

**SELECTED ASPECTS OF TRANSFORMATION  
IN COUNTRIES OF CENTRAL  
AND CENTRAL-EASTERN EUROPE**

**A BOOK DEDICATED TO PROFESSOR OLEH SHABLIY  
UPON THE 50<sup>th</sup> ANNIVERSARY OF SCIENTIFIC WORK**

edited by T. Michalski, A. Kuczabski



**Pelplin 2010**

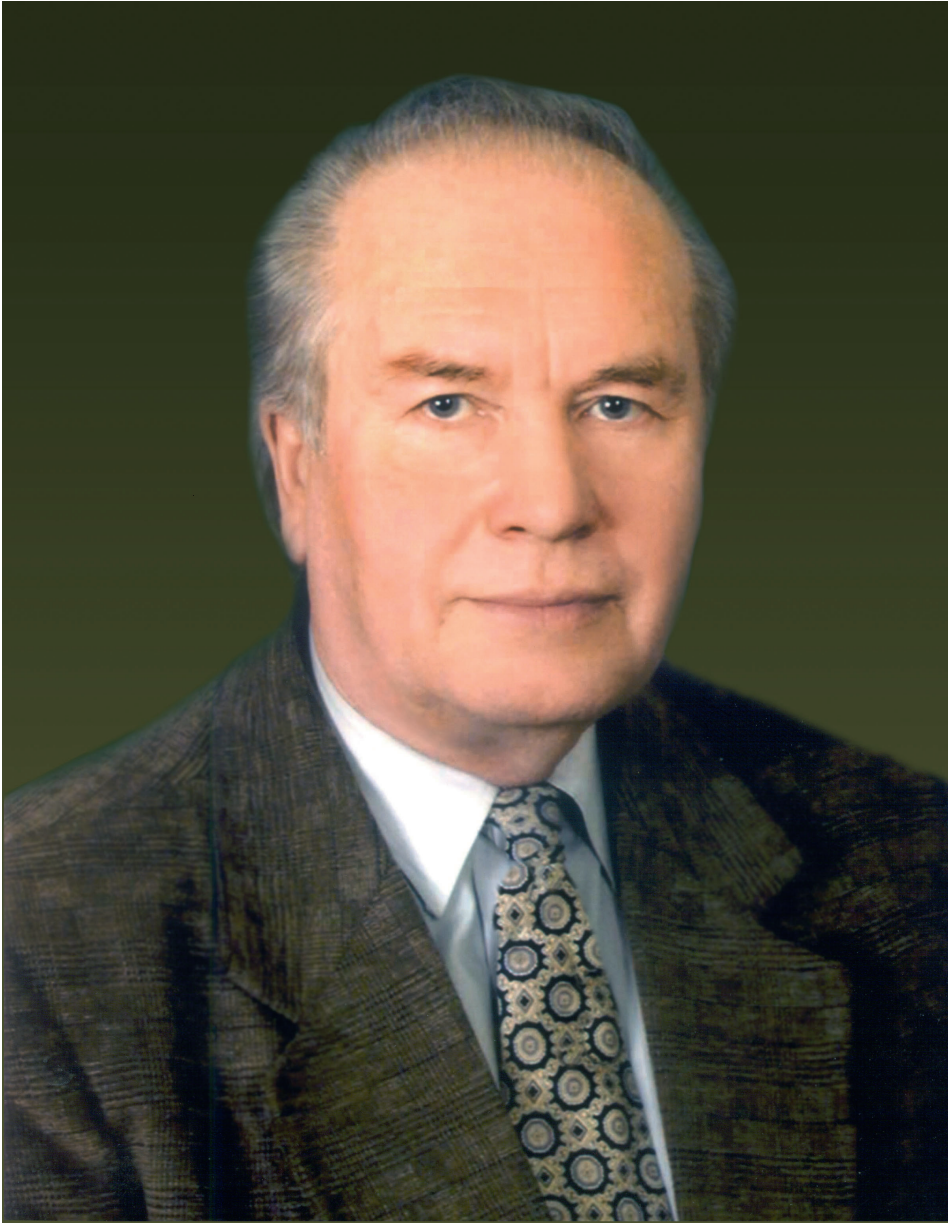
Reviewers:  
prof. Tadeusz Palmowski  
prof. Olga Zastavetska

© by Authors

Wydawnictwo "Bernardinum" Sp. z o.o.  
ul. Biskupa Dominika 11, 83-130 Pelplin, Poland  
phone: +48 58 5361757, fax +48 58 5361726  
e-mail: bernardinum@bernardinum.com.pl  
www.bernardinum.com.pl

Printed in: Drukarnia Wydawnictwa "Bernardinum" Sp. z o.o., Pelplin

**ISBN 978-83-7380-816-4**



Professor Oleh Shabliy





## Contents

<i>Oleksandra Vis'tak</i> The researcher and pedagogue of a higher school in Ukraine.....	7
<i>Nikolay Bagrov</i> Geography in the information world: tendencies, problems .....	20
<i>Kostyantyn Nemets, Ludmyla Nemets</i> Information-synergetic paradigm of social geography and the problem of sustainable development .....	31
<i>Oleksandr Topchiyev, Valentyna Olijnyk, Tatyana Melnychenko</i> The concept of territory geoplanning in Ukrainian geography .....	52
<i>Roman Rudnicki</i> Natural considerations for the regional diversification of absorption of European Union funds in Polish agriculture.....	63
<i>Anatoliy Jakobson</i> Linguistic conflicts and problems of ethno-cultural policy in contemporary Ukraine: the view of an ecologist and marketologist.....	81
<i>Aleksander Kuczabski</i> The social support for administrative-territorial reform in Ukraine: key role of self-government.....	105
<i>Tomasz Michalski</i> International transitions in Central Europe after 1989 .....	117
<i>Stefan Buzar, Andreas Papastamou</i> Network theory and town twinning: implications for urban development policy in post-socialist Europe.....	129

---

<i>Valeriy Rudenko</i> Geographical problems of natural resources potential evaluation in Ukraine .....	146
<i>Natalia Scypion-Dutkowska</i> The spatial and temporal car crime analysis in Szczecin (Poland) .....	153
<i>Uladzimir Valetka</i> The evolution of the cities' size distribution in Belarus and Poland in 1970-2009: a rank-size rule and Markov chains analysis .....	190
<i>Wojciech Janicki</i> The influence of the Polish-Ukrainian border on the socio-economic situation of selected border communes .....	208
<i>Małgorzata Flaga</i> Polesie as an area of depopulation in the Polish-Ukrainian borderland.....	234
<i>Lucyna Przybylska</i> The influence of politics on the development of the Roman Catholic parish network in Poland after 1945. Case study: Trójmiasto (Tricity).....	250
<i>Ion Gumienny</i> Aspects concerning the confessional politics of the Russian Empire at its western bordaries (The Case of Bessarabia) .....	261
<i>Anna Dubownik</i> The role of IROP (Integrated Operational Programme of Regional Development) in the execution of the local government's plans in the Piła sub-region in years 2004–2006 .....	270
<i>Jolanta Mazurek</i> Involvement on the part of local authorities and institutions in the development of farm tourism in the rural areas of Koszalińskie Coast.....	281
Contributors .....	293

Oleksandra Vis'tak

## **The researcher and pedagogue of a higher school in Ukraine**

This article covers the biography and research record of the well-known scientist – Geographer, Cartographer and the expert in Ukrainian studies.

The most important spheres of his research interests – theoretical and methodological, geo-ecological, politico-geographic, historico-geographic, mathematical and cartographic problems of Social Geography – have been singled out.

The viewpoint of the scientist on the development of Ukrainian Human Geography in the nearest perspective has been revealed.

### **1. Life Outline**

Distinguished Professor of Lviv National University named after I. Franko, Doctor of Geography, Academician at the Academy of Higher School of Ukraine and Ukrainian Ecological Academy; Honorable Member of the Ukrainian Geographic Society, Full Member of the Scientific Society named after T. Shevchenko, Head of the Department of Economic and Social Geography at Lviv University – Oleh Shablii was born on the 14<sup>th</sup> of November, 1935 to the family of a farmer in the village of Kurivtsi, Ternopil region, Ukraine.

In his native village stretching along the narrow valley of the river Nesterivka, the left tributary of the river Seret, (Western Podillia) he spent his best years of the early childhood, though it was the period of war hardships. He finished an elementary school there. In 1947 the eleven year old boy moves to school in the village of Velykyi Hlybochok.

In the time of hard postwar years the son of a repressed farmer was threatened with being exiled to Siberia together with his father. Therefore, at the age of 14 (1950) he left his home to set out into the wide world, the first landmark on his paths of life becomsng Pedagogical College in the city of Berezhany on the river Zolota Lypa.

When in Berezhany, O. Shablii received only “excellent” marks and graduated from the college as a teacher of Mathematics with the diploma

“Cum laude”, so-called “5% diploma” (enabling the top 5% students to enter a higher educational establishment without entrance exams). He intended to apply to the Physics faculty at Lviv State University. Among the three faculties proposed – Law, Philology and Geography – he chose the latter one.

The year before graduation from the University (1958) O. Shablii was offered a position at the Department of Economic Geography headed by Associate Professor (since 1971 – Professor) Opanas Vashchenko. In 1961 the latter became a supervisor of the diploma paper of the budding scientist. Working as Senior Lab Assistant then (from 1962 on as Associate Professor and a University teacher since 1964), O. Shablii took a post-graduate course by correspondence (1961–1965). In 1966 he defended his thesis (Candidate of (Geography scientific degree)) “The Wood Industry Complex in the Ukrainian Carpathians (Tendencies of Development and Structure).

However, a spell of humiliations, reprisals and hush-outs, followed, yet the young scientist did not give in. He displayed an uttermost activity in the pedagogic field (only three years afterwards – in 1969 – does he become Associate Professor). He writes articles, monographies and makes a lot of reports at conferences. The field of his scientific interests broadens considerably. Geographic and wood-production topics are gradually supplemented with agroindustrial, transportation and recreation aspects. With the flow of time all those subjects were integrated into the scientific problem of interbranch territorial complexes. This became the subject matter of his Doctorate successfully supported in 1978 at the Qualificatory Council of Leningrad University. The topic of his Doctorate is “The Interbranch Territorial Complexes: Issues of the Theory and Methodology of Research”.

Everything passed successfully. But the defense of the thesis coincided with the time of Communist – Bolshevik violence raging in Ukraine, especially in Galicia. Denunciations in political unloyalty of the “newly-made” Doctor of Sciences came like a downpour to the KGB (State Security body) Committee for State Security. Therefore, it was only in 1988 that he was promoted to the post of Professor, being awarded the title of Professor afterwards.

In the late 1960s he initiates an active introduction of mathematical methods and models into the teaching – and – scientific process, introduces the course “Mathematical Methods in Economic Geography”. Also, he organizes the 3-rd All-Union Summer Mathematical School (1968); writes and publishes a pioneering textbook in the Ukrainian language. This textbook was widely used not only in this country, but also in the former republics of Russia, Byelorussia and the Baltic. It has run another publication in 1994.

In the “glorious” Eighties of stagnation O. Shablii organizes University – funded projects at his own Department, prepares and publishes three school country-studies atlases (of the Lviv, Ivano-Frankivsk and Transcarpathian regions), works at the formation of large atlases of economic complexes of two regions (Ivano-Frankivsk and Lviv), the city of Lviv and others. At present, under his supervision, the “Complex Atlas of Lviv” is being prepared for publication.

It was in the 1970s–1980s that the scientific and theoretical potential of the scientist found its mightiest manifestation. Apart from the development of the concept of the “interbranch territorial complexes” he advances the Law of the geospatial integration of production; he is the first to systematize the laws and regularities of its territorial organization (1983), he substantiates the principle of non-strict territorial systems integration into the systems of a higher level (1984), suggests the idea of the general object, the subject of particular objects, the content of Human Geography.

But the talent of the scientist manifested itself to the full in the recent eighteen years, when Ukraine gained independence. Professor O. Shablii becomes Head of the Department of Economic and Social Geography at Lviv National University named after Ivan Franko (1990). Over that time he has accomplished more than during all the previous decades. The research topic of the Department was chosen to be “Social, Politico-geographic issues of Western-Ukrainian Border Area in the Context of Eurointegration and Geostrategy of the Society”. Alongside the traditional economic-geographic guidelines, demo-social-geographic and politico-geographic – world and country-studies ones started to develop. Particularly developed became historico-geographic investigations of the scientist himself and his followers – Associate Professors M. Vlach, I. Rovenchak, O. Vis'tak. Entered into the scientific circulation were the names of outstanding Ukrainian scientists forbidden by the Soviet rule, such as Stepan Rudnytskyi, Volodymyr Kubiyovych, Olena Stepaniv, Valentyn Sadovsky, Anton Syniavsky and others. Since the year 2000 they have started publishing the All-Ukrainian national journal “The History of Ukrainian Geography” in Ternopil, where O. Shablii became General Editor. All-Ukrainian and international conferences and symposiums, devoted to topical issues of the geographic science (1994): were organized viz “The history of Ukrainian geography and cartography” (1995), “Topical issues of Geographic Ukrainian Studies at the turning point of the Millennium” (2000), “The 60th anniversary of the Department of Economic and Social Geography in Ivan Franko Lviv National University” (2005), “Modern theoretical and methodologic issues of regionalization and complex development of Ukraine” (2008) and others.

The fundamental work by Professor O. Shablii (which, to a greater extent, may be considered summarizing), is the book "Human Geography: Theory, History and Ukrainian-Studies" (2001). The most important research ideas and developments both in this book and in the following one – "Essentials of General Social Geography" (2003) were: scientific substantiation of a number of key issues: the hypothesis of existence of gnoseologic types of objects in the investigation concepts of our science – real, conceptual and virtual; the categories of "territory", "territorial organization", "territorial potential" as a scientific construct; classification of scientific issues in Human Geography, its scientific theories and concepts, methods of research, nature-resource potential; a new interpretation of the "productive forces" category; scientific periodization of the development of Ukrainian Social Geography, development of the concept-terminology system "The History of Ukrainian Social Geography" (in collaboration with O. Vis'tak), substantiation of the place and the role of the Lviv Social-Geography School etc.

Professor O. Shablii is an outstanding Ukrainian-Studies researcher. He was the first to discover the geographic essence of Ukrainian Studies. One can hardly find better definition than that proposed by O. Shablii. "Ukrainian Studies – he maintains – is a wide sphere of scientific research, the object of which is Ukrainian ethnos, nation, land, territory and state in their manifold manifestations, qualities, relations and mediations" (1997). He defined three historical stages in the formation and the development of Ukrainian-Studies, including the geographical aspect. They are: summational, interbranch and integrative. In Geographic Ukrainian-Studies he was the first to distinguish the six groups of scientific issues: geocologic, geodemografic, geocultural, geosocial, geoeconomic, and geopolitical. A separate group comprises the problems, related to the history of Ukrainian Geography. The 6-member social geographic regionalization of Ukraine was backed by numerous colleagues.

As far back as 1994, the scientist substantiated the Ucrainocentrism principle in the research into and teaching of Social Geography. In the years to come he made scientific reports, contributed to periodicals and made statements on the necessity of decommunization of Human Geography, particularly elimination from the geographical map of Ukraine of the names reflecting its former colonial status. Owing to the efforts of Professor O. Shablii, they initiate the placement of memorial plaques of V. Kubiyovych (2007) and O. Stepaniv (2003), laying of the Memorial Stone and in the near future (spring, 2009) – constructing of the monument to V. Kubiyovych in Lviv. A separate mention should be made here of the publication of the series of books "Figures of Ukrainian Land-Studies", publication of the journal "The History of Ukrainian Geography", and collected papers of outstanding Ukrainian geographers.

Like nobody else, perhaps Prof. O. Shablii became aware of the expediency to prepare and publish new manuals and textbooks in Ukrainian. Over the period of 1999–2008, he and his colleagues in the Department have published 25 such books, almost half of them – with the approval of the Ministry of Education and Science of Ukraine. Under his authorship, in particular, there came out in 1993 the textbook “Mathematical Methods in Social and Economic Geography”, “Foundations of General Human Geography” (2003). The manual “Social and Economic Geography of Ukraine” has run three editions (1994, 1995, 2000). The year 2004 saw the publication of the translated textbook under the aegis of the Ministry and Science of Ukraine (authored by the American researchers H. de Blii and P. Muller, entitled “Heohrafiya: svity, regiony, koncepty” [Geography: Realms, Regions, Concepts], where O. Shablii is the author of the lengthy (70 pp.) chapter “Ukraine” and the editor-in-chief generally. The book held the first place in the All-Ukrainian contest of new publications for the year 2004 in the “Encyclopaedic and reference editions” nomination. During the period in question O. Shablii teaches three major courses at the Faculty of Geography, viz. “Mathematical Methods in Social and Economic Geography”, “Foundations of Human Geography” and “Major Issues of Human Geography”. Moreover, he elaborated new syllabi for them, made a new syllabus for Post Graduate Studies candidates majoring in “Economic and Social Geography”, co-authored the Ministry of Education approved “Syllabus of Requirements for the Degree of “Candidate” (Geography). Also, he organized the development of new syllabi in the major “Economic and Social Geography” as well as launching new, present-day curricula concerning the disciplines taught at his Department.

Prof. O. Shablii has invariably been active in scientific-organizational work. Alongside running the Department of Economic and Social Geography he is also Head of the Geography Commission at the Shevchenko Scientific Society, Deputy Head of the Shevchenko Scientific Society in Ukraine, former years-long Head of the Ukrainian Geographic Society (Lviv Branch), Head of the Geography Branch at the Junior Academy of Sciences. He is on the editorial boards of several periodicals, viz. “History of Ukrainian Geography” (Editor-in-Chief, Ternopil), “Ukrainian Geographic Journal” (Kyiv); “Regional Economics” (Economy of the Regions, Lviv); “Chasopys suspilnoyi heohrafiyi” (Journal of Human Geography), Kharkiv; “Visnyk NTSh” ([Shevchenko Scientific Society Herald], Lviv); member of Organizing Committees at many All-Ukrainian and International Forums where he makes reports on topical theoretical, methodologic, historical and teaching issues of Social Geography and Cartography. The scholar had for a long time been Member of the Scientific and Methodological Council of the USSR Ministry of Education for Higher Education in Geography. Pursuant



to the Decree of the President of Ukraine he is Member of the Editorial Council for Preparation and Publishing of "The National Atlas of Ukraine" (2001). The "Atlas" saw the light of day in 2007.

Nowadays Professor Oleh Shabliiy is the recognized leader of the Lviv Social Geodraphic School that marked its 110-year jubilee in 2006. The school was initiated by the Ukrainian Geographers Hryhoriy Velychko and Stepan Rudnyts'kyi prior to World War I and developed during the 1920s–1930s in the works by Volodymyr Gerynovych, Volodymyr Kubiyovych, Volodymyr Ohonovskyi and Olena Stepaniv. The postwar development was marked by the works by Prof. Opanas Vashchenko, Acad. Maksym Palamarchuk, Profs. Mykola Shrag, Fedir Zastavnyi, Bohdan Yaremchyshyn, Mykola Pistun, Oleksandr Topchiyev, Stepan Ishchuk, Valentyna Nahirna a.o.

All the members of the Department of Economic and Human Geography headed by Prof. O. Shabliiy – Associate Professors M. Biletskyi, O. Vistak, M. Vлах, V. Hrytsevych, I. Hudzeliak, M. Knysh, A. Kuzyk, V. Stetskyi, Ya. Ivakh, I. Rantsia, I. Vanda, L. Kotyk – are his disciples working in nearly ten trends of the present-day Human Geographic Science. O. Shabliiy's disciples and followers develop his ideas in other related departments of Lviv University (Profs. M. Malskyi, Ass. Prof. M. Malska, Yu. Zanko, M. Matsiakh, I. Zinko), Lviv Academy of Commerce (B. Zablotskyi), the Institute of Regional Research (Dr.(Economics) Liubov Shevchuk, Uliana Sadova, Svitlana Shults, Maksym Maksymchuk), Ternopil Teacher-Training University named after Volodymyr Hnatiuk (Prof. Olha Zastavetska, Ass. Prof. Yaroslav Maryniak, Ihor Ditchuk), Ternopil Academy of National Economy (Prof. Yevhen Kachan), Volyn Lesia Ukrainka Teacher- Training University (Prof. Petro Lutsyshyn (now deceased), Vinnytsia Teacher Training University named after Mykhaylo Kotsiubynskyi (Prof. Volodymyr Zakharchenko) a.o.

The scholar's international scientific contacts' specter has noticeably expanded. If the scientific contacts prior to 1990 went only eastward (Moscow, Saint Peterburg, Kazan, Perm, Dushanbe, Irkutsk a.o.), nowadays their Western vector has taken shape too.

O. Shabliiy is now Visiting Professor at the Ukrainian Free University in Munich (Germany). Close ties have been established with Ukrainian geographers, economists and historians from the diaspora (Prof. Arkadiy Zhukovskyi from Paris, Prof. Volodymyr Bandera from Philadelphia, Ihor Stebelskyi from Windsor in Canada, Prof. Vasyl Veryha from Toronto, Prof. Roman Drazhniovskyi from Milwaukee (USA)). The cooperation results in the rise of works on Geographic Ukrainian Studies, publication of works on Ukrainian Geography research papers withdrawn from the history of National Geography (S. Rudnytskyi, V. Kubiyovych, O. Stepaniv, V. Sadovskyi, M. Dolnytskyi a.o.).



