaluation among the urban and rural respondents. Our analysis succeeded in capturing a part of the relationship between functional variables (for instance: value system) and existential variable (spatial location). More detailed analysis of further relations especially between the functional and structural variables may possibly enrich the explanation by a psycho-social dimension.

## REFERENCES

- BRUNN, S. D., JOHNSON, J. H., ZIEGLER, D.J. (1980). *Final report on a social survey of Three mile Island area residents*. East Lesting (Department of Geography Michigan State University).
- DRBOHLAV, D. (1992). Behaviorální přístup v geografii. In Sýkora, L., ed. *Teoretické přístupy a vybrané problémy v současné geografii*. Praha (KSRRR PFUK), pp. 30-41.
- DRDOŠ, J., JAKÁL, J. (1992). Das Becken der oberen Neutra (Horná Nitra). *Osterreichische Osthefte*, 34, 430-449.
- DRDOŠ, J., SZÉKELY, V. (1994). Environmental quality and the possibilities of the environmental promotion (Upper Nitra Region). *Geojournal*, 32, 225-229.
- GOLLEDGE, R.G., STIMSON, R.J. (1990). *Analytical behavioural geography*. London (Routledge).
- INSTITUTE NATIONAL D ETUDES DEMOGRAPHIQUES (1991). *Enquete sur la population: L espace de vie et l environnement*. Paris (INED).
- IRA, V. (1989). Niektoré otázky časovo-priestorových výskumov v sociálnej geografii. In Bezák, A., ed. *Nové trendy v geografii*. Piešťany, 24.-26.10.1988. Bratislava (SGS), pp. 39-42.
- IRA, V. (1992). Percepcia prostredia a environmentálne vedomie obyvateľstva s narušeným životným prostredím. In Drgoňa, V., ed. *Regionálne systémy životného prostredia*. Nitra (Nitrianska Univerzita), pp. 87-89.
- IRA, V., KOLLÁR, D. (1992). Cognition of environment as part of the relationship "man-environment". *Geographica slovenica*, 23, 463-476.
- IRA, V. KOLLÁR, D., (1993). Behaviorálne aspekty výskumu technologických hazardov a rizík. *Životné prostredie*, 27, 83-85.
- IRA, V., SZÖLLÖS, J. (1993). Perception of the environmental and economical impact of the mining, Power and chemical industries on the Region of Horná Nitra. In Stankoviansky, M., ed. *Abstract of papers International conference at the occasion of the 50th anniversary of the Institute of Geography*. Bratislava (IG SAS), pp. 32-33.
- JONES, E., EYLES, J. (1977). *Introduction to social geography*. London (Oxford University Press).
- KOLLÁR, D. (1992). Sociálna geografia a problematika výskumu priestorového správania človeka. *Geografický časopis*, 44, 149-161.
- OKRESNÉ ODDELENIE SLOVENSKEHO ŠTATISTICKÉHO ÚRADU PRIEVIDZA (1992). *Ščítanie ľudu, domov a bytov, 3.3.1991, okres Prievidza*. Prievidza (OO SŠÚ).
- VAVROUŠEK, J. (1993). Human values for sustainable living. *The Network*, 26, 3 .
- WALMSLEY, D.J., LEWIS, G.J. (1985). *Human geography: Behavioural approaches*. London, New York (Longman).

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## PERCEPCIA PROSTREDIA A ENVIRONMENTÁLNE VEDOMIE V OBLASTI S NARUŠENÝM ŽIVOTNÝM PROSTREDIEM (REGIÓN HORNEJ NITRY)

Životné prostredie je do určitej miery priestorovým prejavom ľudského rozhodovania a mnohé z týchto rozhodnutí majú vzťah k spôsobu, akým priestor vnímame, hodnotíme jednotlivé jeho prvky a ako si predstavujeme ich využitie. Behaviorálno-geografický výskum realizovaný vo vybraných 25 obciach homonitrianskeho regiónu nám umožnil získať určitú predstavu o percepcii prostredia, zhodnotiť úroveň vedomia o environmentálnych problémoch obyvateľov regiónu so silno narušeným životným prostredím, zhodnotiť ich postoje a návrhy na riešenie problémov.

Zdrojom informácií bol tradičný nástroj terénneho výskumu - dotazník. Súbor 300 respondentov, ktorí sa zúčastnili výskumu bol v základných sociálno-demografických charakteristikách blízky štruktúre obyvateľstva skúmaného regiónu.

Charakteristickou črtou pri analýze percepcie kvality životného prostredia obyvateľmi homonitrianskeho regiónu je negatívna dimenzia. Takmer 9/10 respondentov sa domnieva, že žije v nezdravom životnom prostredí. Stav životného prostredia podľa opýtaných obyvateľov sa za posledných niekoľko rokov zhoršil.

V súvislosti so zhoršeným stavom životného prostredia v hornonitrianskom regióne za najzávažnejšie otázky respondenti považujú: znečistené ovzdušie (89,3 %), zlý zdravotný stav obyvateľstva (52,3 %, v mestách dokonca 64,2 %) a znečistenie vody (50,7 %).

Postavenie životného prostredia v systéme hodnôt podmieňuje rozhodovanie človeka i jeho priestorového správanie. Respondenti boli postavení pred úlohu zoradiť 7 problémov (výška platu, zdravie, práca, životné prostredie, majetkové pomery, rodina a politika) tak, ako sú v súčasnosti pre nich závažné. Najvýznamnejšou hodnotou pre respondentov bolo zdravie. Životné prostredie predstavovalo druhú najvýznamnejšiu hodnotu.