Particularly fruitful have become the contacts with Polish scientists from Lublin (Prof. Jan Ernst, Ludwig Mazurkiewicz, Jerzy Mościbroda, Krystyna Harasymiuk), Kraków (Prof. Zbigniew Ziolo, Jan Loboda, Bronisław Ciok a.o.) The joint work with Geographers from Austria (Prof. Peter Jordan a.o.) has resulted in the Map of Recreational Potential in Central and Eastern Europe. Prof. O. Shabliiy participates in the work of many international conferences and institutions as reporter, researcher, reviewer: Uppsala (Sweden, 1992), Paris Sarcel (France, 1994), Prague (1994), Munich (1994), Bratislava (1996), Washington, New York, Toronto (1999), Warsaw (1998), Kraków (1998), Lublin (many times), Wrocław (1995), Vienna (2005) a.o. The Department of Economic and Social Geography at the National University in Lviv became the focus where international scientific-geographical currents of the European and American continents crossed throughout the years 1990–2008. To a large extent, this is conditioned by the interest of Prof. Oleh Shabliiy in foreign languages. When a student, he started learning Polish and Czech by himself. Later on in the 1970s-1980s, he works as reviewer of the All-Union "Referatyvnyi Zhurnal" [Information Review Journal], surveying Geography articles in Polish, Czech and Slovak and since the 1990s he has been communicating fluently in these languages with scientists from the Universities in those countries. At a mature age, the Professor took a passionate interest in English, which has almost brought to naught a language barrier in the scientific contacts with European and American researchers and University teachers.

There is, probably, no other scientist in today's Ukraine more productive in ideas and research attainments in the field of Human Geography than Prof. Oleh Shabliiy. One can be impressed by the variety of the scientific trends and aspects embraced by his creative potential. The scientific scope alone of what the Professor has accomplished lists more than 400 works of various trends and size, comprises about 25 monographs, 15 textbooks and manuals, 8 atlases and maps. Prof. O. Shabliiy has been scientific reviewer and editor of about 70 works by other scholars and teams. He has trained 16 Doctors and 2 Habil. Doctors in the field of Geography, having officially reviewed more than 55 dissertations for the scientific degrees of Doctor and Habil. Doctor of his colleague geographers. He is also Expert of the Qualificatory Councils at Lviv and Kyiv Universities. Agricultural University of Lviv, Institute of Geography at the National Academy of Sciences of Ukraine (Kyiv), Institute of Regional Research (Lviv). Head of the Qualificatory Councils for the Defence of Habilitation and Doctoral Degree Dissertations on three majors in Geography (The Ivan Franko National University in Lviv).

The hobbies of Prof. Oleh Shabliiy are well-known to the general public in the 1960s-1970s - music and Painting (particularly the latter) - have

somehow unnoticeably retreated into the background. The older generation remembers Associate Professor O. Shabliy as musician in the “Cheremosh” song - and - dance group, Laureate of the “biggest violin” in the Symphony Orchestra of his Alma mater. Before that, there had been the bayan and the accordion, almost all stringed instruments. As graduate from the Teacher-Training school in Berezhany, he received a non-formal secondary musical education.

## 2. Look into the Future

Prof. O. Shabliy's works outline major ways of developing Human Geography for the near future.

1. Activation of fundamental research, development of the theory, search for new regularities in the territorial organization of society, esp. in the transition to market economy (as is the case in postcommunist countries) or to the postindustrial informational society (in highly- developed countries).
2. Perfecting the methods of scientific research, introduction of new media and approaches into the methods. It is important that distant methods (aero- and space photography) be applied, introduction of mathematical methods in combination with cartographical ones, GIS-technologies etc. be introduced.
3. Decommunization of Social Geography. It is necessary to completely get rid of the Marxist foundations of science, totally review the terminology, concepts and methods “substantiated” from the works by Marx, Engels, Lenin; discard the way of thinking based on Marxist-Leninist dogmas. Even in the structure of economic and geographic characterization of the country it is not relevant to put stress on the heavy industry, as was the case in the Soviet period and much other like that.
4. The study of Economic and Human Geography of the world and human-geographic aspects of global human issues, when the last largest empires, especially the Soviet one, have disintegrated. The rise on the post-Soviet space of new Asian and European states radically changes not only the geopolitical, but also geoeconomic situation in the world as well. Global disintegration and integration processes do not diminish the topicality of researching the role and place of Geography on a world scale, structural spheres of human civilization – demographic, social, economic, political, cultural, scientific etc. in particular and within the geospatial context.
5. Intensification of research into economic and social-geographic Area Studies. Need is ripe for a new, deideologized typologization of world countries (i.e. their division into capitalist, so-called socialist and developing ones). The most important thing here is the Ukrainization of Social Geography. It consists in the fact that:

- a) the emphasis in geographic Area Studies is to be made on Ukraine itself, so far a “white spot” of its kind on the socio-economic and political map of the world;
  - b) globalization, its processes and regularities should be studied not only in the context of foreign states, but also in that of Ukraine treating it as a bearer of these processes and issues;
  - c) other countries should be studied not in isolation, per se, but in their attitudes, primarily, towards Ukraine and, no doubt, other countries as well);
  - d) much attention should be paid to geographic terms and names in compliance with norms and traditions of the Ukrainian literary language (of special significance here is the issue of geographic names, decolonization); especially important in Human Geography is the issue of transcribing foreign geographic names in Ukrainian;
  - e) to study and to popularize the contribution of Ukrainian geographers, viz. world geography researchers, experts in Country and Local Lore Studies, travellers. To provide examples, little or totally unexplored is the Economic Geography heritage of unique Ukrainian scientists such as Profs. Valentyn Sadovskyi, Volodymyr Ohonovskyi, Mykola Shrag a.o. It is necessary to research as comprehensively as possible the contribution made by foreign geographers starting from Herodotus as well as Ukrainian descent geographers living in foreign countries (Profs. Ivan Tesla, Roman Drazhniovskyi, Ihor Stebel’s’kyi a.o.) into the study of Ukraine.
6. A through study of Ukraine itself – new independent state on the map of the world. Of importance here are:
- a) research into the economic, social and politico-geographic situation of Ukraine in the space of Europe and Asia as well as globally, their relations with close and distant neighbours;
  - b) study of quantitative and qualitative characteristics of Ukraine’s natural and resource potential with the aim of its fullest possible and rational use for a stable development of an independent economy;
  - c) study of geographic, especially geoeconomic specificity of the Ukrainian people as autochthonous state-building nation, conditions and factors of placing the population of Ukraine, its migration, geocultural specificity of separate areas of Ukraine;
  - d) research into the social sphere, that of services (social infrastructure), degree of meeting the needs of the population in different areas;
  - e) geographic analysis of shaping the national-economic complex of Ukraine in the posttotalitarian period, revealing the ways of its restructuring, solving energy, food, raw material and other national problems within the context of regional and global relations;

- f) research into the issues of Ukraine's regionalization in view of really existing historico-geographic, demographic and socio-economic preconditions with due regard for the development of Ukraine as a sovereign unified state.
7. Intensification of applied research in order to introduce fundamental theoretical elaborations of Human Geography into the practice of territorial regulation of demographic, economic, social, political and ecological processes.
8. Perfection of teaching Human Geography of Ukraine and the world in the secondary school and specialized secondary educational establishments. Once again, the Ukrainocentrism principle is to be implemented here, viz. the primary study of Ukraine (beginning with the fifth form as Primary Geography of our country), main attention is to be focused on its first- and second-order neighbours, those countries Ukraine is most connected with economically, politically, demographically (including, hence, Ukrainian diaspora states), those that, by their potential, determine present-day global socio-economic and political processes. This requires that one should restructure the order of studying Human Geography in the secondary school: Local-Lore Studies first, then Primary Geography of Ukraine, followed by Geographic Globalistics, Geography of Continents and Oceans, Economic and Political Geography of Countries of the World, Social and Economic Geography of Ukraine.
9. Preparation and publication of national-scale textbooks and manuals, generally – complexes of teaching and methodological literature both for the secondary specialized and higher school of Ukraine. Particular attention should be focused on the teaching and methodological literature to train Bachelors, Specialists and Masters majoring in Geography, esp. Human Geography.
10. Research into Historical Geography of Ukraine and the World, which will provide a profuse factual material to substantiate the tendencies for change in the environment, population, economy and politico-geographic systems both globally and regionally. This basis will enable an education of "man-nature" interaction in particular states and on continents in the civilizational (broader-cultural and spiritual) dimension. In this connection Social Geography will increasingly be transformed into Geography of Human Civilization, Geography of Culture (oral communication of Prof. Oleh Shablii).
11. Paying particular attention to the study of History of Ukrainian Geography as science and system of human knowledge, field of national culture in its kind. This study ought to be conducted in the context of European Country Studies (with due regard for change in scientific and

geographic paradigms) and heterovector trends in the geographic research done by geographers in the occupational states (with their imperial components) of the Ukrainian lands and the Ukrainian national territory.

12. Intensification of the research in Geography and Local Lore: study of particular historico-geographic and administrative-territorial areas, regions, localities, settlements etc. Organization of publications in the domain of Geography and Local Lore not only nationally, but regionally as well.
13. Strengthening of scientific and public organizations such as the: Ukrainian Geographical Society, Shevchenko Scientific Society in particular Geography Committee. Systematic organization of All-Ukrainian and International Scientific Forums on the topical issues of Human Geography, esp. Geography of Ukraine.
14. Publication of national scientific magazines in the domain of Human Geography, its theory, methods and Ukrainian Studies of the type "The History of Ukrainian Geography" (Ternopil), "The Magazine of Human and Economic Geography" (Kharkiv) and others.
15. Variagation and intensification of popularizing geographic, including social-geographic knowledge by publishing relevant literature in World and Country Studies, Local Lore, organization of new popular editions in Geography modelled on the American journal "National Geographic", production of geographic audio- and videomaterial (films and videofilms), radio and TV programmes etc.

### 3. Major research papers

1. Лісопромислові комплекси Української РСР (питання теорії і моделювання) [Wood-production complexes of Ukrainian SSR (issues of theory and modelling) – Львів: Вища шк., 1973. – 187 pages.
2. Межотраслевые территориальные системы (проблемы методологии и теории) [Interbranch territorial systems (problems of methodology and theory)] – Львов: Вища шк., 1976. – 200 pages.
3. Модель законов территориальной организации производства // Моделирование территориально-производственных комплексов (методология, теория, метод) [The Model of laws on territorial organization of production // Modelling of territorial and production complexes] – Львов: Вища шк., 1981. – р. 17-27.
4. Математичні методи в економічній географії: Навч. посіб. [Mathematical methods in Economic Geography] – Львів: Вища шк., 1984. – 136 pages.
5. Гибкая территориальная организация производства (постановка вопроса) // География и современность: Межвуз. Сб. [Flexible

- territorial organization of production (positing of question) // Geography and Contemporary problems] – Ленинград: Изд-во Ленингр. ун-та, 1987. – Вып. 3. – р. 95–104.
6. Львовская область: Атлас / Редкол.: О. И. Шаблий (пред.), М. З. Мальский, И. И. Ровенчак и др. [Lviv Region: Atlas] – Москва: ГУТК СССР, 1989. – р. 2.
  7. Атлас Івано-Франківської області [Atlas of Ivano-Frankivsk Region] – Москва: ГУТК СРСР, 1990. – р. 19.
  8. Атлас Закарпатської області / Редкол.: О. І. Шаблій (голова), М. З. Мальський, І. І. Ровенчак та ін. [Atlas of Transcarpathian Region] – Москва: КГК СРСР, 1991. – р. 2.
  9. Академік Степан Рудницький – фундатор української географії [Academician Stepan Rudnitskyi: Founder of Ukrainian Geography] – Львів; Мюнхен: Ред.-вид. від. ЛДУ, 1993. – 223 pages. – (series: Монографії; Чис. 53).
  10. Соціально-економічна географія України: Навч. посіб. / За ред. О. І. Шаблія [Social and Economic Geography of Ukraine / Edited by Oleh Shabliyi] – Львів: Світ, 1994. – р. 3–5.
  11. Математичні методи в соціально-економічній географії: Навч. Посіб [Mathematical methods in Social and Economical Geography] – Львів: Світ, 1994. – 303 pages.
  12. Володимир Кубійович: енциклопедія життя і творення [Volodymyr Kubiyovych: The encyclopaedia of life and creativity] – Львів: Фенікс, 1996. – 704 pages.
  13. Володимир Кубійович: формула життя і чину // Володимир Кубійович. Наукові праці [Volodymyr Kubiyovych: The formula of life and activity] – Львів: Фенікс, 1996. – Т. 1. – р. 3–40.
  14. Професор Опанас Ващенко: вчений та організатор географічної науки й освіти // Професор Опанас (Афанасій) Ващенко / Упоряд. О. Шаблій [Professor Opanas Vashchenko: Scientist and Organizer of Geographical Science and Education] – Львів: Вид. центр ЛНУ ім. Івана Франка, 2001. – р. 7–23.
  15. Суспільна географія: теорія, історія, українознавчі студії [Human Geography: Theory, History, Ukrainian Studies] – Львів: ЛНУ ім. Івана Франка, 2001. – 744 pages.
  16. Львівська область: Географічний атлас [Lviv Region: Geographical Atlas] – Київ: Вид-во „Мапа”, 2002. – 20 pages.
  17. Професор Іван Тесля / Упоряд. О. Шаблій [Professor Ivan Teslia / Edited by O.Shabliyi] – Львів: Вид. центр ЛНУ ім. Івана Франка, 2002. – р. 5–6.
  18. Олена Степанів. Наукові праці. Есе. Спогади [Olena Stepaniv. Scientific Works. Essays. Memoirs / Edited by O.Shabliyi] – Львів: Вид. центр НТШ, 2003. – р. 10–128.



19. Професор Валентин Садовський / За ред. О.Шаблій [Professor Valentyn Sadowskyi / Edited by O.Shabliyi] – Львів: Вид. центр ЛНУ ім. І.Франка, 2004. – 305 pages.
20. Доктор географії Мирон Дольницький / За ред. О. Шаблія [Doctor of Geography Myron Dolnytskyi / Edited by O.Shabliyi] – Львів: Вид. центр ЛНУ ім. І. Франка, 2005. – р. 9–66.
21. Львівська суспільно-географічна школа (до 60-річчя кафедри економічної і соціальної географії Львівського національного університету імені Івана Франка) [Lviv Human Geography School devoted to the 60<sup>th</sup> anniversary of the Economical and Social Geography Department in Lviv National University named after I. Franko] – Львів: Вид. центр ЛНУ ім. Івана Франка, 2004. – 168 pages.
22. Блії Г., де, Муллер П. Географія: світи, регіони, концепти: Пер. з англ. [Bliyi H., de, Muller P. Geography: Realms, Regions and Concepts / Edited by O.Shabliyi] – Київ: Либідь, 2004. – р. 12–15.
23. Професор Володимир Кубійович / За ред. проф. О. Шаблія [Professor Volodymyr Kubiyovych / Edited by O.Shabliyi] – Львів: Вид. центр ЛНУ ім. І. Франка, 2006. – 378 pages.
24. Новітня українська суспільна географія. Хрестоматія / Упоряд. та автор біографічних статей проф. О. Шаблій [Modern Ukrainian Human Geography. Reader] – Львів: Вид. центр ЛНУ ім. І. Франка, 2007. – 1008 pages.
25. Академік Степан Рудницький / За ред. проф. О. Шаблія [Academician Stepan Rudnytskyi / Edited by O.Shabliyi] – Львів: Вид. центр ЛНУ ім. І. Франка, 2007. – 408 pages.
26. Професор Володимир Герінович / За ред. проф. О. Шаблія [Professor Volodymyr Gerynovych / Edited by O.Shabliyi] – Львів: Вид. центр ЛНУ ім. І. Франка, 2009. – 282 pages.

Nikolay Bagrov

## **Geography in the information world: tendencies, problems**

None of the living science has a definite and consolidated forever status in interscientific distribution of spheres of knowledge and social understanding of its role in human existence. In public understanding geography – is a science about the World space and humanity habitat (abode of a human-being, according to K. Ritter). Geography has been like this for ages, and only the physical frontiers of Oecumena on the one hand, and the penetration into the comprehension of rules of structure and organization of the World – on the other hand, historically changed their size.

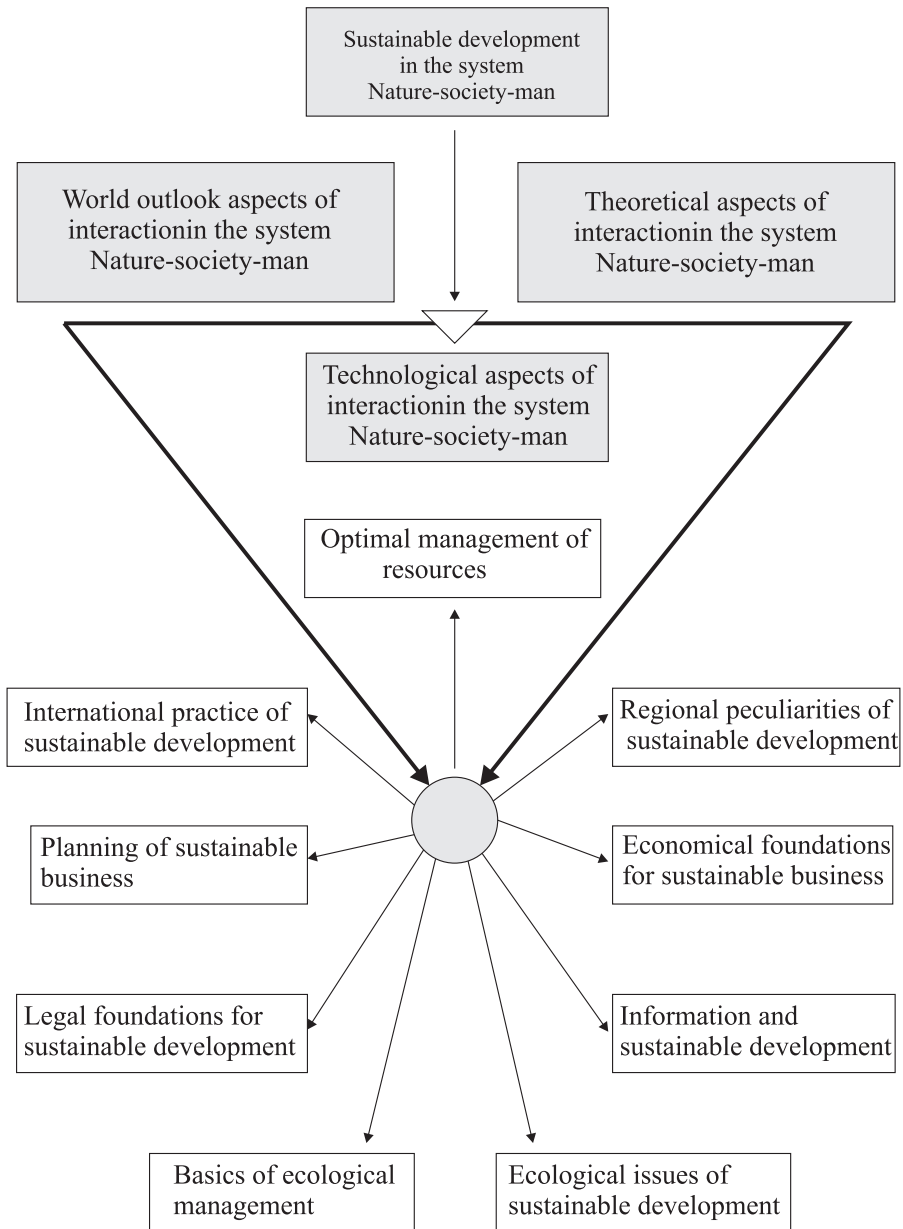
Beyond the science, in humankind perception, the attitude to Geography had been dynamically changing. It was wandering in the system of common to all mankind values from vanguard, socially highly claimed role up to rather retrograde position. In the latter case (and this position is now dominating in the educational Geography) it was dedicated exclusively to interpretation of what had already happened, and thus, had practically lost its sense and social value for humankind, which is mainly headed to the future.

So, what is “modern Geography?” And to what extent is the fundamentality intrinsically to it, perceived as a modern basis of sustainable development?

The author tried to give the answer to this painful question, which the modern science faces, several times during the decade, hoping to pay attention to its potential, which might become quite actual or important. In this case the Geography might return its positions in the vanguard of human knowledge (where it used to be).

Such are, in general, the basics from which the author proceeds, proposing the way of reforming the traditional Geography, the position of which has shrunk to that of educational discipline, in order to turn it into the Geography of the informational society (by purpose), and now into the informational Geography (in essence).





The circle in the centre shows the place of Informational Geography<sup>1</sup>.

Figure 1. Problem vision of sustainable development

Source: Own studies.

<sup>1</sup> Here and further on – the more detailed description of schemes – in the book by the author “Geography in the Informational World”.

At present there is the perception of the fact that the informational revolution is going on in the civilized world. It divides the world social-economic progress into two main stages, which have the spatial-temporal form: the industrial stage (industrial epoch) and postindustrial stage (informational epoch). These processes are studied by the sociologists and futurologists of all the world. Though they view the progress of society differently, in essence they come to one conclusion: the informational revolution in its depth and fatality outstrips the global revolutions of the past (agrarian and industrial).

Modern Geography (as well as classical and post neoclassical economics, sociology and other humanitarian areas of knowledge) is still based on the industrial model of the world. At the same time in the heart of these scientific systems new, "undercurrent" flows, reflecting the postindustrial world, have appeared and are rapidly developing. They come up to the surface every now and then, and quite often they touch the interests of Geography, as if trying "to shake it out of slumber", saying: wake up, look around, don't lose the chance.

The author has estimated the situation in proper time and laid the foundation of informational Geography in the end of the 20-th century, having demonstrated its significance in forming of noospherology and global problems of mankind (M. Bagrov, V. Bokov, I. Chervanyov, 2000), then - in the concept of regional geopolitics (M. Bagrov, 2002), and finally - in the informational Geography (M. Bagrov, 2005). The concept of informational Geography was reported at the Plenary meeting of the Joined Council on fundamental issues of Geography of the International Association of Academies of Science (AS) of CIS countries and it was approved by its participants<sup>2</sup>.

Each historical epoch presented the social request to Geography, which, in answer, generated as a rule a new paradigm and definite "module of knowledge" about the world in multidimensional matrix of world outlook. The Epochs of Great Geographical discoveries and Northern expeditions are generally known.

What can we foresee now, in the informational epoch, which the civilized world has already irrevocably stepped into? I think that the social order for the completely new research and development has taken shape. They are not addressed specially to Geography, but are in its bosom. Generally speaking they refer to the sphere of spatial-temporarily decisions on different levels: topical (local, native), regional and global. The world has become much more virtual than materially tangible. The

---

<sup>2</sup> M. Bagrov, Information Geography: Respond to the Challenge of the Epoch / New geographical Knowledge and Trends of Research / International Association of the Academy of Sciences: United Scientific Council.

notion of “noosphere” by Vernadsky has gained real contours: most part of the world values – are not tangible but influential informational flows, moving super governmental structures, that is, not existing, but felt at the same time.

The civilized world is getting used to think in a concrete way, to solve tasks, crossing the border lines of the sciences and states. Information and derived from it knowledge is becoming the main resource. The volumes of both of them are growing so rapidly, that not only their systematization via so-called “placing on the shelves”, indexing, cataloging and the like, but their actualization are strongly required.

Geographical spatial-temporarily design of such ranking (some non-formalized multidimensional matrix) should turn out to be in this respect most productive, since it has natural and really fixed carcass in the form of aggregate already mentioned and existing geographical objects and unambiguously calculated coordinates. Tasks of geographical character that are not characteristic for classical geographical research on account of lack even in the recent past of the corresponding methodical and technical possibilities arise and are solved. The call for the tasks of spatial-attributive choice, estimation, optimization is formed, which is possible only on the basis of high technologies of geo informational systems (GIS).

High level of responsibility, demonstrativeness, reproducibility and expandability of knowledge, that is, its introduction into definite technological chains, processes of generating of secondary, tertiary and higher levels of analysis (as if by analogy with the multi – stage relations of raw material – final product in material production) will be in demand. The accurate technological schemes of transformation of geographical information (spatially organized), non-admissible of arbitrariness and at the same time demanding qualification of specialists, reaching in its character that of an engineer.

This is how the business panorama of the modern world looks like. We should find the way to fit into it in the most natural way possible. If we achieve this, then the geographical knowledge will be included into computer systems of modeling and management, at the same time preserving the structure of the modern world, and will become the most important module in many commercial products, high technologies and the condition of success in many types of human activity – from the common choice of the best possible route in the modern city up to the network decision in the banking- financial sphere or in the choice of the partner – investor.

So, there are only two tasks in front of us:

1. If possible to estimate prognostically in what way the Geography is necessary in the informational epoch.

2. To define the place of Geography in solving of the specific tasks of informational epoch, that is, the content of informational Geography. And the decision is comprehended as strictly as any engineering activity, only more complicated and more responsible (which is, unfortunately not characteristic for the classical Geography in general, which at best accompanied decision making).

The most important task of this message is to motivate the deep reforming of Geography in order to attach it the high social status, adequate to its possibilities in the informational world.

To state the fact that Geography has lost in the eyes of society its main attractiveness – means to say nothing. More important is that it has lost, as they say now, its “development vector”. Reiterated reforming of its content without revelation of the necessary essence (for fear to lose some “purity” of ideals) turned out to be rather costly. But not only we have to pay for this. The rejection of public perception of the main positions of geographical professionalism have appeared, which in its turn gave birth in society to so-called geographical nihilism. Because of this geographical nihilism sometimes the whole world suffers. I’ll mention only the main positions:

- steady loss of positions of Geography in the secondary school;
- loss of quality of university enrollees (of intellectual class), entering the specialty “Geography” at institute of higher education;
- absence of the word “Geography” in political lexicon;
- modest representation of geographers in business structures, even if the activities of the latter could benefit from it.

These circumstances threaten the preservation of Geography, not saying about its development. In my opinion, it’s necessary to shift the accents in society from the general educational in Geography to the pragmatic ones. This is the root of the problem.

The change of Geography functions should be based on definition of its role as a scientific and educational discipline, not only shaping the outlook of a person and society, but using the methods of complex spatial-temporary analysis in interdisciplinary research, taking an active part in elaboration of the models of territorial organization, in providing of territorial management and development. All these still exist, but it loses its social significance, appearing in the shade of more pragmatic values.

I’d like to emphasize (after the mentioned book): the notion of allocation of national economy has transformed (first of all of industry), meaning now not the generally known carcass of economic objects and transportation networks, but the Geography of informational flows and

corresponding virtual networks, more and more ruling the world. This is our perspective.

Similar to the leap forward of applied mathematics two centuries ago, having held the theory of graphs, we have to study the routes, those "valves" and "membranes", which now are regulating the informational (and in economical terms – also financial) flows in the networks mentioned above, like the dispatchers in the airports every day solve the momentary tasks of operational control, avoiding the catastrophic situations in the zone of their responsibility. And our "airspace" is sometimes the whole world.

The role of Geography as a complex discipline will grow in the solution of real interdisciplinary tasks, including those ones, which haven't the fixed territorial matching, but at the same time are "naturally spatial", for instance, territorial management, control, fiscal policy, etc. The geographic (geoinformational) providing of the system of management of territorial development on all the levels of spatial-temporary organization of the World of relations: nature – industry – society – from the local to the global is really becoming the core of the "geographisation" of activity on the informational basis.

Modern business world – is the twinkling system, where the "lights" – are the moving points of growth, between which the "sparkles" of mutual relations appear, warmed up by the "short circuits" in technologically highly developed "points of growth" and innovations mainly in these points.

Even non-economics systems in the informational society – culturological, ethno-national, and even electoral, were influenced by such man-caused innovations. For them the aspiration of globalization for homogeneity in everything, for universal standard, for leveling of traditions – is the undermining of their roots, which is of serious danger, if on the basis of synthesis of man-caused and ethnonational systems new models of development are not found.

We should not only observe, but also form the social order from the side of practice to the science of spatial systems in general – if it is obvious that these notions of space, availability, payment for the distance, have significantly lost their stability, "sanctified" by the many – centuries experience of activity of ethnoses, countries and systems. This is quite clearly stated in the famous concepts of geopolitics.

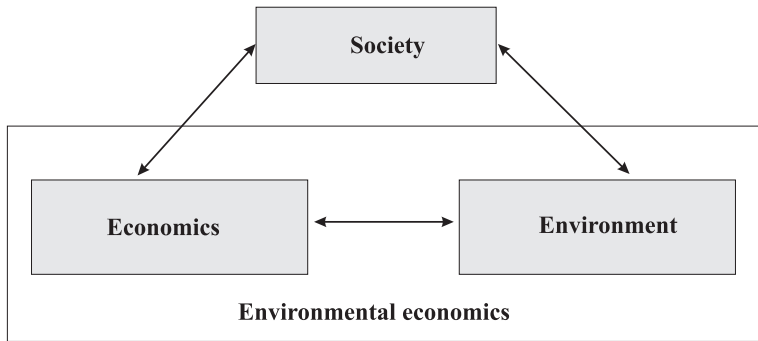
The problem in question is the possibility to be in the vanguard of the corresponding new knowledge – geogenesis as the skill to use the aggregate of spatial properties, generating the structure and functions of the modern world, for "generating" and getting real tangible benefit. It is clear conceptually, but not so easy in reality.

It is common knowledge what is the rent for natural resources (especially for the land and the Earth's interior). But it's only the material aspect of the considered problem of geogenesis. Less aware we are of the rent for location, ownership, knowledge of the territory, for the better technology of use, or for the attractiveness and cleanliness. We know about it, but don't realize to the full extent the profit from the beautiful panorama or some special curve of the coast. And on the more general level - there are the whole countries fairly well-to-do just because they realized earlier than others the importance of such "trifles" as the beauty of the territory or the cleanliness of environment.

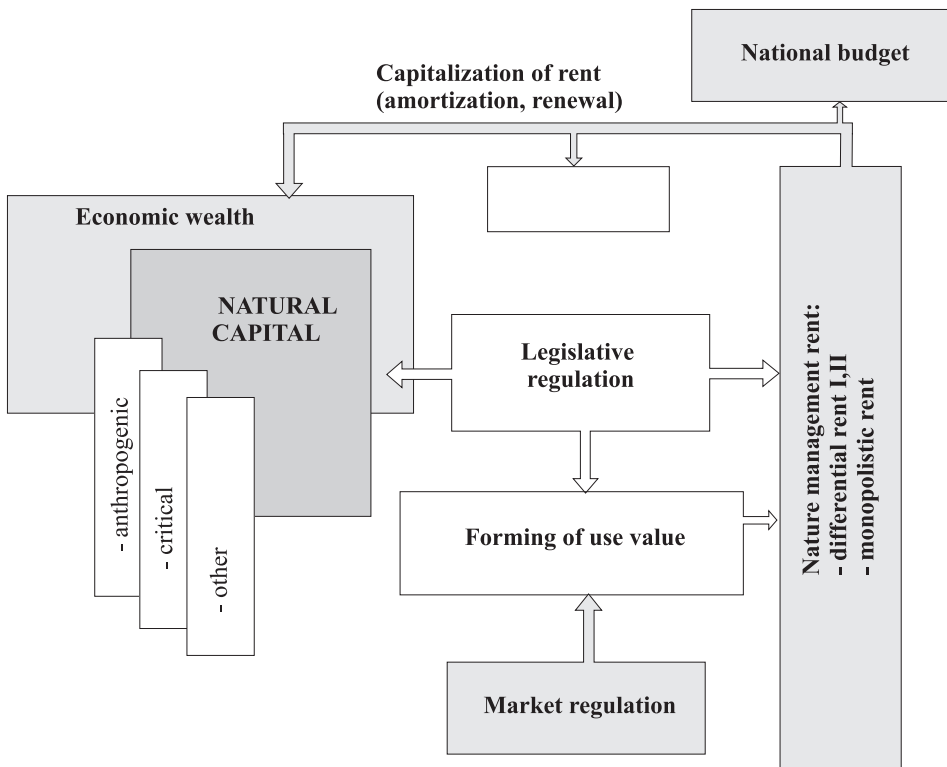
Social economics appeared in economics as a new paradigm of viewing a man in the economic system and in my opinion it's a very productive trend in research. Tourist business is developing rapidly. But all these are the "nipped pages" of the classical social Geography (Man Geography), which we have read and re-read many times, but still couldn't understand and estimate as our perspective.

The reason for this situation from my point of view is that there is no corresponding research mechanism in our science, no skills or taste to aspire to become the real force of social development. That's why we should immediately and categorically put a question about the creation of informational Geography with the corresponding attributes of modern science - first of all the presence of the method of concrete analysis and decision making. Further on I'll try to outline my vision of the contours of informational Geography.

Geography is called up by the social division of labour to turn more and more to the so-called "engineering of space". Present manufacturing system of the world is as if "breathing", "moving", sometimes spilling form one region to another, and from one place to another following the ideologists, staff, market conditions and other assets of the informational society. Modern production is free since it doesn't have those "anchors" (industrial giants, production infrastructure) due to which the production was fastened and then held for centuries in one place: there is no concentrated machine production, the industrial capital equals to the banking capital, often there is no industry as such in our traditional understanding, is rather virtual, and the labour force is based on "home tasks" and is controlled by managers. Geography has to learn to "breathe" together with the world. In order to achieve this it's necessary to realize the models of new geographical space, which would be competitive with the models of regional economics.



A)



B)

A) Position of environmental economics relative to the triad “economics – society – environment”.

B) Natural capital and rent as the “pillars” of sustainable regional development.

Figure 2. The natural foundation of the regional development on the basis of environmental economics concept

Source: Own study.



The role of informational Geography in the society should change radically compared with that of classical Geography, which would entail the consolidation of the new paradigm in Geography.

Probably, the following notions would be at the heart of this paradigm:

- attitude to the territory as to a complex resource, which could bring profit by successful use of the “function of place”;
- attitude to the spatial information as to the most important social product, and at the same time the criteria of social-economic development, object and means of labour;
- comprehension of the fact that the essential part of information is caused by the geographic differences and is of geographical nature (and consequently, should be reflected by the adequate means – GIS technologies, for instance);
- conviction in the defectiveness of the unprofessional analysis of the spatial-temporary structures of informational society (I’d like to stress again – mostly in virtual and ephemeral structures), without using the geographical vision of the subject, skills and methods of geographical analysis, even if they were raised in the past epochs.

The most important task of the informational Geography is to become the natural part of the business world.

The purpose: to serve the main form of structuring and using of spatial-temporary information and concrete-scientific knowledge about the world in different tasks, arising in the informational society (mostly in the world of business).

The means: substantial store of knowledge, concepts, methods and ways of geographical analysis/synthesis of spatial-temporary regularities, multiplied by the progress of the high technologies.

Relations with other sciences. First of all, for sure these are the relations with the classical Geography. They are simple and complex at the same time. They are simple – because we view the informational Geography as the stage in development of the classical Geography. They are complex – because the paradigm of the science is changing, and this means first of all radical change in public consciousness and the acute need in retraining of the professionals. The economic potential of the regions does not depend on the advantages of geographical position and availability of natural resources any more, but on the ability of the regional society to take into account these individual peculiarities, in particular in assessment, prognostication and choice of the development trajectory, including the learning of various innovations. The latter one, in its turn, is determined by the population quality of the region – level of education, health, life



conditions, informatization of activities. Here is the junction (interaction zone) of the informational Geography and sociology (in the original meaning of this word).

The relations with geopolitics, ecology, geoinformation science might become the most painful ones, since they don't have the "critical mass" of geographers-professionals.

The relations with GIS-technologies might become the most promising. It's not essential for business (which is one of its branches) how you are called, it is much more important what you can do. But you should be able to show this, first of all by demonstrating your professionalism in the sphere of informational Geography.

I could set several of such examples, not pretending to the completeness of coverage of all that was said in the paradigm-methodological aspect.

Our university laboratory of sustainable development contributed significantly to the development of the informational Geography. It was founded in 2001 on the eve of opening the Chair of UNESCO "Ecological energy and sustainable development", founded jointly with the Kharkov University (this was the first such experience of UNESCO). For the 5 years of its existence more than 20 projects were worked out at the Chair and successfully defended in front of the customers (both governmental and business structures) in the sphere of territorial management. These are the following tasks:

- environmental-ecological network design;
- rational arrangement (mostly environmental - recreational) of territories that used to be military grounds - there are many of them and the management of the territories;
- estimation of the natural resources, especially in the non-material sphere, which is vitally important for the Crimea: recreation, tourist business, historical-cultural objects, etc.; the completely new principles of organization of recreational sphere, which is the most acute /burning national economic issue for Crimea;
- participation in the GIS projects on dataware of territorial management, geoecological audit, regional development of the alternative energy, etc. Here our results are the most impressive: besides the specialization of the author in geopolitics and territorial management, it is also essential that Crimea has its own government and our university plays the same role for the leaders and officials here as Stanford for the American top-managers.

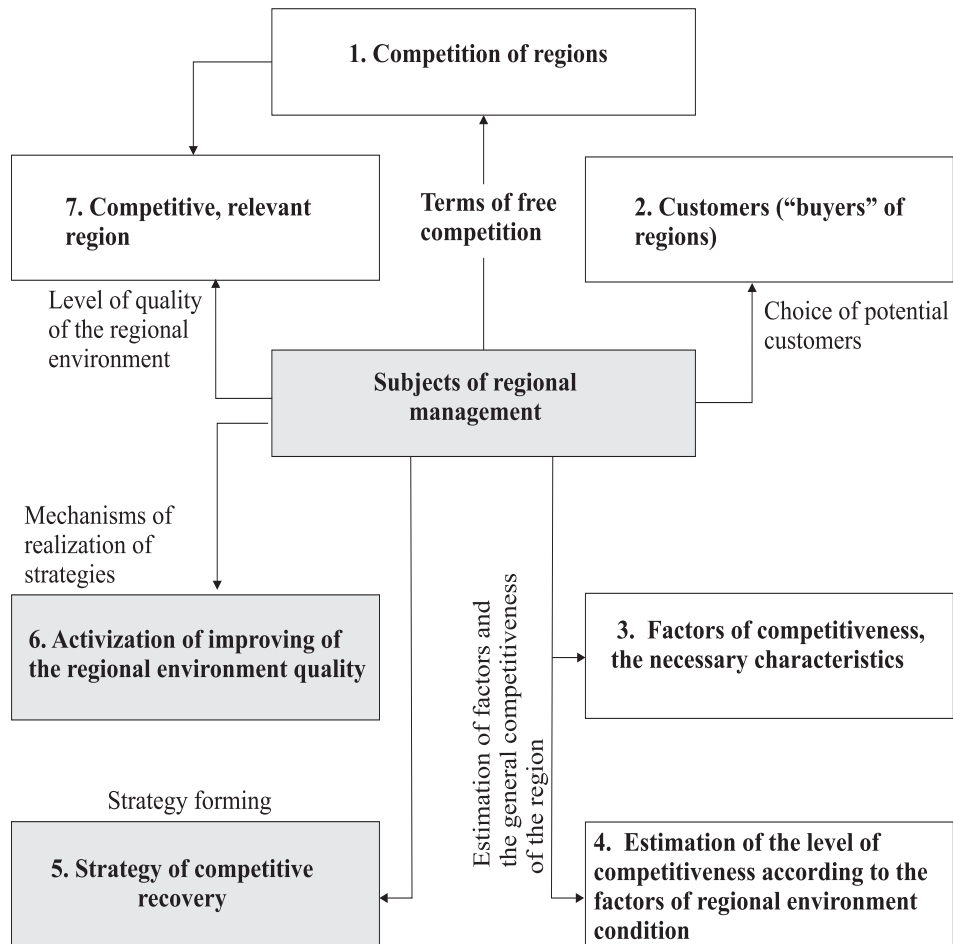


Figure 3. The place of geographical information in the system of competitive recovery of the region (geographical blocks are marked out)

Source: Own study.

This is the place of Geography in the system of knowledge, cognitive activity and practical tasks on providing the sustainable development of mankind in the end of the XX century.

### References:

- Bagrov M., 2005, *Geography in the Information World*, Lybid, Kyiv.
- Bagrov M., 2002, *Regional Geopolity of Sustainable Development*, Lybid, Kyiv.
- Bagrov M., Bokov V., Chervanyov I., 2000, *Earth Science, Textbook*, Lybid, Kyiv.

Kostyantyn Nemets, Ludmmyla Nemets

## **Information-synergetic paradigm of social geography and the problem of sustainable development**

Changes in natural environment under the influence of economic activity of man are impressive in scale. But even more impressive and dangerous are consequences of these changes. Imbalance between anthropogenic impact and natural systems ability to self-regeneration has become so critical that the pathway of social geosystems can become incompatible with the existence of the «rebel» – man. Today we are already witnessing global processes of natural systems transformations, their inability to catch up with extremely fast development of the society and its nature-transforming technologies. We can imagine what these transformations can lead to, it is much more difficult to influence on this process so as to give nature its inherent properties back without restraining the society's forward development.

This problem, which is of complex character, has been studied by prominent scientists as far as since XX century, but positive decision has not been found yet. Its solution in general is impossible within the limits of only one branch of science, because maximally broad interdisciplinary approach is needed on the basis of synergetical paradigm. Therefore complex researches of the indicated problem are very urgent and have to accelerate the development of a concrete program of society's activity in this direction, in fact an urgent requirement has become obvious in acceptance and realization of rapid and active measures to correct a critical situation and control the functioning of sociogeosystems of different levels.

World community realizing a new challenge, disturbed by the state of relations between society and natural environment, was able to develop and accept a concept of sustainable development at the end of 20<sup>th</sup> century (Rio de Janeiro, 1992), which does not have an alternative even today. There are a lot of determinations of concept « sustainable development», which represent separate sides of social life. From positions of social geography we understand (L. N. Nemets, 2003) under sustainable development

a forward development of a social – geographical process in given parameters, which make impossible occurrence of catastrophic and dangerous phenomena in sociogeosystems in management of their subsystems on the basis of noospherically oriented integral mentality of society to provide harmonious and optimum development of social and natural subsystems with the purpose of maintenance of favourable life conditions of present and future generations and further transition to the state of noosphere. For this concept to grow into the program of practical actions in every country, it is necessary to go into a detail taking into account the concrete state of society, development of economy, economic development, a state of information resource and efficiency of its use. As it has been shown in work (L. N. Nemets, 2003), the decisive factors of transition to strategy of society's sustainable development is transformation of people's mentality, organization of education, formation of noospheric world view and cardinal changes in social consciousness in relation to attitude toward natural environment. A grandeur and scale of this task does not have precedents in history of modern civilization and require a detailed system research of all peculiar problems of interrelation between society and nature. Consequently, proceeding in the broken equilibrium between natural and social systems is possible through their management, capable to provide the coherent action of all subsystems and components in relation to this purpose. And for this purpose it is necessary to create such phase space in which relevant components and ties of all subsystems will serve as co-ordinates.

Today many sciences try to investigate different aspects of the indicated problem on interdisciplinary basis. Because the threatening changes of natural environment are mostly of global spatial character, substantially influence on development of society and that is why are the object of research of social geography, it is necessary to find out the most general conformities to the law of this process and use them for more purposeful management all the processes, including changes in social consciousness in social systems of all levels. Social – geographical researches of the problem of interrelation between society and nature are substantially complicated by an extraordinarily large difference and variety of the object of research – sociogeosystems. Determination of this concept is offered in the paper (L. N. Nemets, 2003): «*Sociogeosystem is a heterogenous system, which contains different by the level of generalizations and hierarchies social elements or subsystems, as well as technogenic, abiogenic and biogenic elements (subsystems), interrelated via the flows of matter, energy and information in geographical spatial – time continuum*». From the above determination it is clear that sociogeosystem is one of the most general system concepts of social geography to-date and unites natural,

economic and social components with stochastic interrelations, multilevel hierarchical structure and almost unsynchronized dynamics. From the point of view of possible formalization any sociogeosystem more often is complex, opened, badly organized or self-organized, guided outwardly or by the self-managed system with plenty of direct and reverse connections.

In researches of such systems the use of information approach is promising, which allows to take into account not only power exchange of matter between natural and social systems but also exchange of information. Information exchange in natural and social systems is the most general process (K. A. Nemets, 2005a), due to which different by physical nature processes and phenomena can be equivalently compared in terms of information theory. It enables to create a universal information scale by which it is possible to «measure» different subsystems and components of sociogeosystems. Most suitable for this is the use of different modifications of information entropy which is the measure of vagueness or disorganization of the system. Opposite to it is a value of structural information.