Napriek uvedomovaniu si nepriaznivej environmentálnej situácie 58,0 % respondentov by v žiadnom prípade nerozmyšľali o odstávaní z regiónu. Len 1/5 opýtaných by sa odstáhovala v prípade, že sa zhorší terajší stav životného prostredia. Potenciálnu mobilitu ovplyvňuje charakter uznávaných hodnôt. Viac ako polovica respondentov ostáva bývať v regióne kvôli rodinným a príbuzenským zväzkom, 1/4 kvôli priaznivým bytovým pomerom, 23,3 % kvôli zamestnaniu a len 13,3 % kvôli silnej citovej väzbe na obec, príp. región.

Baníctvo, energetika a chemický priemysel boli v období povojnovej industrializácie nosnými prvkami regionálneho rozvoja. Uvedené hospodárske aktivity výrazne ovplyvňujú a ovplyvňujú životné prostredie a zdravotný stav obyvateľstva. Napriek vplyvu ťažby na charakter využívania územia niektorých obcí, vplyv baní Nováky a Cigel' na životné prostredie hodnotilo len 42,0 %, resp. 35,7 % respondentov ako nepriaznivý až veľmi nepriaznivý. Vplyv elektrárne v Zemianskych Kostol'anoch a Chemických závodov v Novákoch na životné prostredie a zdravie obyvateľstva bol hodnotený podstatne menej priaznivo. Ako nepriaznivý až veľmi nepriaznivý ho označilo 86,0 %, resp. 90,3 % opýtaných.

Napriek negatívemu hodnoteniu väčšina respondentov vidí riešenie nepriaznivého stavu v ponechaní závodov v prevádzke a modernizácii technológií (66,6 % pri elektrárňach a 65,0 % pri chemických závodoch).

Podľa názorov 63,0 % respondentov najväčšiu možnosť ovplyvniť riešenie problémov životného prostredia regiónu má vláda SR. Podľa 20,3 % respondentov majú najväčšie možnosti obecné úrady a podľa 14,3 % okresný úrad. Najaktívnejšie v snahe o zlepšenie životného prostredia sú podľa názorov respondentov dobrovoľné ochrannárske skupiny (58,3 %) a politické strany a hnutia (12,7 %).

Komparatívna analýza vnútroregionálnych rozdielov ukázala rozdielnosť v percepcii, postojoch i hodnoteniach podmienených charakterom prostredia napriek tomu, že časť týchto rozdielov bola spôsobená rozdielnymi kultúrnymi faktormi, osobnými motíváciami a emóciami, ako aj vplyvom funkcie rozdielných informačných a decizných filtrov.

Obr. 1. Situačná schéma študovaného územia.

Obr. 2. Informovanosť o stave životného prostredia.

1 - veľmi dobrá, 2 - priemerná, 3 - veľmi dobrá, 4 - nedostatočná, 5 - žiadna.

Obr. 3. Hodnotenie problémov v životnom prostredí (v súčasnosti). 1 - veľmi výrazné, 2 - výrazné, 3 - priemerné, 4 - mierne, 5 - nepatrné, R - celý región, R1 - južný subregión, R2 - severný subregión, R3 - centrálny subregión.

Obr. 4. Najzávažnejšie otázky životného prostredia regiónu.

1 - znečisťovanie ovzdušia, 2 - zlý zdravotný stav obyvateľstva, 3 - znečisťovanie vody, 4 - poškodzovanie lesných porastov, 5 - komunálny a priemyselný odpad, 6 - znehodnocovanie pôdy, 7 - hluk, 8 - záber pôdy ťažbou, 9 - výstavba málo funkčných a neestetických objektov, 10 - rizikové technológie, 11 - živočíšna veľkovýroba, 12 - monokultúrne veľkopoľné poľnohospodárstvo, R - celý región, R1 - južný subregión, R2 - severný subregión, R3 - centrálny subregión.

Obr. 5. Významnosť hodnôt.

1 - výška platu, 2 - zdravie, 3 - práca, 4 - životné prostredie, 5 - majetkové pomery, 6 - rodina, 7 - politika, R - celý región, R1 - južný subregión, R2 - severný subregión, R3 - centrálny región.

Obr. 6. Subjektívne hodnotenie zdravotného stavu obyvateľstva.

C - u detí, A - u dospelých, 1 - infekčné ochorenia, 2 - novotvary, 3 - alergie, 4 - cievne choroby, 5 - choroby dýchacieho ústrojenstva, 6 - kožné choroby, 7 - choroby tráviaceho ústrojenstva, 8 - nervové ochorenia, 9 - choroby krvi.

Obr. 7. Možnosti ovplyvniť riešenie environmentálnych problémov.

1 - obecné úrady, 2 - okresný úrad, 3 - vláda SR, 4 - nezistené, R - celý región, R1 - južný subregión, R2 - severný subregión, R3 - centrálny subregión.

Obr. 8. Aktívne skupiny participujúce na zlepšení životného prostredia.

1 - dobrovoľné ochranárske skupiny, 2 - cirkevné spoločenstvá, 3 - politické strany a hnutia, 4 - iné, 5 - žiadne, R - celý región, R1 - južný subregión, R2 - severný subregión, R3 - centrálny subregión.