In the process of systems information interchange or with an external environment they simultaneously accept and give information. Depending on the features of this process we determine three basic types of information exchange: managing, adaptive and cognitive (K. A. Nemets, 2005a). Thus three situations are possible on principle:

1. The system accepts and gives identical amount of information without accumulation or loss of its own information. In this case it is a simple translator, does not change its condition and is indifferent in the process of information exchange.
2. The system accepts more information, than gives. Thus, its organization increases – it progresses, its own information content grows. But an external environment increases entropy.
3. The system gives more information, than it receives. In this case its entropy and system degrades, and environment becomes more varied.

Going out from the noted features of information exchange, it is possible to draw a conclusion, that the systems, capable to accept and uptake greater information content, reach progressive development due to other systems. In general theory of the systems this position is postulated as a principle of systems competition. Consequently, in a complex system (for example, multi-system nature management) part of its components or subsystems catches more information and because of this increases its structural organization, improves itself and develops progressively. Other subsystems, losing their own information, degrade. In modern sociogeosystems of different hierarchical levels it is social subsystems that accumulate

information more rapidly and develop quickly due to it. The natural systems created during geological time and have considerably slower dynamics, develop slowly or degrade under the influence of active social components at the surplus anthropogenic load. An unbalance between the social and natural systems in the process of information exchange, obviously, is one of important factors in the development of global social – geoeological crisis.

Thus, comparing the dynamics of information entrophy or structural information of separate components in sociogeosystem, it is possible to draw a conclusion about the direction of their development and correct management through technogenic subsystems or elements in accordance with the set purpose. In conditions of increasing global social – ecological crisis harmonization of mutual relations of society and natural environment must become such a purpose through formation of noospherical mentality and world outlook.

Modern society is pierced by the streams of various information, which predetermines dynamics and direction of its development, condition and consequences of interaction of separate society as well as their influence on natural environment. A great number of factors influence on formation of separate individuals' mentality, society on the whole (natural geographical conditions, geopolitical situation, economic features of society, ethnic-cultural, religious, historical traditions etc.) (L. N. Nemets, 2003). Many of them are external conditions of mental options formations which need to be taken into account and used for achievement of an ultimate goal. But there is a group of factors which can and must be managed by society for direction and process control of the new approaches formation to nature management, i.e. they are technological constituents. Such factors include information resource which is an integral element in the system of society's information management. In the conditions of transition to information society this factor acquires enormous influence on all institutions of social life, including social awareness.

As has been shown in (K. A. Nemets, 2005a), in all scenarios of interaction between society and natural environment there is a continuous process of information transformation according to the scheme: **structural**>**monitoring**>**operative**>**managing**>**structural**, in which more developed society is in a position to convert the greater part of structural information of the natural systems into social (scientific) information which plays a decisive role in social progress.

The necessity of a special detailed analysis of social information from the point of view of its influence on transformation of public consciousness is predetermined by many reasons. First of all, society becomes determinative in sociogeosystems' development and not only in social and economic spheres. As it has been noted above, serious changes in a global



sociogeosystem require reconsideration of the role of “human factor” in the subsequent evolution of society and biosphere on the whole.

The point is that economic and technological feasibilities of humanity have stepped over the threshold of sensitivity of the natural systems a long time ago, many of them are already actively or passively managed by society. The trajectory of development of such systems more and more deviates from a natural trajectory, optimal from the point of view of biosphere evolution, which threatens to deepen global social – geoecological crisis. It means that activity of society becomes in a global scale the order parameter in understanding of G. Khacken, who was the first to introduce this concept to define such functioning condition of a complex system, when one variable (or a few) determines the whole behaviour of the system. G. Khacken showed this on the example of laser operation, although the parameters of order are also found in social systems. It can be, for example, dominating ideology, national ideas, leading political ideas of some parties etc. Some facts are known from history when quarreling societies united for a fight against common threat. In this case it creates the parameter of order which subordinates all other interests and problems.

Approximately the same situation is noted presently in the relations of society and nature. Presently the parameter of order, predetermined by economic activity of society, which in its present state is a serious threat for the evolution of biosphere, is formed in global multi-system of nature management. A biosphere is so sensibilized to fast increase in human activity as to the scale of natural systems disturbance, that all complex of parameters of society's influence forms the unique management variable which prevails and determines the character of biosphere development. The essence and structure of this variable are still to be investigated in detail but it is already clear, that the main task of society is in reorientation of anthropogenic order parameter vector so that attractor, which the biosphere development trajectory will gravitate to, was acceptable both for biosphere and for humanity. The idea of noosphere in these terms can be formulated as follows: *society forms the parameter of order which operates in the system “biosphere is society” and sends the trajectory of its development to attractor, which corresponds to harmonic connection of interests of humanity and nature.* Then management of the natural systems, and more precisely, multi-system “biosphere – society” becomes motivated by non-conflicting interests of nature and society, the vectors of which can be optimized as systems of aims (L. N. Nemets, 2003). In this case it becomes possible to set quantitative descriptions of management quality of sociogeosystems and define the criteria of its optimization.

The required condition of noospheric reorientation of the vector of anthropogenic parameter order is a change of mental options of humanity,



transition to position of natural centrism and complete waiver of moral "tamer of nature". This stereotype which results from anthropocentric approach to nature management has been appropriately formed in human consciousness for many millennia of fight against nature, firmly fixed in public consciousness and has determined aggressive consumer strategy of nature management for many millennia to come. In accordance with this approach everything in nature and society should take place in the interests of man. In social issues and in the problems of society's development application of anthropocentrism principle, as aspiration to operate for satisfaction of people's urgent necessities, keeping human rights, social justice and equality rights, without harming anybody, is fully acceptable and necessary. It is obvious that social strategy of society must be built taking into account this principle. However, when this principle is applied to nature management, i.e. in interrelations between society and nature, a lot of contradictions arise which lead to negative, and sometimes tragic consequences.

Firstly, it is hard to understand what action in nature is in the interests of man. It is clear that satisfaction of any social necessity in any case takes place in natural environment - humanity is simply doomed to nature management. A question is how this necessity is satisfied. Following the principle of anthropocentrism, natural resources are extracted not thinking about the future, individual biological species which interfere with man in his economic activity are destroyed, a lot of other things are going on in nature which that inflict it enormous harm, but are justified by the necessity to satisfy rapid and doubtful demands of man. In contempt of natural equilibrium in the natural systems, society removes them from the state of homoeostasis and by this creates itself a number of problems, because a man as well as other biological species, can not live out of nature and sooner or later the changes in the state of natural environment will affect man. In other words, descendants will pay for today's unwise actions of our generation.

Secondly, man occupies his own ecological niche in a biosphere and objectively has no advantages over other living organisms. All biological species compete in nature, but their appearance, extinction, spatial and time distribution are subjected to general objective laws of biospheric evolution. These laws foresee optimum correlation of random and determined processes, due to this a biosphere becomes more complicated, accumulates information and progresses. Man, having powerful facilities to influence on natural environment, interferes into an action of the mentioned laws, violates natural equilibrium and changes direction and dynamics of evolution of biosphere. Economic activity of humanity despite natural laws is a powerful destabilizing factor to which a biosphere is

forced to react according to the principle of Le – Shatel'e by counteraction up to elimination of the source of excitation – man, as a biological species. From this point of view, it is possible that global social geoecological crisis is the initial stage of this process. To stop this counteraction, nature management should be carried out not contrary to, but according to the laws of nature development, i.e. society must acknowledge the parity of interests of all biological species, including man, and to take it into account in its activity.

Thirdly, there is a very deep moral aspect in the problem of relations harmonization of society and nature. Man has appropriated himself a right to manage fate of other biological species, as a result many hundreds of thousands of types of flora and fauna disappeared because of his fault. It is amoral in relation to nature. An analogical situation often arises in society in the activity of different flows, groups and sects of reactionary ideologies (racism, nazism, chauvinism, etc.). For example, race discrimination ideology results in ethnic and racial conflicts in which people die. A public moral at all levels condemns such actions and considers them a crime against humanity. So why, condemning these ideologies in society, man acts in accordance with them in nature? The policy of double standards in relation to public and natural objects testifies to immaturity of moral foundations of society, about the necessity of their perfection and development to the level deserving a clever creature and requirements of conception of sustainable development as a global paradigm of a new millennium.

Fourthly, in co-operating with natural objects man assumes realized and unrealized actions, but a role of the conscious, the clever in such co-operation grows gradually. Consequently, man begins to understand destructive ideology of "tamer of nature" and necessity of its transformation into ideology of co-evolution with natural systems. Today, when global social ecological crisis has become a reality, majority of progressive humanity of the planet already understand inevitability of main choice for humanity: whether we radically change the attitude toward nature, or we will perish. The main contradiction of biosphere is between biological and social essence of man – under the influence of clever human activity it must become not antagonistic but dialectical – such, that stimulates progress of global sociogeosystems. For this purpose it is necessary to cardinaly change human qualities, mentality of global society, teach sense of responsibility at personal and global levels for everything done in nature.

Consequently, a root of all contradictions between society and nature is in society. Therefore possibilities of overcoming these contradictions are also concentrated in society but they need to be found or created. Social information and information resource of society have a determining

influence on its formation and change of properties, systems of values, aims, social necessities, etc. as a specific and extraordinarily important factor of social development. Various information flows which determine all events of public life are formed and function in society. Social development is found out, in particular, in greater efficiency of society. From positions of general theory of the systems it results from the principle of information accumulation (information resource) – its variety grows with the increase of the information volume accepted by society. It means that every individual, public and society on the whole due to development of communication networks generate and get more various information, than before. In these conditions restructuring of public consciousness will accelerate and be carried out more effectively.

To better understand essence of modern problems of humanity, it is necessary to consider the evolution of biosphere (global sociogeosystem) from the point of view of information exchange. From positions of information approach we select a few stages in development of biosphere (global sociogeosystem) which are differentiated by original phase transitions – its high-quality changes and restructuring (K. A. Nemets, 2005a; K. A. Nemets, L. N. Nemets, 2006).

First stage – *lithogenesis* – is characterized by development of geological cycle of matter, formation of the mineral systems and lithosphere. Its duration has not been determined but it is not less than 4.5 billions of years. Basic essence of this stage consists in formation of mineral substance of Earth. With complication of inorganic (mineral) compounds structure their variety grew and structural information contained in them increased. Thus, relatively small informative capacity of inorganic compounds at different hierarchical levels of geological structures – element and isotopic composition, crystallographic parameters of minerals; petrographic and lithologic characteristics of rocks; micro – and macro structural elements of geological masses and structures in the course of time became an obstacle in subsequent growth of intensity of accumulation of structural information. General evolution of matter in a global geosystem required faster growth of structural information content, which inorganic compounds already could not provide. Consequently, there was a demand for a new, more capacious carrier of structural data. It has led to formation **of the first informative threshold** and stipulated **the first phase transition** – from relatively simple inorganics an organic compound was synthesized by chance which became the nucleus of the future biological systems.

Second stage – *biogenesis* – began approximately 3–4 billions years ago. Essence of this stage consists in formation of biological cycle of matter, development of biosphere and biological systems able to accumulate considerably more structural information compared to the mineral systems.

According to the laws of evolution the structure of biological systems had been continually complicating accompanied by permanent perfection of mechanisms and facilities of structural information accumulation. A biosphere spatially intersected with other geospheres and in the process of mutual adaptation actively influenced on their properties. The matter of lithosphere, hydrosphere and atmosphere was engaged in the biological cycle of matter, rocks of biogenic origin appeared, under the influence of organic matter gas composition of atmosphere and chemical composition of water of the World Ocean, surface and underground waters, etc. changed. A biosphere changed intensively: a biological variety grew quickly, evolutionally there appeared new biological species, more complex and able to receive, accept and keep greater volumes of information. Biological species less adjusted to receipt and processing of information in the process of biospheric evolution died out. Rapid development of the biological systems resulted in the saturation of information capacity of biosphere that began to slow down its evolution. There arose a necessity to have a better biological species capable to obtain, save, transfer and process greater volumes of information by principally different mechanisms. Thus, **the second information threshold was formed** which stipulated **the second phase transition** – appearance of man.

The third stage of information development of global (socio) geosystem – *sociogenesis* – began approximately 40 thousands years with appearance of primitive man. From the point of view of the concept of evolutionary accumulation of information this event in the history of global sociogeosystem development was exceptionally important. Only an intellectual creature was able to form the artificial (anthropogenic) cycle of matter and make the process of information accumulation independent of properties and information capacity of natural transmitters and depositories of information, as it had been before its appearance. Information essence of sociogenesis has been considered in detail in (K. A. Nemets, 2005a), where it has been shown that almost all historical time of humanity existence was spent to make it real force, able to influence on global processes. Extraordinary power of modern anthropogenic cycle of matter and energy, which engulfs enormous space of technosphere, results in real stressing the contradictions in interrelations between society and nature, causing local, now even global social geoecological crises, creates perceptible disbalance of biosphere. Appearance of social superstructure above natural systems gave the biological type of *Homo sapiens* in the biosphere new quality and «dual citizenship» (status of biological and social creature) and became a breakthrough in the process of information accumulation.

Achievement of the state of closed global sociogeosystem, predefined by formation of global informative structures is accompanied by progressive

growth of processing speed and information generation which is the main factor of society's development acceleration. Man already can not manage the flows of information in a natural way and is forced to use artificial facilities, technologies of its processing, hybrid systems, develop artificial intelligence, etc. The information capacity of artificial transmitters and facilities of information storage today are practically unlimited, but it appears that it not enough. It is necessary to increase the speed of information processing because technological processes become more rapid and require adequate decisions. All this in future requires application of considerably more effective technologies of information processing, super fast computers and intelligence systems because man already does not have time to realize and comprehend the enormous volumes of operative information. Thus, *noogenesis started* with development of industrial society, i.e. with beginning of intensive increase in information volume in social managing systems. Presently **the third information threshold** related to limits of processing speed of information is being formed in a global sociogeosystem. This unavoidably will result in **the third phase transition** – mass creation and application of the intelligence and transition systems in the future of biosphere in the state of noosphere. Humanity, exempt from the necessity of conservative processing of information, will get all possibilities for physical and spiritual perfection and will be able to concentrate efforts on solution of strategic problems of interaction with natural environment. A major problem already is transformation of consciousness of man. Technical progress should take place only on the basis of increasing role of spirituality, education, and formation of noospheric mentality which must provide the awareness of human's responsibility for the development and state of biosphere (L. N. Nemets, 2003). Creating technically perfect system of sociogeosystems management it must proceed from new, noospheric by content aims of nature management which foresee the parity of interests of society and biosphere. On the basis of this the management of sociogeoprocesses has to be carried out at all levels, beginning from nature management (a solution to environmental problems in multi-systems of nature management) to socio-natural and social processes (prevention of local, regional and global dangerous phenomena and social conflicts).

In our view, it is possible to formulate the following information principles of interaction between society and nature (K. A. Nemets, 2005a; K. A. Nemets, L. N. Nemets, 2006).

*Principle of conformity of level of society's development with its volume of information resource.* According to this principle development of productive forces of society determining the level of its development, depends on an information resource. Technological and technical equipment of any production or economy on the whole is determined by the level of



scientific development, i.e, by accumulated scientific information content. On the other hand, the system of knowledge has a clear structure and logic of connections between separate industries, its development and expansion submit certain conformities to the law, which represent dependence of this process including on the current volume of scientific information. In it has been showed how the changes in the executive system of society and their efficiency depend on the rates of growth of an information resource which is a catalyst and original indicator of community development (K. A. Nemets, 2005a).

***Principle of mutual acceleration of development of socioecosystem and accumulation of information.*** This principle directly stems out from the previous one. The change mechanism of the executive system of society is inevitably accompanied by strengthening of generation and accumulation of scientific information. The search of new effective technologies and technical means of production stimulates scientific research which accelerates public progress. From comparison of rates of public progress with the speed of information accumulation it is seen that their tendencies coincide, but an information resource grows faster which is especially noted from the second half of XX century, when scientific-technical revolution began.

***Principle of optimum conformity of satisfaction level of social necessity with accumulated information content.*** According to this principle satisfaction of any social need is possible only when there is available information resource in society which is accompanied by obtaining of some «equivalent» quantity of information from the natural environment. Every social need can be actualized and satisfied only at available proper technologies and technical means providing it which can be created at a current level of information resource. It is necessary to note that appearance of some social needs is accelerated and even provoked by scientific –technical feasibilities of society. Probably because of this many social needs of modern society are unjustified and surplus.

***Principle of equivalent information transformation is in nature management.*** Information in a multi-system of nature management, passing through the chain of management in which society is a subject, natural system is an object, and economic structure is a management means, undergoes transformations according to a scheme: ***structural – monitoring – operative – managing – structural*** information. Thus its transformations are carried out continuously and on every stage of transformation information changes quantitatively and qualitatively. For example, on the basis of monitoring and operative information society generates scientific (refined, cleared from casual influences) information which fills up the informative resource of society. Plenitude and correctness of information

transformation are substantially influenced by quality of channels of information transmission in a management chain. We believe that modern global social ecological crisis is predefined by imperfection of the direct and indirect channels of communication in a multisystem of nature management. To improve their efficiency it is necessary to change society's ideology of relation to natural environment, in particular, to revise the systems of aims, substantially extend the incoming and outgoing vectors of the natural systems etc.

*Principle of successive growth of valuable information volume* determines growth in time of society's possibilities to obtain and process information coming from natural systems. With development of technologies and technical means of scientific researches, perfection of monitoring networks the society received and acquires more information. In accordance with it the volume of valuable information which is used in planning and organization of nature management increases. Thus, society grows an information resource gradually, which allows, firstly, to expand the volumes of the acquired information and, secondly, to use greater information content for satisfaction of social needs. Such mechanism of informative resource increase together with other factors determines the acceleration of this process and, as a result – an acceleration of social development.

*Principle of successive efficiency growth of the executive systems and diminishing of the natural system's perturbation.* Growth of information resource results not only in the acceleration of social development but also in the high-quality changes of technologies and technical means of nature management. In accordance with this new, improved executive systems of society are being developed and implemented directed to diminishing of the natural system's perturbation and limiting anthropogenic influence. It is a pre-condition of origin of noospheric strategy of nature management, introduction of which will allow to raise a question not only about diminishing of anthropogenic influence on the natural systems but also about renewal of their primitive state, as is foreseen by conception of sustainable development.

*Principle of successive discrete transformation of the executive systems.* The executive systems of society in a very narrow time domain correspond to a current informative resource and urgent social needs. In the course of time they begin to lag behind from a growing information resource and become obsolete that results in development of the proper contradictions in the system of public production. These contradictions can be partly relaxed due to modernization of some elements of the concrete executive system, but on the whole it stops meeting the demands of society and requires a change to a new executive system, created on the basis of new volume of the accumulated information. Thus, the executive systems of



society go through periodic changes depending on growth of information resource. In this process there is contradiction between discrete character of transformation of the executive systems and continuous accumulation and acquisition of information (K. A. Nemets, 2005a, 2005b).

*Principle of recurrence of satisfaction of social needs* follows directly from the previous one and determines periodicity (recurrence) of satisfaction of social needs predefined by discrete transformation of the executive systems. Functioning of every executive system regardless of its aim and place in the system of public production is divided into three basic phases. The first phase engulfs the period of adaptation of the new executive system to the existent terms of production and is characterized by gradual growth of its efficiency. In this phase contradiction is gradually untied between the high level of the executive system and current scientific- technical level of public production. Second phase – phase of the greatest efficiency of the executive system – characterizes its compliance with the level of production, when contradiction reaches minimum and the most favorable system's operating conditions set in. In the third phase, when contradiction develops between the level of the morally obsolete executive system and current queries of public production, efficiency of the system begins to diminish and because of this there appears a requirement to change it. Thus, satisfaction of social needs is carried out recurrently – in accordance with the discrete change of the executive systems of society, which, in its turn, is determined by correlation of information potential of the given executive system and information resource of society. The cyclic phenomena in economy, social life, science, art, etc. have been studied in detail in many literary sources and have different explanations. In our view, all of them are of the unique informative nature – incessant growth of information resource of society requires discrete adaptation of all mechanisms and institutions of society's development (K. A. Nemets, 2006).

*Principle of successive change of strategies in nature management.* A successive change of the executive systems can be realization of one strategy of nature management, i.e. fundamental scientific – technical basis of these systems remains unchanged. Scientific revolutions generate principally new technical solutions as a result high-quality character of public production changes and foundation is created for formation of principally new executive systems. It is possible that such large intervals of existence time of new scientific paradigms and theories correspond to new strategy of nature management. Its realization is carried out through the chain of successive changes in the executive systems, each of which executes a set tactical task. It is necessary to note that changes in information resource unavoidably result in high-quality transformations of mental options of society, and this, at the same time also affects formation of nature management strategies.

***Principle of priority development of the information provision of nature management.*** It is known from cybernetics, that management system able to obtain and use more information about the object of management is more effective because it can more ground managerial decisions more qualitatively, to foresee the consequences of certain phase of management in more detail, more confidently to forecast the separate stages of process etc. (Ye. A. Sedov, 1976, 1985). Consequently, information provision of nature management is one of effective factors to of minimize anthropogenic perturbation of the natural systems. This principle determines the importance of optimization of monitoring information obtaining, in particular, correctness of determination of incoming and outgoing vectors of the system – management object.

***Principle of information interference in mult-system of nature management*** is most general and important for compatible development of society and natural environment. These generalized systems develop according to their own laws (at presence of general conformities to the law) which differ. To-date humanity has learnt the laws of development of the natural systems better than those of the society (man has learned himself better as a biological creature, than a social one) and it is not by chance. Lagging in researches of social processes as compared with natural, certainly, is temporal until the time when the proper thesauruses will be evened according to the information filling. However, these heterogeneous systems co-operate, adapt themselves mutually, change, evolve or degrade in accordance with the fundamental laws of development of the material world. Despite the enormous variety of forms and mechanisms, this co-operation is limited by power, matter and information exchange, the last one being most common and that is why combines all mosaic of processes in one enormous megaprocess of universal development. Consequently, information co-operation in multisystem of nature management plays integrating role and because of this there is logical unity of social and natural systems – biosphere.

***Principle of cultural process development in society on information resource.*** Growth of information resource (development of science, accumulation of knowledge, improvement of technologies, etc.) is part of cultural process and inevitably results in growth of cultural standards of society (L. N. Nemets, 2003). In history of humanity there were periods of cultural flourishing and decline but they are distributed in time and space. From the point of view information conception of interaction between society and nature this phenomenon is explained by the action of principles of social needs satisfaction recurrence and appropriate change in nature management strategies. But in the process of change of the executive systems of society it is important to save the attained level of informative

resource. With appearance of book-printing, and considerably later – more perfect facilities of scientific information transfer the problems of saving knowledge, scientific theories, technologies, etc. practically disappeared. Today an actual question is not about facilities and methods of information saving, but about speed of its processing.

From positions of the information conception given above the interrelation between society and nature management is the tool of society to satisfy such fundamental social needs as an increase of informative resource. In long and difficult history of nature management which is the chain of important discoveries and properties of humanity and at the same time large catastrophes and shocks in natural environment and society, man performs a very important function of converting structural information of the natural systems into the informative resource of society – scientific knowledge, technologies and economic feasibilities of public production. It is obvious this can be considered a main function of humanities in development of global sociogeosystem, because at the stage of noogenesis subsequent evolution of biosphere is possible only at presence of the required informative resource of society and formation of noospheric mentality of society which has to provide complete accordance of sociogeoprocesses at all levels of natural laws.

Information development of global sociogeosystem, formation of global informative structures and processes of globalization, cause changes in usual presentations and concepts of public geography in general. So, *firstly*, the structure of world economy and traditional ideas about the changes in geographical labor division gradually lose sense. *Secondly*, compression of space and time predetermines close integration and interdependence of the world countries in all sectors of co-operation which results in globalization and accentuation of conflicts of different nature. *Thirdly*, information grows into the main factor of world development, because countries which fall behind in the use of economic and technological feasibilities of treatment and accumulation of information forever lose the prospect of equal participation in world processes. *Fourthly*, the volumes of informative exchange have increased so much that it is impossible to disregard them in public – geographical researches. Methodological principles, concepts and paradigm of public geography is to change in accordance with this.

The evolution of concept – terminology vehicle of public geography can be shown on the example of one of fundamental concepts of geography – «geographical space». At first in geographical space operated one block of co-ordinates which described mainly properties of the natural systems. With development of public geography there appeared a derivant concept of «social – geographical space». Three blocks of co-ordinates describing properties of the natural systems, society and economy, are already utilized

in this space. Presently there is a need for his subsequent transformation and determination of concept «information – social – geographical space», which foresees the additional use of a new for public geography block of informative co-ordinates.

In our view, a general progress of modern science on the basis of synergistical paradigm, which orients research on interdisciplinary approach requires the proper alteration of paradigm of social geography. As it has been mentioned above, growth of actuality of social – geographical researches and new prospects of social geography grounds possibility to determine its new – *informatively – evolutionary* paradigm. It is the new generalized social query for science which always actively influenced on public consciousness. It is obvious that today science must make efforts to direct a development trajectory of global sociogeosystem to noospheric attractor. The nearest tasks of science today is to determine strategy and algorithms of sociogeoprocesses management at different levels, that in general view represents conception of sustainable development.

In the process of management a fundamental principle of the required variety operates, according to which the subject of management in relation to the mechanism of management must have a variety, not smaller than the variety of management object. In nature management this principle requires that a volume of informative resource of society was equivalent to structural information of the natural systems content. But it is unattainable in principle, that is why society is forced to substantially schematize the natural systems, i.e. to present them in a simplified schematic way. This distorts the original natural systems in the primitive world-modeling to a great extent. Therefore, the attempts to manage multi-systems of nature management at the excessively growing social needs of society and absence of necessary informative resource remind the actions of a bull in a china shop.

The most essential problem in management of sociogeosystems is a choice of purpose, aims and management strategy (L. N. Nemets, 2003). Three strategies of adjusting to sociogeosystems are possible:

- stabilizing, when it is necessary to support a certain state of management object;
- program management, when it is needed to retain motion of management object on the chosen trajectory of development;
- reflective, when the choice of managerial decisions depends on current status of management object and external environment.

If stabilization of a sociogeosystem's state is intuitionally clear and comparatively easily obtained at available necessary resources, the strategy of program management related to transition of the system into another state, requires a very serious scientific explanation. Taking into account

a considerable inertia and stability of the natural systems, substantial resources are needed to change natural trajectory of their development, but it is even more difficult to correct the errors in their management. Reflective strategy of management requires available perfect scientific vehicle which can continuously analyze the state of sociogeosystem and operatively find optimum managerial decision. In a certain sense reflective strategy is a combination of previous two strategies because the stabilization phases of management object and program management can alternate.

There is a problem of choice between incoming and outgoing vectors of the guided subsystems at the compatibility of local models. In a chain of interconnected processes often initial parameters of previous are incoming ones for the following ones. For example, development of global processes in a biosphere unavoidably influences on direction, intensity and results of more local processes. When there is a purpose in natural management of multi-system through such chains of information flows it is possible to achieve an ultimate goal. Consequently, a choice of optimum composition and structure of incoming and outgoing vectors of management objects is one of major terms of effective management. But this problem, in its turn, depends on observability and management of natural and social systems (K. A. Nemets, 2005a), as well as on technical – technological possibilities of societies which are an integral part of informative resource. Obtaining of monitoring information in general is in principle the necessary condition of accumulation of informative resource of society. The monitoring systems owned by society as a management subject must have the space and time parameters, adequate to complication and behaviour of the guided systems. Taking into account that observability and guidance of the systems can be the function of their state, there are special requirements in relation to flexibility and mobility of monitoring, its adaptability to character of the claimed information. Thus, representation, sensitiveness and discrete ability of monitoring vehicle of society determines possibility to obtain scientific information and increase the level of information provision of nature management to a great extent.

The end of XX century is famous for the beginning of information – telecommunication revolution. This substantially transforms the vital functions of modern civilization at all hierarchical levels and results in the original “compression” of geographical space and acceleration of social processes development in it. Formation of mega-society takes place as a result of processes of globalization. Informative civilization is gradually formed. Globalization brings both positive and negative results for different countries of the world. Thus, next to positive scientific achievements modern civilization faced the threatening problems of general globalization focused in the deepening systemic social – ecological crisis from which



even large well-developed countries cannot go out alone. On the way to transition there are a lot of objective and subjective barriers to sustainable development of global society, the main among which being inequality of social – economic development of different countries and world regions, considerable information and economic advantage of one country over another, unsolved problems of ethnic, social- cultural and other character which are difficult to overcome. To overcome the numerous problems of the modern world is possible only by **high-quality changes in the system of education as a basis of formation of common civilization culture**, thus giving possibility to have an access to world achievements and blessings to all the inhabitants of the planet.

Education for sustainable development must be of leading ahead character. Its important constituent is formation of competence for activity in natural and social environment, which must be realized through the variety of organizational forms, facilities and methods of studies, etc. There are questions of development of new methodology of such education, as well as a leading role of separate sciences about nature and society in its successful realization and design of their educational disciplines. It is necessary to strengthen the role of world view disciplines which form common civilization valued landmarks of separate individuals and whole society which will enable to reach mutual understanding between peoples as well as to optimize interrelation between society and nature. Alongside sociology, philosophy, etc. there must be disciplines of geographical direction, in particular, social geography.

Some scientists believed (sometimes they do now), that by a „panacea“ for humanity in a way out from a global crisis there is ecological education. But some dozens of years of introduction of ecological education have shown that it is only a necessary element and very important component of education for sustainable development, but not educational direction, sufficient for solution of all problems of humanity. More universal environmental education is needed which will provide formation and transmission from generation to generation (as mentality) of the valued options of society for some historical time. Education for sustainable development basically differs from other levels of education by the fact that it is considerably wider and takes over all other types of education. It prepares the personal and public consciousness to perception of globalized world, to the synthesis of cultures of different epoches, countries and people, formation of global mentality of society without what the mutual understanding is impossible within the framework of modern civilization, overcoming social – ecological crisis, global terrorism, hunger, poverty, etc. Thus traditional values keep an ontological value for personality, continuing to determine its vital position, attitude toward itself and to other people,

and borrowed norms and standards are perceived as pragmatic directing behaviour within the framework of certain class of mutual relations and situations. The specificity of national culture and psychological composition is saved even in the conditions of rapprochement of the valued orientations, born by cognition of cultural consequences of modernization. Therefore globalization is the powerful source of destabilization of relations between personality and society, crises of social identity of man and generates the problem of search for new forms of sociality, sense of people's life in society. Only the system of education, called to change „human qualities, can solve this important problem“. Because modern civilization, attaining the peak of the power on the stage of globalization experiences the real spiritual drama related to the crisis of all existing valued and rational bases and forms of modes of life. It is not by chance that XX century became the century of crash of great studies or utopias – communist or liberal – market, declared by their adherents the «end of history», as in fact, there was nothing for them to say except what they had already said before (M. S. Gorbachev et al., 2003).

The task of education for sustainable development consists in claim of new values and vital senses which must change the values of consumer society and become spiritual basis of new type of civilization development. There are many variants of model of such education, they differ in different countries, world regions, and also in different regions in one individual country. But all of them must have general ideological foundation directed to achievement of primary objective: to give a chance to the present generation of people to live in normal ecological and social – economic conditions without wars and violence and to give the same chance to future generations. Therefore the model of the educational system for sustainable development must contain all the best achievements of human idea, world pedagogics, science and culture on the whole.

Formation of the education system for sustainable development is an intricate and responsible problem, which requires creative approach, non-traditional decisions. The educational system in general works on steady development, giving knowledge of natural environment, etc. But, taking into account that the present state of education is unsatisfactory and does not execute the social query of society, which very swiftly changes under the influence of global changes of the world, a unique possibility is created for reformation of education already in new quality – as a social institute of new phase of existence of modern civilization. Taking into account requirements of education for sustainable development in relation to society, system of education has possibilities not only to promote the social status as a social institute of society, working at social order fulfillment, but also to considerably strengthen the education influence on development of future modern civilization.



The educational system of Ukraine on the mentioned basis can substantially renew inherent to our society values, traditions, integrating them in educational space as particles of national culture. Conception of sustainable development, which must be translated into the system of education, has weighty potential of attractiveness, is attractive to research workers, creates conditions for creativity and can provide preparation of new generation of young people on the basis of rich inheritance, cultural and humanistic traditions of the past which will save us from casual or intentional destruction of property of our ancestors in future. It is possible to regard education for sustainable development from such point of view as some social technology to construct stable, reliable, general house for generations of today's and future. The social tasks of such education must become formation of a new cultural layer in modern civilization which will allow us and our descendants to survive. Methodological issues concerning the theory of such education, its structure, methods and forms of organization, etc. require serious restructuring. It is required to develop a conceptual – terminological vehicle based on the theory of sustainable development, to build the model of global mentality of society, filling it with proper constituents presenting the separate branches of the corresponding sciences and educational disciplines etc.

To form conception of education for sustainable development as global strategy of modern civilization's survival, it is necessary to answer two major questions. The first question consists in explanation what global strategy of sustainable development is and what it gives to modern society, how it can help it to survive in the conditions of tightening global social – geoeological crisis. The second question touches directly upon the construction of conception, illumination of methodological aspects, new paradigms of modern education, development of structure, methodical provision, training of personnel, correlation of global and national constituents in general strategy of education for sustainable development, etc. The authors believe that in preparation and realization of education for sustainable development a lot of sciences about nature and society should be involved, but social geography must play a key role, especially its social branch, taking into account the possibility to realize its basic functions, foremost – theoretical – cognitive and noospheric – world view (L. N. Nemets, 2003).

A world summit on sustainable development in Johannesburg (2003) confirmed the support of Rio de Janeiro's ideas by the world community. In the documents of the summit the key role of education was underlined once again and there was an appeal to encourage the formation of the educational system for sustainable development. The necessity to change a vital paradigm in a short historical time compared to the life span of one

generation, predetermines deepening of humanistic problem as a globalization component in creation of the educational system for sustainable development.

### References:

- Gorbachev M. S. et al., 2003, *Borders of globalization: Difficult issues of modern development*, Alpine Publishers, Moskva.
- Nemets K. A., 2006, *Information resource of society as a factor of social development [in:] Regional geographical research of Ukraine and bordering territories. International scientific-practical conference dedicated to 70<sup>th</sup> anniversary of establishment of a chair of Geography at Lugansk T.G. Shevchenko national pedagogical university, 27 - 29 November, 2006, Lugansk, p. 157-159.*
- Nemets K. A., 2005, *To formation of information conception of interaction between society and nature, Bulletin of Kharkiv university. Geology. Geography. Ecology № 704, p. 50-55.*
- Nemets K. A., 2005a, *Information interrelation of natural and social systems, Eastern-regional center of humanitarian-educational initiatives, Kharkiv.*
- Nemets K. A., 2005b, *Laws of information interaction between social and natural systems, Bulletin of Kharkiv university. Geology. Geography. Ecology. № 655, p. 67-72.*
- Nemets K. A., Nemets L. N., 2006, *Information conception of social-geographical systems development [in:] Issues of nature management and ecological situation in European Russia and bordering countries. II International scientific conference, Belgorod, 12 - 15 October 2006, Belgorod, p. 100-102.*
- Nemets L. N., 2003, *Sustainable development: social-geographical aspects (on example of Ukraine), Fact, Kharkiv.*
- Sedov Ye. A., 1976, *Evolution and information, Moskva.*
- Sedov Ye. A., 1985, *Interrelation between power, information and entropy in the processes of management and self-organization [in:] Information and management "Philosophical-methodological aspects", Moskva, p. 169-192.*

Oleksandr Topchiyev, Valentyna Olijnyk, Tatyana Melnychenko

## **The concept of territory geoplanning in Ukrainian geography**

X-th congress of the Ukrainian geographical society took place in march of 2008, on which geoinformation and geoplanning paradigm were discussed as conducting directions in modern geography (M. B. Баргов, 2008; О. Г. Топчієв, 2008). General scheme of territory planning of Ukraine is developed and authorized in 2001 (Генеральна схема... , 2000). Presently, the territory planning schemes are developed for some regions of country. The concept of **territory geoplanning** was included in methodology and practice of modern Ukrainian geography. It is necessary to notice, that in the past as the geographical discipline a so-called **regional planning** has received development, which developed the project schemes of settlements and location of economy for rather small planning raions. The territory geoplanning deduces this problem on a qualitatively new level – regions, countries and continents.

The purpose of **territory planning (geoplanning)** is a formation of comfortable social-natural environment of people live activity, greatest possible preservation of natural-resource potential of territory, safe and convenient settlements of population, economically effective and ecologically safe location of economic activity, maintenance rational koevolutional, noosferical interaction of society with nature. We offer for discussion the synthetic approach to problems of territory planning, in which the integrated components of a landscape environment – nature, population, economy are considered, and in the chapter of a corner the substantiation of their rational spatial combinations and interactions on each site, in each region, in each country as a whole is put.

Briefly we shall consider the main methodological principles of territory planning of regions used in the Ukrainian geography.

**The analysis of a role and place of region in an economic complex of the country.** The socio-economic functions of region in the country are caused by its geographical location, including its geopolitical and geoeconomic location, by natural-resource, labor-resource, infrastructural potential, level and type of economic development, features of structure

and specialization of economy, volume of foreign economic activities, depth of socio-economic reforms. The functions, on which the region occupies conducting positions in the country, should be priority and in development of the schemes of planning of its territory, serve a majorant in a substantiation of its perspective territorial organization. And on the contrary, there is not enough important socio economic functions of region suppose those or their other transformations, and including in a context of territory planning.

**Formation of a natural framework of region ecological safety.** The methodology of nature protection and maintenance of ecological safety essentially changes last years in Ukraine. In 1970 years orienteers of ecological safety of territory **the extreme allowable concentration (EAC)** of polluting substances in an environment were mained. The ecologists carry out monitoring "of hot points" – places of choices and dumps of pollution, standardized and regulated them. The specification of natural-reserved fund (NRF) was legislatively established later: in each region and in the country as a whole NRF should make not less than 5 % of the general area. This specification with all evidence is small and besides not differenced for different zones. In 1990 years the Ukrainian geographers have apprehended the concept of **ecological networks** developed by the European Union. According to the Seville strategy (1995) in Europe the formation of ecological network began which further was extended on the countries of East Europe in the form of a so-called **Emerald ecological network**. During 2000–2004 years in Ukraine the laws on formation of a national ecological network of Ukraine were accepted and the development of the program of creation of ecological network for the period 2000–2015 years is begun. Since 2000 the development of the concepts and programs of formation of regional ecological networks (in regions and Autonomic Republic (AR) of Crimea) is conducted. In some regions (Про затвердження..., 2005; О. Г. Топчієв (ed.), 2000) and AR of Crimea this work is already completed.

Such way, now the ecological safety of regions is regulated by three criteria in Ukraine: (1) not breaking limit of ELC of the basic pollution in emissions and dumps of ecologically dangerous objects; (2) presence NRF at a level of the specification (not less than 5% of territory); (3) generated ecological network, which forms a natural skeleton of ecological safety of region.

The formation of regional ecological networks in Ukraine occurs in conditions very high agricultural and industrial discovering of territory, relative flash approach, and insufficient share of lands of NRF. The first development of the concepts and programs of creation of regional ecological networks testify that the ecological networks can occupy 15–25 % of

territories of region (Про затвердження..., 2005; О. Г. Топчієв, 2005). What criteria of grounds can be included in structure of ecological network in the given conditions?

First of all, it is objects and territories of NRF, on the basis of which the natural nucleuses (regions) of regional ecological networks are created. Here enter the wood and tourist-recreational lands, areas of water-bog arable land. The main reserve of formation of ecological networks in conditions of Ukraine there are grounds of water fund. This category of lands is precisely allocated in the Land and Water codes of Ukraine. Such categories of lands of water fund are legislatively established: (1) reservoir zones; (2) coastal protective strips; (3) coastal strips; (4) strip of removal water; (5) zone of sanitary protection. For all versions of such lands the specifications of their allocation on area and rules of their economic use are established. Unfortunately, in conditions of radical land reform, which passes in Ukraine, the land designing lags behind a real situation on 7-15 of years. It means, that the lands of water fund can be allocated on district (in a real) only in 4-8 years and now no rules of their use can be realized.

Significant reserve for formation of ecological networks **represents low-yield and degraded agricultural lands**. Ukraine singles out unfairly high level of agricultural cultivating of territory, which can reach 90%, and turning up of lands (70%). As a result of mass turning up of lands on slopes, unreasonable meliorations (drainage, irrigation) the share of low-yield and degraded-eroded, salted underflooded, polluted lands has reached 20-30 % and more in many regions. The most part of such lands is necessary for removing from agricultural processing, to preserve and to transfer to the status of natural arable lands. These lands together with lands of water fund should become a basis for ecological networks.

In the Ukrainian geography the theoretical **model of rational territorial organization of economy** in the form "of the polarized landscape" (B. B. Rodoman, 1974) is popular. The idea of polar (poling) concentration and delimitation of biosphere and technosphere becomes more and more obvious: it is impossible to stop socio economic development and to turn "back to a nature"; at the same time it is fatally dangerous to increase by modern rates anthropogenic impact on a nature; there is one way - maximal poling delimitation of territory with intensive economic activity and reserved not so broken biosphere. At this the transitions from one pole to another should be echeloned and gradual.

At the figure 1 the scheme (cartoid) of a natural framework of ecological safety of territory - ecological network is submitted. Its elements are biosphere nucleus - the reserved sites, buffer zones - sites with the minimal economic loading, which protect biosphere nucleus, ecological corridors connecting nucleuses and the buffer zones in complete territorial structure

and provide normal biogeochemical flows into biosphere. Let's remind, that the purpose of an ecological network – preservation of a landscape and biological variety, and social function of a natural framework of ecological safety of territory – safeguarding of comfortable conditions of live activity of a society.

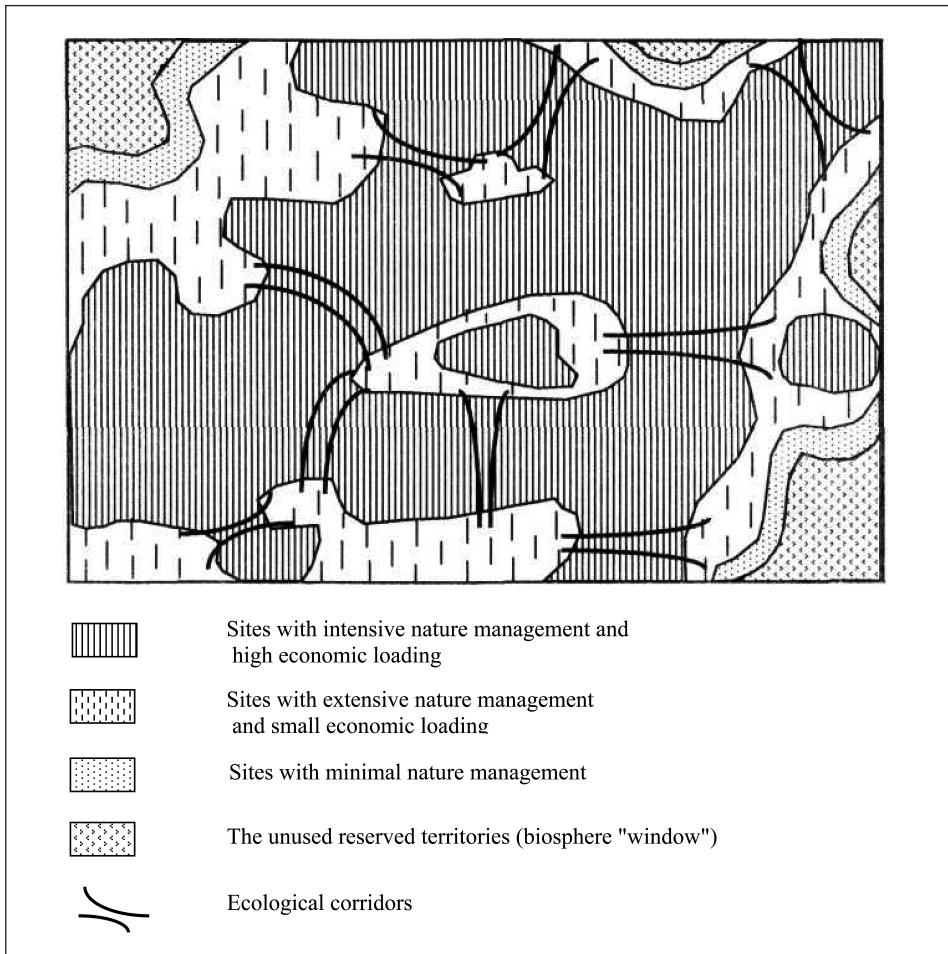


Figure 1. Model of biosphere organization of natural environment

Source: Own studies.

**Formatting of settlements systems.** Ecistic (settlement) factor is the most important component of territorial organization of society. From the one site, it is the base factor, as the settlements systems have the own genesis and own history. From the other site, ecistic factor is dynamical also such dynamics can be essential and noticeable in territory planning.



**The settlement systems** have own generalized (system) characteristics, among which popularity, density of the population and settlements, infrastructural connections. The type and rank of settlement system is determined by the basic kinds of economic activity of population and by general level of anthropogenic loadings within the limits of settlement system. In such context of the special attention deserve agglomerations and natural zones of big and average cities. At the present day, the prospective administrative-territorial reform is discussed. In project developments of the perspective administrative-territorial device of the country are offered two new administrative-territorial units – city-region (big city together with its suburban area) and city-raion (average city with suburban area) (О. Г. Топчієв, 2005). A key task of ecistic in development of the concept of geoplanning is the classification and systematization of regional and local settlement systems according to parameters determining general character of using of nature, economic activity and levels of anthropogenic loadings on natural environment. It is suppose, that to different types of settlement systems correspond the own specific tasks of territory planning.

**The framework of anthropogenic loadings on natural environment** (figure 2) is an original antipode of a natural framework of ecological safety of region. Its basis is made by the settlements, transport communications, lands of different economic purposes and use, and also some socio economic objects representing certain ecological thread, – so-called “hot points” and “hot areas”. Creation of map of framework of anthropogenic loadings on territory basically is not complicated, if the appropriate parameters and specifications of such influences are known. In the Ukrainian geography the geoecological concept “influences-changes- consequences” (V. S. Preobrazhenskii, 1985) has received distribution. According to concept anthropogenic **influences** on natural environment certain **changes** cause, which, in turn, are accompanied by those or other negative **consequences** essentially changing an initial situation. The new cycle begins: changed (in the worse party) environment is exposed by new influences, which result will be new changes giving new negative consequences. The task of geographical ecology is forestall a part of the most intensive chain “influences-changes-consequences” (А. Г. Топчієв, 1993; В. А. Барановський, П. Г. Шищенко, 2005).

In research of a spatial framework of anthropogenic loadings it is a lot of not enoughed methodological directions and methodical questions. A key question is **systematization of settlements by levels of them anthropogenic loadings**. It is obvious, that, first of all, they depend on popularity of a settlement, and its functional type. It is in addition necessary to take into account structural-technological features of economic complexes



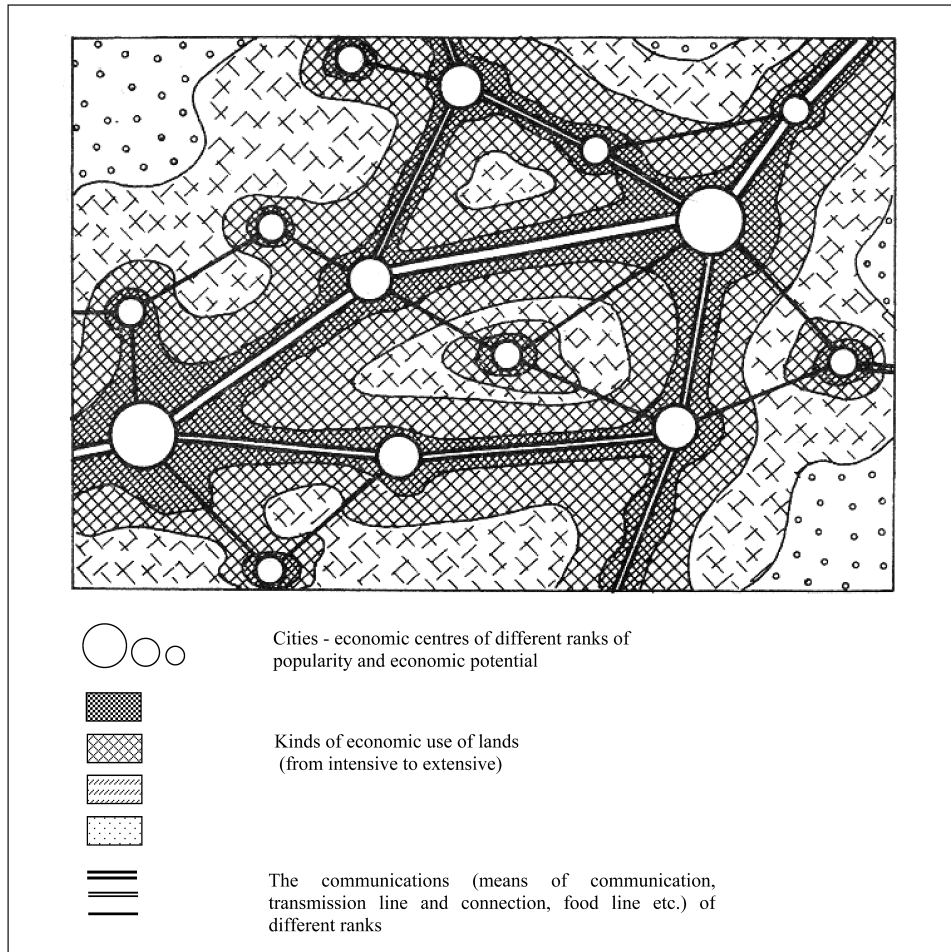


Figure 2. Model of territorial organization of population and economy (siosphere and technosphere)

Source: Own studies.

of settlements, especially of cities, the necessary facilities of infrastructure, their ecological infrastructure supply, in particular. For urban settlements is important presence-absence of the qualitative general schemes, schemes of the land-economic device of city, its functional zonation, schemes of planning of a suburban zone.

**The methodological development of principles of territorial organization of suburban zones of big cities and agglomerations** is the important problem for geoplanning. Established, that the influence of the big city on suburban area echeloned and forms ring, belt, planning zone, in which structure is near, average (transitive), distant (peripheral) suburban

zones. For each echelon (zone) of a suburban zone is characteristic set of socio economic functions on service of big city and interaction with its satellite (О. Г. Топчієв, 2005).

The planning division on sectors is characteristic for suburban area of big city, in which suburban population is strongly attracted to main highway, and sectors, which do not have transport axis, wedge oneself into city building by park zones and sanitary-hygienic zones. As a result, natural zones of big cities have echeloned sector-ring organization, which is necessary to standardize and regulate by socio economic functions and kind of economic activity.

The suburban zones of big seaside cities and of big economic centers located on water objects (of the river, lake, estuary etc.) have own planning features.

**Systematization of transport highways and other communications** by levels of them anthropogenic loadings on environment, by spatial scales of influences, by required sanitary-protective zones is necessary for territory planning. Planning classification of transport highways and technical and engineering communications should take into account their kind (type), throughput, character of negative influences on natural environment and population. From the point of view of geoplanning the transport communications represent **biosphere barriers**, which divide natural environment on more fractional, the rather isolated territories and create serious obstacles for biochemical dislocations and flows in biosphere. Subject to formation of regional ecological networks as territorial complete structures of natural environment the problem of biosphere barriers receives signification of complication and acuteness (А. Г. Топчієв, 1993; В. А. Барановський, П. Г. Шищенко, 2005).

**Systematization of categories and kinds of economic land use** – territories and water areas, coastal zones and contact strips is represented by less difficult. General systematization of economic land use of settlement, industrial, transport, agricultural, forestial, water industrial, recreational etc. – is known. More detailed classification of kinds of use of territory and water area is necessary which would take into account their large-smaller intensity and corresponding levels and estimations of anthropogenic loadings on environment. Planning systematization of kinds of land use should base on their qualitative distinctions (kind, subkind, type, subtype etc.), and also on character of them anthropogenic loadings on natural environment.

The analysis of **spatial compatibility-incompatibility of those or other economic functions** represents the special interest. In many cases the deficiency of territories concerning necessary and obligatory socio economic functions is observed. The practice of territorial imposings and combinations

of different economic functions is popular. Thus naturally there is a necessity of an estimation of greater-smaller territorial compatibility of those or other functions or their complete incompatibility and even alternative.

The examples of typification of territories by their industrial development are already known (Л. Руденко (ed.), 2003). By criteria such systematization is a general level of industrial development (share of production of an industry into a general regional national produce) and the structure of industrial production (old and new industrial raions). The qualitative and quantitative characteristics of its anthropogenic loadings are necessary for the purposes of territory planning except of volumes of industrial production. First characteristics can be shown by classes of ecological hazard of branches and enterprises, second, – total and specific parameters of emissions of pollution into environment. The parameters of labor input, power consumption and resource capacity of the main manufactures are necessary also. The real zones of industrial pollution of different levels and necessary areas of sanitary protection of the population against such influences should draw a map.

In the general scheme of territory planning of Ukraine (Генеральна схема..., 2000) is developed the systematization of agricultural use of territories. In its basis are fixed subregional and microregional specialization of agricultural production and its general structure (on a ratio crop and livestock industries). Thus outside of a field of sight there are its technological levels (biointensive agriculture, organic agriculture, trickle irrigation etc.), and also greater-smaller use of modern principles of territorial organization of a countryside. The account of these attributes is most important for planning territories: agrolandscape organization of countryside, landscape-planimetric organization of territory, circuit-melioration organization of agricultural lands etc. All within the limits of Ukraine is picked out eight **functional types of agricultural use of territory** and one **functional type of use of wood resource of territories** (Генеральна схема..., 2000).

The developers of the General scheme of territory planning of Ukraine (V. I. Nudel'man and others) have made a map of economic zoning of territory, on which have allocated nine **functional types of economic use of territory with prevalence of not agricultural activity**. Among them three types with prevalence of a manufacturing industry, different on levels of adaptability to manufacture of the basic manufactures. In separate types the territories with prevalence of a local mineral industry (building materials, mineral raw material) and depression territory of a coal industry are allocated. Two functional types form recreational territories with the advanced resort economy and tourism, and also frontier territories carrying out transit and transport-distributive functions.

Systematization and the classification of functional types of use of territories remains to one of the main problems of modern geography and geoplanning.

The general maps of frameworks of anthropogenic loadings are necessary for supplementing by display “of hot points” and “hot areas”, which usually require radical geoplanning decisions on their localization and liquidation. Hot points can be sources high anthropogenic loadings and pollution of environment, among which separate economic objects, dumps and ranges firm household waste, warehouses and storehouses of mineral fertilizers and weed and pest-killer chemicals, cattle-breeding complexes and farms, burial ground of cattle). Hot areas can be the polluted water objects, career, irrigation system, location of military parts.

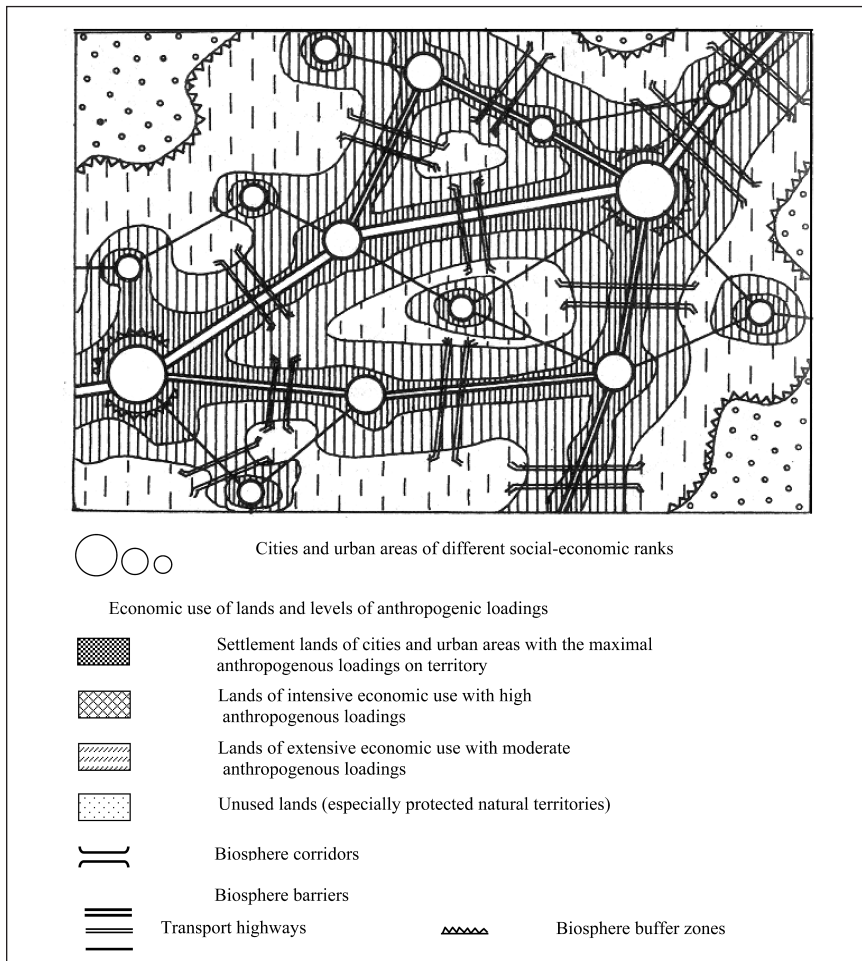


Figure 3. Theoretical model of territorial organization of system “nature – society”

Source: Own studies.

**Geoplanning: the connected analysis of framework of ecological safety and anthropogenic loadings of region.** At the figure 3 imposing a framework of ecological safety and anthropogenic loadings of region (figure 2) on a natural framework of its ecological safety (figure 1) is shown. The connected analysis of these two structures in many respects defines a subject domain of geoplanning of region, its main directions and tasks. The main questions, on which should give the answer the connected analysis of skeletons of ecological safety of anthropogenic loadings, are those:

- The degree of security of territory by sites of the not broken biosphere also is extensive of used natural environment;
- General level of anthropogenic loading, its qualitative and quantitative distinctions, features of spatial distribution;
- Degree of polarization of a landscape on mutual distance and delimitation “biosphere windows” and areas of the maximal economic loadings;
- Best-worse echeloned of sites with different economic use by way of gradual transitions from the large loadings to smaller and on the contrary;
- Negative influences of ecological barriers (transport communications) and problem of their crossing with ecological corridors;
- Feature of spatial distribution “of hot points” and “hot areas” and problem of minimization of their influences.

## References:

- Багров М. В., 2008, Нова парадигма географії у інформаційному світі (соціально-економічний аспект) [in:] Географія в інформаційному суспільстві, т. I., «Обрії», Київ, р. 3–9.
- Барановський В. А., Шищенко П. Г., 2005, Україна: еколого-економічна збалансованість території, Всеукраїнська екологічна ліга, Київ.
- Генеральна схема планування території України, 2000, Державний науково-дослідний інститут проектування міст «Діпромісто», Київ.
- Преображенский В. С., Ворачек В., 1985, Оценка влияния хозяйства на природу: воздействия – изменения – последствия. т. 1, 2., Брно.
- Про затвердження програми формування національної екологічної мережі в Одеській області на 2005–2015 роки. Рішення Одеської обласної ради №705-IV від 18 листопада 2005р.
- Родоман Б. Б., 1994, Поляризация ландшафта как средство сохранения биосферы и рекреационных ресурсов [in:] Ресурсы, среда, расселение, Наука, Москва, р. 150–163.
- Руденко Л. (ed.), 2003, Атлас: Україна. Промисловість та інвестиційна діяльність, Інститут географії НАН України, ДНВП «Картографія», Київ.

- Топчієв А. Г., 1993, Екологічна безпека і раціонально-територіальна організація суспільства, Український географічний журнал, №2, р. 3–8.
- Топчієв О. Г. (ed.), 2000, Регіональна програма охорони довкілля, раціонального використання природних ресурсів та забезпечення екологічної безпеки. Одеська область, Одеса.
- Топчієв О. Г., 2005, Суспільно-географічні дослідження: методологія, методи, методики, Астропринт, Одеса.
- Топчієв О. Г., 2008, Методологічні трансформації географії в інформаційному суспільстві [in:] Географія в інформаційному суспільстві, т. I, «Обрії», Київ, р. 284–294.



Roman Rudnicki

## **Natural considerations for the regional diversification of absorption of European Union funds in Polish agriculture**

### **Background information**

The natural conditions in agriculture are affected by numerous environmental components: the climate, the terrain, water conditions and, most of all, the soil. Totalled, these components determine the natural fertility of agricultural land and the related expenditure on stabilizing or increasing the existing fertility potential. Therefore the output of agricultural production as determined by the intensity and correctness of management, is strongly affected by natural conditions. At the same time, increasing agricultural output in areas with poor natural conditions necessitates high extra expenditure unnecessary in good conditions (R. Rudnicki, 1997). This relation adversely affects the economic situation of farms located in areas of poor natural conditions. There, due to the necessary and relatively high related expenditure, generation of a good income from agricultural production resulting in pay parity is irrational both for economic and natural reasons. This is why these areas require assistance: extra financial support aimed at combating depopulation of rural areas and the atrophy of their agricultural character as well as promotion of organic farming. Failure to undertake such activities results in limiting biological and cultural variety in these areas.

Direct subsidies for individual landowners and factory farms operating in adverse natural conditions are vital elements of the EU Common Agricultural Policy. For the first time in Poland, the related opportunities stem from measures implemented by the Agency for Restructuring and Modernisation of Agriculture (ARiMR) in 2004–2006 (the first financial period of Poland's membership in EU), primarily from the execution of the Rural Development Plan (PROW). The document stipulates the goals, priorities and rules of supporting sustainable development in rural areas. Its beneficiaries include farmers / land users applying for financial assistance as part of the following activities: structural pensions, support for semi-

subsistence farms, supporting agricultural activity in less favoured areas (LFA), supporting agri-environment measures and animal welfare, forestation of farmland, supporting the group of agricultural producers and adjusting farms to the EU standards (the Rural Development Plan..., 2004). On the European Union's part, the Plan's financial instrument is the Guarantee section of the European Agricultural Guidance and Guarantee Fund (EAGGF). These are the so-called accompanying measures, part of the second 'Pillar' of the Common Agricultural Policy. The EU's financial contribution to the Rural Development Plan amounts to 80% (with the exception of 85% for supporting agri-environment measures); the remaining 20% includes the country's contribution whereas private contributions are not requisite.

The natural considerations of the regional diversification of absorption of European Union funds in a given farm stem from: location in less favoured areas, location in priority areas of the agri-environment measures and occurrence of soils of the lowest valuation classes (V, VI) making the areas eligible for financial support in foresting agricultural land. The above mentioned determinants refer to additional activities within the Rural Development Plan available only to farms meeting specific natural environment evaluation criteria; hence they reflect the natural preference with respect to granting EU financial support to Polish agriculture.

The specified activities as part of the Rural Development Plan have been analysed with respect to their regional diversity and broken down to two approaches:

- the territorial range in line with the area of agricultural land meeting the eligibility criterion in a given activity;
- the activity of farms partaking in a given activity in 2004-2006, according to the size and area of agricultural land.

Two synthetic indicators have been adopted as the basis for reasoning:

- the Rural Development Plan's natural preference determined with respect to the relations between the general area of agricultural land in a given region and the total area of agricultural land eligible for financial support eligible to less favoured areas;
- the impact of the Rural Development Plan on the agricultural production area determined with respect to the ratio of the agricultural land area virtually granted financial support as part of selected measures of the Rural Development Plan and the total area of agricultural land meeting the eligibility criterion in these measures (applicable to the Rural Development Plan, priority zones of the agri-environment measures and agricultural land forestation).

## Less favoured areas

The influence of nature on the spatial diversity of farms' activities in the realm of obtaining EU funds is directly related to implementing the Strategy for the Development of Rural Areas targeted at supporting agricultural activity in less favoured areas (LFA; cf. K. Czapiewski, G. Niewęglowska, 2006). Financial support is granted in the form of annual compensation subsidies per hectare of agricultural land within specified communes or villages geographically separated in:

- mountain areas (€67.8 / 1 ha AL) – in communes where over half of the agricultural land is located above 500 m above sea level;
- plains broken down to plain zone I (€37.8 / 1 ha AL) – in communes where the quality ratio of the agricultural productive area exceeds 52 points and does not exceed 72.5 points and plain zone II (€57.0 / 1 ha AL) – in communes where the ratio does not exceed 52 points;
- areas with special impediments (€55.2 / 1 ha AL) – includes communes in mountainous regions of significance to the development of tourism, facing complex problems related to unfavourable terrain and scattered land structure.

Owing to the specificity of the natural environment in Poland, the most important element of the LFA system are plains (9084 thou. ha AL – 93% of all agricultural land LFA), including chiefly zone I (6939 thou. ha AL – 76% of all agricultural land on LFA plains and 93% of all agricultural land LFA). The share of agricultural land LFA deemed zone II, characteristic of particularly unfavoured land, amounts to 22% of all agricultural land LFA. With respect to the administrative division, the percentage ranges from 1-2% in Lower Silesian and Lesser Poland voivodeships to 41% in the Pomeranian voivodeship (cf. Table 1). The remaining elements of classification of less favoured areas: mountain areas with specific impediments – occur only in five voivodeships in the south of Poland: Lower Silesian, Subcarpathian, Silesian and Świętokrzyskie (in the latter only with specific impediments). Mountain areas represent barely 2.2% of all LFA agricultural land while the percentage is highest in the Lesser Poland voivodeship (52%). On the other hand, the share of agricultural land in areas with specific impediments in the total area of agricultural LFA amounts on average to 4.8%. It has become an important element of the agriculture financial support system in the following voivodeships: Lower Silesian (40%), Lesser Poland (46%), Subcarpathian (33%) and Silesian (42% LFA AL).

Table 1. Less favoured areas (LFA) – elements of evaluating PROW

Voivodeship	Territory							Farms activity				Farms activity ratio
	Total in thou. ha	Including areas (%)				% of total AL area	no. of farms		AL area			
		Plains		mountains	specific		thou.	%	thou.	%		
		Zone I	zone II									
Dolnośląskie	374.8	52.7	1.1	6.1	40.0	32.3	19.9	24.0	241.7	30.4	64.5	
Kujawsko-pom.	494.5	83.7	16.3	0.0	0.0	42.8	29.6	37.4	390.9	40.1	79.1	
Lubelskie	668.4	90.8	9.2	0.0	0.0	39.4	61.4	27.5	470.7	32.1	70.4	
Lubuskie	472.2	95.2	4.8	0.0	0.0	85.6	15.2	48.0	282.4	90.3	59.8	
Łódzkie	756.3	78.3	21.7	0.0	0.0	60.9	70.5	42.8	487.4	44.0	64.4	
Małopolskie	278.0	0.7	1.4	52.3	45.6	34.4	53.5	24.7	180.0	26.0	64.8	
Mazowieckie	1584.0	63.8	36.2	0.0	0.0	66.7	126.2	43.3	1123.8	52.1	70.9	
Opolskie	86.3	88.8	11.2	0.0	0.0	14.8	6.3	15.2	61.0	15.7	70.7	
Podkarpackie	240.3	53.2	5.0	9.1	32.6	25.7	41.7	21.0	185.0	27.0	77.0	
Podlaskie	1126.8	62.1	37.9	0.0	0.0	93.6	64.5	64.7	821.5	74.4	72.9	
Pomorskie	518.1	58.7	41.3	0.0	0.0	57.0	21.8	40.8	331.4	47.9	64.0	
Śląskie	177.5	29.5	14.6	13.5	42.4	29.0	16.4	14.8	84.6	19.4	47.7	
Świętokrzyskie	289.6	53.7	34.4	0.0	11.9	42.4	35.5	28.3	163.9	27.5	56.6	
Warmińsko-maz.	906.6	90.1	9.9	0.0	0.0	70.0	29.5	56.9	588.3	66.5	64.9	
Wielkopolskie	1040.2	67.3	32.7	0.0	0.0	55.3	74.2	53.4	886.9	59.0	85.3	
Zachodniopom.	749.0	97.7	2.3	0.0	0.0	67.7	17.9	43.6	462.0	69.2	61.7	
POLAND	9762.6	71.1	22.0	2.2	4.8	53.7	684.3	35.1	6761.7	46.8	69.3	

Source: author's own on the basis of the Chief Statistical Office's data (Regional Data Bank) and ARiMR (Management Information System).

The area of agricultural land in less favoured areas amounts to 9763 thou. ha. which represents 53.7% of total agricultural land in Poland. The related percentage varies significantly from one region to another (15% in the Opole voivodeship and 94% in the Podlaskie voivodeship; cf. Figure 1).

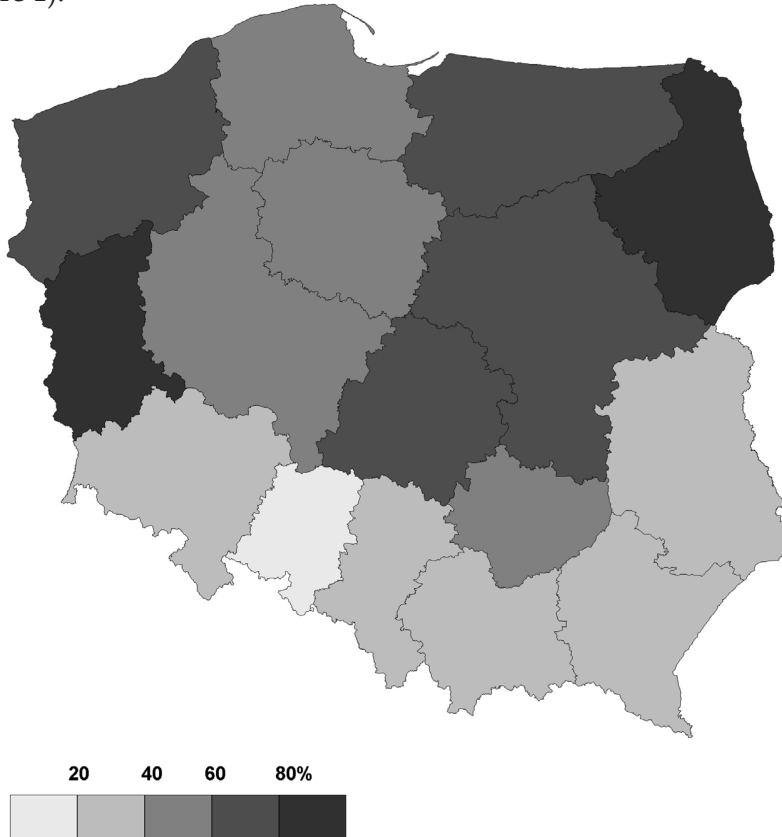


Figure 1. Share of less favoured land in the total agricultural land area

Source: author's own on the basis of the Chief Statistical Office's data (Regional Data Bank) and ARiMR (Management Information System).

Owing to the easy access procedure and the beneficiaries' slight commitment, support for farms from less favoured areas (LFA) tended to be the most popular Rural Development Plan activity. On average, in 2004-2006 farmers would submit 684.3 thou. applications, ranging from 6 thou. in Opole to 126 thou. in Masovian voivodeship. Farms financially supported on account of LFA represented on average 35% of the total number of households in Poland. The percentage varied from approximately 15% in Opole and Silesian voivodeship to over 50% in Podlaskie (65%), Warmian-Masurian

(57%) and Greater Poland (53%). A case in point of the presented activity's importance is the considerable agricultural land area eligible for LFA subsidies: 6762 thou. ha (the largest area of 1124 thou. in Masovian voivodeship) representing as much as 46.8% of the total agricultural land area in the country. The percentage was highest in central Poland (Masovian 52%, Greater Poland 59%), in the north-east of the country (Warmian-Masurian 67%, Podlaskie (74%) and in the north-west (West Pomeranian 69%, Lubusz 90%; cf. Table 1).

Out of the total agricultural land meeting the eligibility criteria in question, LFA subsidies amounted to as much as 69%. This ratio of LFA impact on agricultural production area ranged between 48% in the Silesian voivodeship (the only voivodeship with the ratio below 50%) and 79% in Kuyavian-Pomeranian and 85% in the Greater Poland voivodeship (cf. Figure 2).

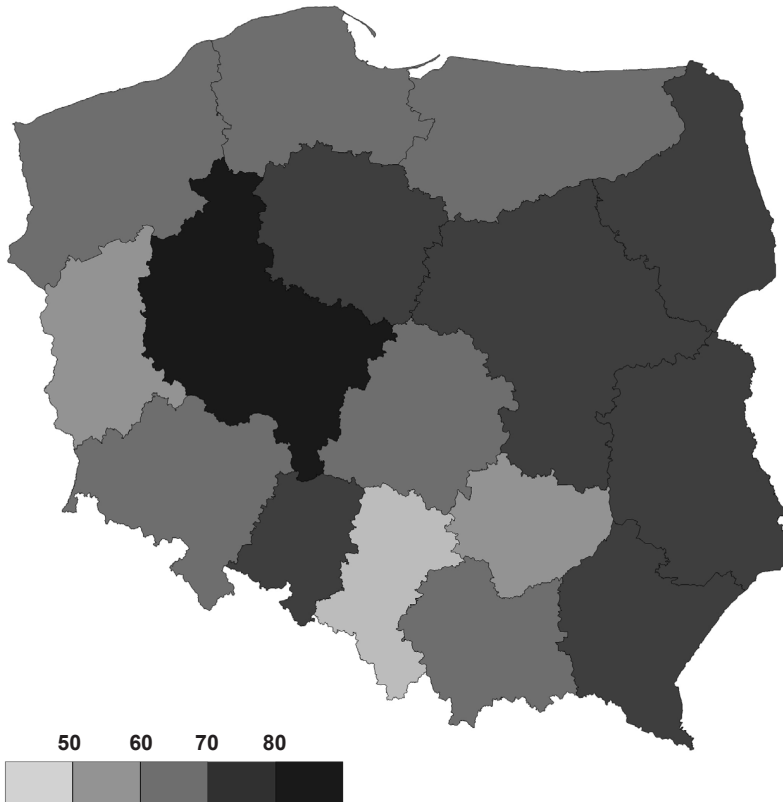


Figure 2. Less favoured areas eligible for subsidies against the total area of agricultural land meeting the eligibility criteria (%)

Source: author's own on the basis of the Chief Statistical Office's data (Regional Data Bank) and ARiMR (Management Information System).



## The agri-environment measures

The natural determinants of the regional diversification of the absorption of European Union funds by farms are also related to the implementation of the measure "Supporting agri-environment measures and animal welfare". This activity is aimed at preventing deterioration of the natural environment and nature values of rural areas – consolidating sustainable farming management, especially in protected areas and those threatened with degradation as well as encouraging farmers to undertake environmental measures.

As a result of implementing the agri-environment measures, farms receive extra income in exchange for environmentally friendly activities; this way the living conditions and development of rural areas are improved. Each measure consists of several strictly defined requirements exceeding usual good farming practice. The agri-environment measures in 2004-2006 included: national measures (organic farming, soil and water protection, buffer zones, maintaining native breeds), three regional measures selected with respect to the evaluation of natural conditions and related to specific priority zones i.e.:

- "Sustainable agriculture" – this measure consists in limiting fertilization, balancing fertilizers administration and observing the right crop sequencing (annual subsidies of PLN160 /ha);
- "Maintaining extensive grassland" – this measure is related to restoring or continuing grass mowing of high natural value and threatened with degradation since 15 August for molinia grassland (floristically rich, in a damp environment) and since 1 July for the remaining grasslands (subsidies from PLN 400 /ha to PLN 1030 /ha depending on the intensity and mode of mowing);
- "Maintaining extensive grassland" – this measure accounts for restoring or maintaining extensive pasturage on semi-natural rough grazing to ensure that floristic values and habitats of birds on the verge of extinction are maintained (subsidies of PLN 230 /ha to PLN 560 /ha depending on the pastures location).

The above measures were implemented in 69 geographically separated priority zones with specific environmental problems or high nature values. The zones were separated with the aim of focusing agri-environment measures and hence achieving tangible environmental results. The zones covered 5995 thou. ha of agricultural land which represents nearly 33% of the total area of agricultural land in Poland. This percentage reflects the share of valuable nature areas and hence distinguishes itself with its considerable spatial diversification: 12-16% in the Łódź and Opole voivodeships up to 54% in West Pomeranian (cf. Table 2, Figure 3).

Table 2. The agri-environment measures priority zones – elements of evaluating the Rural Development Plan

Voivodeship	Territorial range		Farms activity				Farms activity indicator
	thou. ha AL	% of total AL area	No.		AL area		
			thou.	%	thou.	%	
Dolnośląskie	554.4	47.8	1.1	1.3	16.5	2.1	3.0
Kujawsko-pom.	318.5	27.5	0.9	1.1	12.8	1.3	4.0
Lubelskie	554.5	32.4	3.2	1.4	18.5	1.3	3.3
Lubuskie	164.6	29.8	0.5	1.4	12.5	4.0	7.6
Łódzkie	197.8	15.9	0.1	0.1	1.2	0.1	0.6
Małopolskie	254.0	31.4	0.6	0.3	3.2	0.5	1.3
Mazowieckie	958.1	40.3	1.9	0.6	13.0	0.6	1.4
Opolskie	74.0	12.7	0.1	0.2	1.1	0.3	1.6
Podkarpackie	349.2	37.4	2.1	1.1	18.5	2.7	5.3
Podlaskie	473.8	39.4	1.6	1.6	9.0	0.8	1.9
Pomorskie	214.7	23.6	1.0	1.9	11.3	1.6	5.3
Śląskie	174.3	28.5	0.2	0.1	1.4	0.3	0.8
Świętokrzyskie	162.6	23.8	1.3	1.1	6.0	1.0	3.7
Warmińsko-maz.	335.5	25.9	0.5	1.0	15.5	1.8	4.6
Wielkopolskie	610.2	32.5	1.4	1.0	15.2	1.0	2.5
Zachodniopom.	598.7	54.1	0.9	2.1	19.8	3.0	3.3
POLSKA	5994.8	32.9	17.4	0.9	175.4	1.2	2.9

Source: author's own on the basis of the Chief Statistical Office's data (Regional Data Bank) and ARiMR (Management Information System).

As for the activities to undertake in the priority zones of the agri-environment measure, farmers proved most active in maintaining extensive grasslands (14.2 thou. farms, 111.8 thou. ha AL). The farmers' less intense interest in undertaking environmental activities resulted from sustainable agriculture (2.0 thou. farms, 54.8 thou. ha AL) and most of all from maintaining extensive pastures (1.2 thou. farms, 8.8 thou. ha AL). In total in 2004–2006, 17.4 thou. individual farms undertook activities in the priority zones of the agri-environment measure while the zones covered 175 thou. ha of agricultural land.

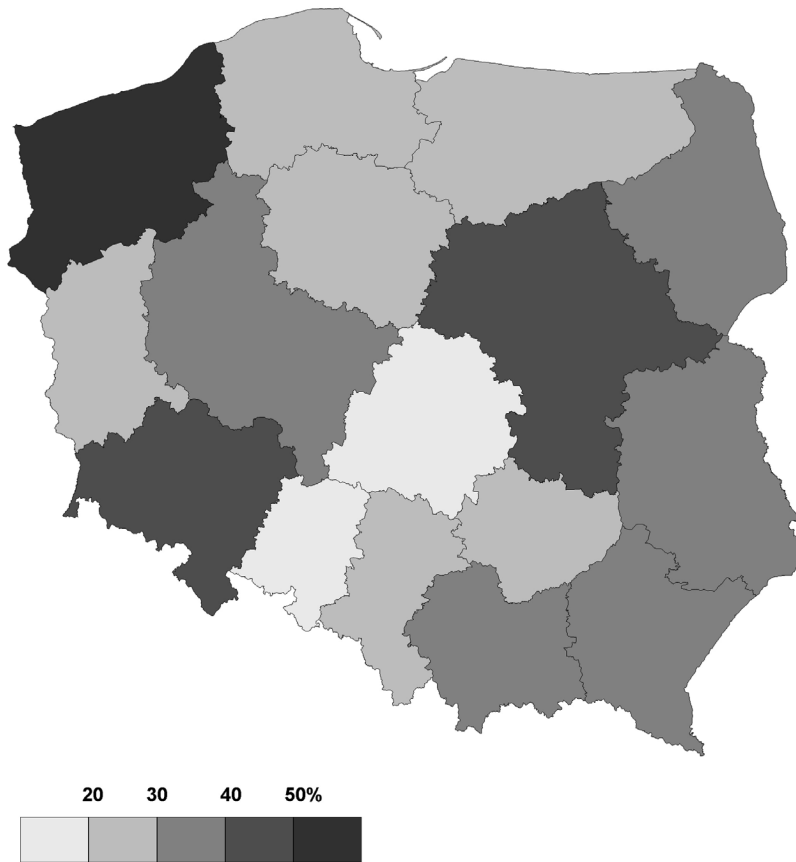


Figure 3. Share of priority zones of the agri-environment measure in the total area of agricultural land

Source: author's own on the basis of the Chief Statistical Office's data (Regional Data Bank) and ARiMR (Management Information System).

Farms' activity in the measures to undertake was strongly spatially diversified within the separated zones themselves. The related activity was insignificant in the Łódź, Opole and Silesian voivodeships (0.1–0.2 thou. farms – 0.1–0.2% of the total number; 1.1–1.4 thou. ha AL – 0.1–0.3% of total area). On the other hand, these activities were highly popular in the Lublin (3.2 thou. farms) and Subcarpathian voivodeships (2.1 thou. farms). The popularity was reflected in the quota of farms undertaking environmental activities of the total number of farms in the Pomeranian (1.9%) and West Pomeranian voivodeships (2.1%). In this respect, the biggest acreage of agricultural land occurred in the following voivodeships: Lublin (18.5 thou. ha), Subcarpathian (18.5 thou. ha) and West Pomeranian (19.8 thou. ha). The highest quota of the total area of agricultural land occurred chiefly in

the north-west of Poland: Lubusz (4%) and West Pomeranian voivodeships (3%; cf. Table 2).

An analysis of the ratio of affecting the farming production area indicates that measures targeted at specifically separated priority zones are of small ecological significance. On average, in Poland the agricultural land of farms partaking in programmes related to sustainable farming and maintaining extensive grasslands and pastures represent barely 2.9% of the total area of agricultural land in the priority zones of the agri-environment measures. This ratio dropped below 1% in the Łódź (0.6%) and Silesian voivodeships (0.8%) while it exceeded 5% in the Subcarpathian (5.3%), Pomeranian (5.3%) and, last but not least, Lubusz voivodeships (7.6%; cf. Figure 4).

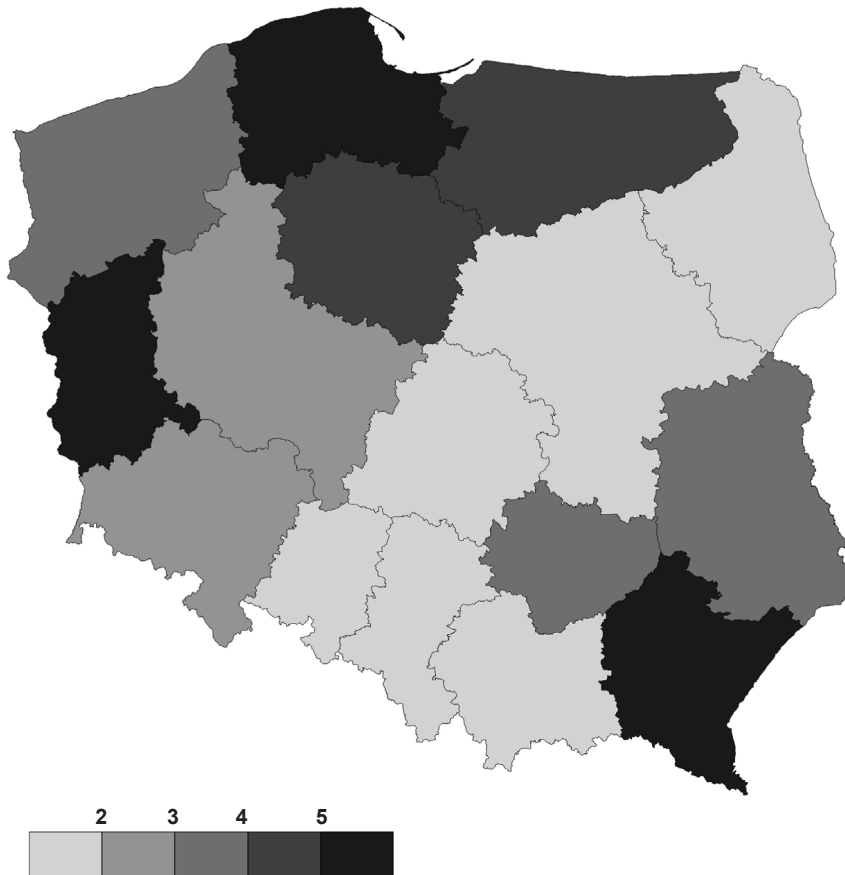


Figure 4. Area eligible for subsidies by virtue of priority zones of agri-environment measures vs. total area of agricultural land meeting relevant eligibility criteria (%)

Source: author's own on the basis of the Chief Statistical Office's data (Regional Data Bank) and ARiMR (Management Information System).

## Forestation of farmland

The natural considerations of the regional diversification of absorption of European Union funds in Polish agriculture are also determined by the lowest valuation classes soils (V, VI), the underlying mechanism of the Rural Development Plan related to forestation of farmland. This measure is aimed at foresting agricultural land of small agricultural utility (minimum 0.3 ha). Financial assistance may be granted to farmers undertaking such measures in the following ways: support in forestation (covering 80% of the cost of planting), a care bonus (covering the costs of maintaining a new forest cultivation – for 5 years upon planting) and a forestation bonus (assistance to balance the income foregone on account of designation for non-agricultural purposes – up to 20 years upon planting). The amount of subsidy varies depending on the tree stand structure, the relief or the quota of the beneficiary's farming income of his total income.

Solving the problem of excessive use of small agricultural utility land by forestation thereof affects sustainable development of agriculture and rural areas directly (by increasing forest coverage and hence creating conditions for reinforcing ecosystems and biological diversity) as well as indirectly (by generating extra employment and income).

Poland has 6248 thou. ha of agricultural land of small agricultural utility (V and VI valuation class of arable land and orchards as well as grazing land) which represents 34.3% of the total area of agricultural land (according to Valuation..., 1998). The related figures would be very spatially diversified. Broken down to regions, the small quota of V and VI valuation class soil (not exceeding 25%) was recorded in the following voivodeships: Lower Silesian (21.3%), Kuyavian-Pomeranian (24.7%), Lublin (23.8%) and Opole (22.4%; cf. Table 3). On the other hand, low valuation class soil is particularly frequent in central Poland (Masovian – 46.1% and Łódź – 45.8%) and in the north-east (Podlaskie – 47.6%, Figure 5).

In 2004–2006 as part of the Rural Development Plan, agricultural land was afforested by 16.8 thou. farms – from 0.2 thou. in the Opole voivodeship to 2.4 thou. in Masovian. These farms' share in the total number of individual farms was insignificant, amounting to 0.9%; broken down to voivodeships, it ranged from 0.2–0.3% in Lesser Poland and Silesian to 3.6% in Warmian-Masurian. The extent of the environment measure's impact is best exemplified by the size of the forested acreage. In Poland 37.1 thou. ha of agricultural land has been forested, an insignificant part in the total area of agricultural land (0.3%). With respect to specific voivodeships, the biggest forested area was recorded in the Masovian (6 thou. ha) and Warmian-

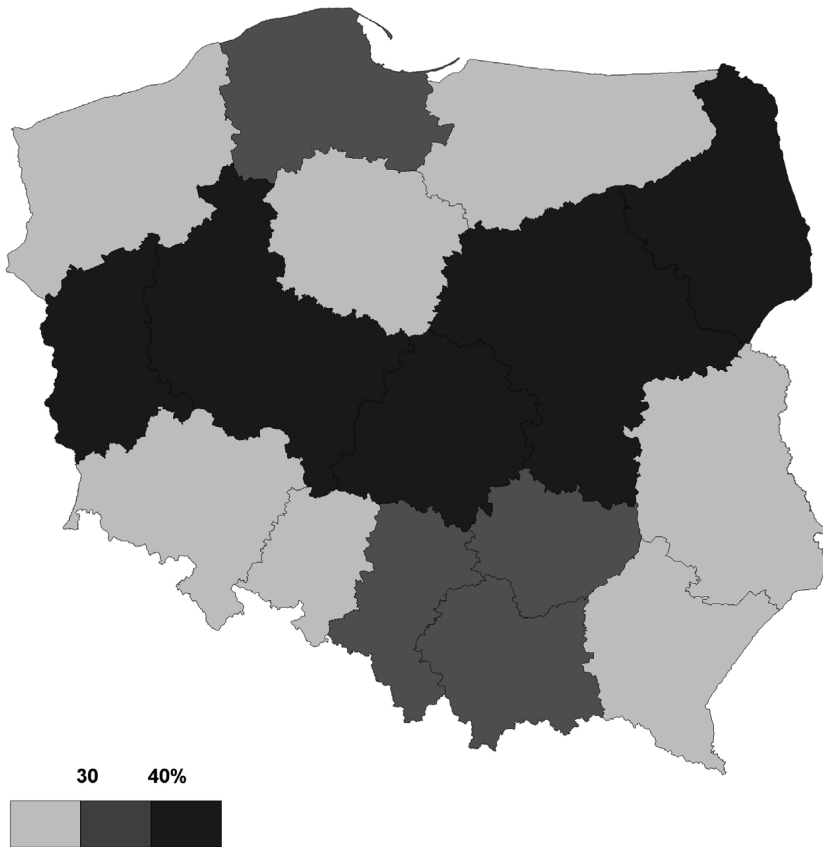


Figure 5. V and VI valuation class soils as percentage of the total area of agricultural land

Source: author's own on the basis of the Chief Statistical Office's data (Regional Data Bank) and ARiMR (Management Information System).

Masurian voivodeships (7 thou. ha), while the share of forested land in the total area of agricultural land ranged from 0.1% (Lesser Poland, Opole, Greater Poland) to 0.5% in the Lubusz and 0.8% in Warmian-Masurian voivodeships.

In 2004–2006 agricultural land forested as part of the Rural Development Plan represented on average barely 0.6% of the total area of lowest valuation classes soil. By regions, the percentage exceeded the threshold of 1.0% only in Warmian-Masurian (2.1%; cf. Table 3, Figure 6). Such a small impact of forestation on agricultural productive area indicates the need for continuing this measure of the Rural Development Plan.



Table 3. Forestation of agricultural land – elements of evaluation of the Rural Development Plan measure

Voivodeship	Territorial range		Farms activity				Farms activity indicator
	thou. ha AL	% of total AL area	no. of farms		AL area		
			thou.	%	thou.	%	
Dolnośląskie	246.7	21.3	0.6	0.8	2.2	0.3	0.9
Kujawsko-pom.	286.2	24.7	1.0	1.2	2.1	0.2	0.7
Lubelskie	406.8	23.8	1.5	0.7	2.6	0.2	0.7
Lubuskie	237.7	43.1	0.4	1.2	1.6	0.5	0.7
Łódzkie	568.9	45.8	1.2	0.7	2.1	0.2	0.4
Małopolskie	244.7	30.3	0.4	0.2	0.3	0.0	0.1
Mazowieckie	1093.9	46.1	2.4	0.8	6.0	0.3	0.5
Opolskie	131.0	22.4	0.2	0.5	0.4	0.1	0.3
Podkarpackie	263.6	28.2	2.5	1.3	1.9	0.3	0.7
Podlaskie	573.1	47.6	1.3	1.3	2.2	0.2	0.4
Pomorskie	311.2	34.3	0.8	1.4	2.4	0.4	0.8
Śląskie	221.5	36.2	0.3	0.3	1.0	0.2	0.4
Świętokrzyskie	245.2	35.9	1.2	0.9	1.4	0.2	0.6
Warmińsko-maz.	331.1	25.6	1.8	3.6	7.0	0.8	2.1
Wielkopolskie	784.6	41.7	1.0	0.7	2.1	0.1	0.3
Zachodniopom.	301.6	27.3	0.4	0.9	1.8	0.3	0.6
POLAND	6248.1	34.3	16.8	0.9	37.1	0.3	0.6

Source: author's own on the basis of the Chief Statistical Office's data (Regional Data Bank) and ARiMR (Management Information System).

### Assistance for farming on less favoured areas – suggested synthetic appraisal

In total, the analysed nature elements of the Common Agricultural Policy referred to as much as 22005 thou. ha of agricultural land, including 44.4% resulting from its location in less favoured areas (from approx. 30% in the Opole and Subcarpathian voivodeships to 57% in Warmian-Masurian), 27.2% in the priority zones of the agri-environment measure (from 13% in the Łódź to 47% in Lower Silesian voivodeships) and 28.4% as a result of owning V and VI valuation class land, eligible for subsidies as part of the forestation of agricultural land measure (from 18% in West Pomeranian to 45% in Opole, cf. Table 4).

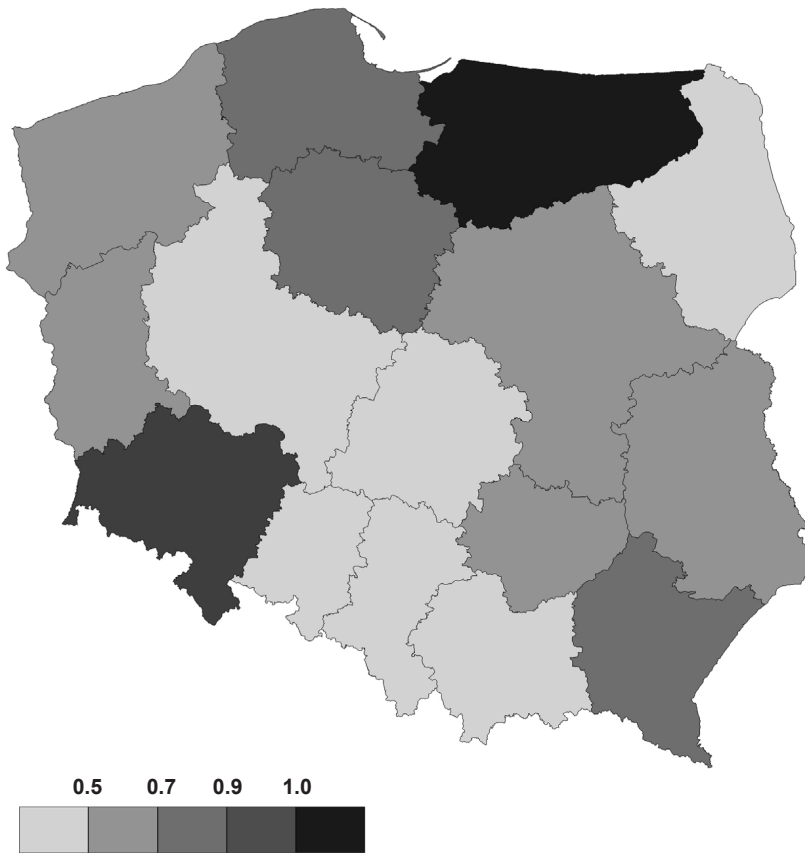


Figure 6. Area eligible for subsidies by virtue of foresting agricultural land against the total area of agricultural land meeting the relevant eligibility criteria (%)

Source: author's own on the basis of the Chief Statistical Office's data (Regional Data Bank) and ARiMR (Management Information System).

The basis adopted for a synthetic analysis of the nature considerations determining farms activity in the realm of applying for EU funds has been the total area of agricultural land eligible for extra financial support by virtue of its location in less favoured areas, in priority zones of the agri-environment measure and as a result of owning V and VI valuation class land, eligible for subsidies as part of the forestation of agricultural land measure. This acreage was an element of constructing two ratios: the nature preference of the Rural Development Plan (relation against the total area of agricultural land) and the impact of the Rural Development Plan on the agricultural productive area (relation against the total area of agricultural land of virtual financial support as part of the analysed measures).

Table 4. Support for agriculture in less favoured areas – synthetic ratios

Voivodeship	Nature elements of the Common Agricultural Policy				Nature preference ratio	Impact on agricultural productive area ratio
	thou. ha AL	in %				
		LFA	Agri-environment measures zones	low valuation land		
Dolnośląskie	1176.0	31.9	47.1	21.0	1.01	0.22
Kujawsko-pom.	1099.1	45.0	29.0	26.0	0.95	0.37
Lubelskie	1629.7	41.0	34.0	25.0	0.95	0.30
Lubuskie	874.6	54.0	18.8	27.2	1.59	0.34
Łódzkie	1523.0	49.7	13.0	37.4	1.23	0.32
Małopolskie	776.8	35.8	32.7	31.5	0.96	0.24
Mazowieckie	3635.9	43.6	26.3	30.1	1.53	0.31
Opolskie	291.4	29.6	25.4	45.0	0.50	0.21
Podkarpackie	853.1	28.2	40.9	30.9	0.91	0.24
Podlaskie	2173.7	51.8	21.8	26.4	1.81	0.38
Pomorskie	1044.1	49.6	20.6	29.8	1.15	0.33
Śląskie	573.4	31.0	30.4	38.6	0.94	0.15
Świętokrzyskie	697.4	41.5	23.3	35.2	1.02	0.25
Warmińsko-maz.	1573.2	57.6	21.3	21.0	1.22	0.39
Wielkopolskie	2435.0	42.7	25.1	32.2	1.30	0.37
Zachodniopom.	1649.3	45.4	36.3	18.3	1.49	0.29
POLAND	22005.6	44.4	27.2	28.4	1.21	0.32

Source: author's own on the basis of the Chief Statistical Office's data (Regional Data Bank) and ARiMR (Management Information System).

The Rural Development Plan's nature preference ratio shows the potential impact of EU measures supporting less-favoured areas. The impact's average value in Poland amounts to 1.21 and is spatially very diversified (cf. Table 4, Figure 7). The scantest possibility of developing agriculture based on extra financial support for less favoured areas was recorded in the Opole voivodeship where the ratio in question amounted to 0.5 (only 50% of the voivodeship's agricultural land may receive extra support on account of less favoured areas). On the other hand, the Podlaskie voivodeship enjoyed a record high ratio (1.81); it is characteristic of a heavy concentration of less favoured areas, usually protected by law.

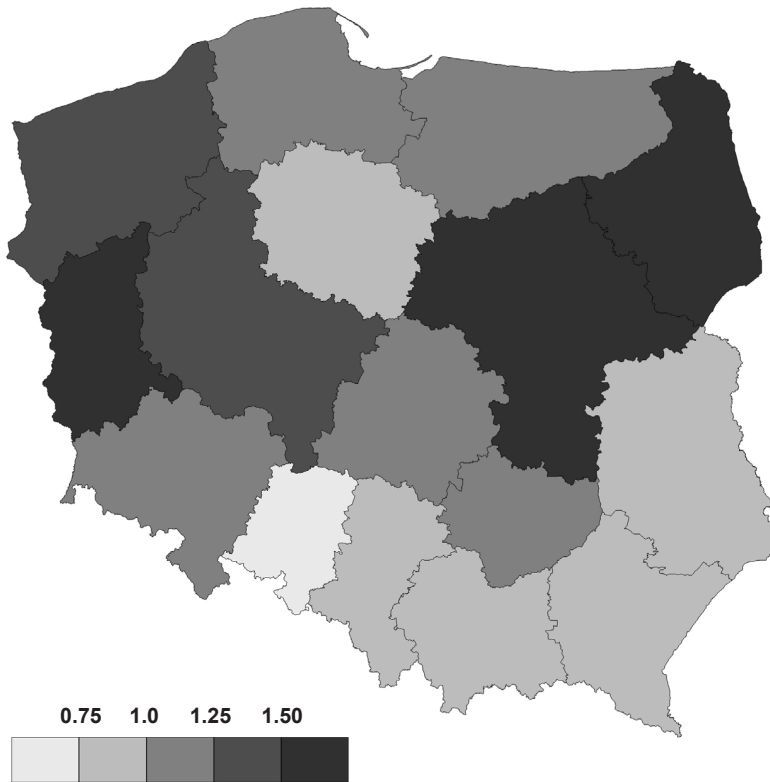


Figure 7. The Rural Development Plan nature preference ratio

Source: the author's own

On the other hand, the ratio of the Rural Development Plan's impact on the agricultural production area reflects the extent of EU measures supporting less favoured areas. Its average value in Poland amounts to 0.32 which indicates that out of the total acreage of agricultural land meeting the relevant eligibility criterion, only approximately 1/3 of the area receives virtual financial support. This shows a need for continuing and extending the territorial range of EU aid measures targeted at less favoured areas.

It is disturbing to realize that the ratio was lowest in the Silesian voivodeship (0.15), the most urbanized and industrialized region in Poland hence one showing great needs for environmental measures, chiefly those supporting less favoured areas. On the other hand, high ratios (0.37-0.39) occurred both in voivodeships with a high quota of less favoured areas (chiefly protected by law - cf. the Podlaskie and Warmian-Masurian voivodeships) and in regions enjoying high farming culture and the resulting farmers' intense activity in EU aid programmes (the Kuyavian-Pomeranian and Greater Poland voivodeships; cf. Table 4, Figure 8).

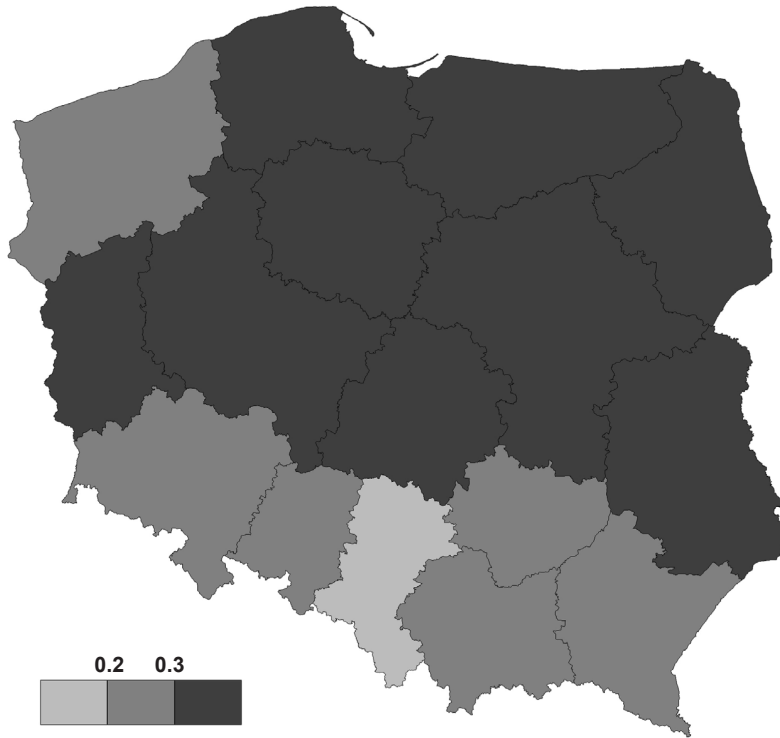


Figure 8. The Rural Development Plan's impact on agricultural production area  
Source: the author's own.

## Conclusions

Poland's membership in the European Union and the resulting need for implementing the rules of the common agricultural policy means that less favoured areas need to gain in importance. Before the accession, devoid of the state's preferential agricultural policy these areas were economically degraded (e.g. resulting from the farms' poor profitability), social degradation (e.g. as a result of depopulation in rural areas), cultural degradation (e.g. by the rural areas losing their agricultural character) and natural degradation (e.g. decreasing biological diversity). Spatial delimitation of these detrimental processes constitutes the basis for separating agricultural problem areas (cf. J. Bański, 1999). On the other hand, the process of disposing of less favoured farming areas has slowed down in Poland as a EU member which results in impeding adverse processes if not enhancing the social and economic conditions in these areas. This is related to implementing the Rural Development Plan and commissioning a system of subsidies for farms which prefers areas where natural conditions are

the basic barrier to agricultural development i.e. qualified as less favoured areas, priority zones of the agri-environment measure and including agricultural land of low valuation classes making them eligible for forestation. This analysis has proved that this mode of supporting agriculture from the national budget and that of the European Union are spatially diversified (e.g. cf. the Rural Development Plan's nature preference ratio – from 0.50 in the Opole voivodeship to 1.81 in the Podlaskie; the ratio of the Rural Development Plan's impact on agricultural productive area – from 0.15 in the Silesian to 0.39 in the Warmian-Masurian voivodeship) are particularly acute in areas protected by law, usually being less favoured areas. Farming in these areas, previously limiting the development of agriculture, offers now an opportunity for receiving subsidies – alternative sources of income, unavailable to farms operating in favoured areas.

### References:

- Bański J., 1999, *Obszary problemowe w rolnictwie Polski. Prace Geograficzne*, nr 172, IGiPZ PAN, Warszawa.
- Czapiewski K., Niewęglowska G., 2006, *Przestrzenne zróżnicowanie dopłat wyrównawczych ONW w Polsce w 2004 roku [in:] Ekonomiczne i społeczne uwarunkowania rozwoju polskiej gospodarki żywnościowej po wstąpieniu Polski do Unii Europejskiej*, IERiGŻ, nr 31, Warszawa.
- *Plan Rozwoju Obszarów Wiejskich*, 2004. Ministerstwo Rolnictwa i Rozwoju Wsi, Warszawa.
- *Polska wieś po wejściu do Unii Europejskiej*, 2004, praca zbiorowa, Fundacja na Rzecz Rozwoju Polskiego Rolnictwa, Warszawa.
- Rudnicki R., 1997, *Geograficzno-ekonomiczne czynniki kształtujące produkcję rolnictwa indywidualnego na przykładzie makroregionu dolnej Wisły*. UMK, TNT, Toruń.
- Witek T. (ed.), 1998, *Waloryzacja rolniczej przestrzeni produkcyjnej Polski*, IUNiG, Puławy.



Anatoliy Jakobson

## **Linguistic conflicts and problems of ethno-cultural policy in contemporary Ukraine: the view of an ecologist and marketologist**

The new independent state, former Soviet republic, Ukraine, being a multi-ethnic country, is meeting a number of linguistic problems. Most of them are typical for the new independent states. We shall deal here with only two of these problems, which are obviously of highest importance.

### **The problem of the Ukrainian language in Ukraine**

Ukrainian is the language of native people, Ukrainians, who comprise today about 75 per cent of the country population. But, as Ukraine has been a part of Russian Empire (later of Soviet Union) for 3 centuries, Russian language has expanded here enormously.

Now Russian is spoken by about one third of the population. In 8 Eastern and Southern oblasts, as well as in Kiev, it is native for 25 to 70 per cent of total population and among them for 10 to 40 percent of ethnic Ukrainians. Respective figures in Crimean Republic are more than 90 and about 45 per cent<sup>1</sup>. In the biggest cities of Ukraine (Kiev, Kharkov, Dnipropetrovsk, Donetsk, Odessa, Zaporozhye), practically all educated people speak Russian. Those for whom Ukrainian language is a professional tool (language teachers, language and history scholars, journalists, actors, etc.) may just make an exception, but even they often prefer Russian in their everyday life.

More precise data are not available, or, to be more exact, do exist but are not reliable. Actually, many people do not understand correctly the question about "*rodnoy yazyk*" (native language) in the Census questionnaire, which presumes the language the person speaks in everyday life, not the one of the given nationality. A Russian-speaking Ukrainian (or, say, Pole) may answer "Ukrainian" ("Polish") just because of misunderstanding.

---

<sup>1</sup> The figures are taken from the USSR Population Censuses of 1970, 1979 and 1989 and are characteristic for all those periods without significant differences.

Moreover, there are a lot of bilingual people in Ukraine, like in each ex-Soviet republic. Then, the specificity of Ukraine is that actually some mixed "language", so called "*Soorzhik*", is widespread here. It is understandable to both Russian- and Ukrainian-speaking (as both languages are Slavic), although rather remote from both literal Russian and literal Ukrainian, still being nearer to the latter. *Soorzhik*-speaking people, as well as the bilingual, may in different cases give various answers when asked about their native language.

Now, since Ukraine has become an independent state, the situation has been changing very slowly (or, better to say, there is almost no change), despite governmental efforts and strong ideological campaign in the mass-media.

### **The essence of ecological approach**

Much has been written that a situation like described above is really a problem. This has been discussed by politicians, linguists, historians, lawyers. Here it will be discussed only as an ecological (environmental) problem.

Saying this, we assume that socio-cultural conditions of human living, including language spoken by the surrounding, make up an important part of environment, affecting human mental and even physical health, and should be treated in the same way as physical environment.

The motto of "*ecology of culture*", put forward by prominent Russian philologist and culturologist Academician Dmitry Likhachov<sup>2</sup>, has become popular with Soviet and post-Soviet intelligentsia. Among those who have accepted this motto and used it in their activity are nationalistic intellectuals, both Russian and anti-Russian.

The latter have been very active in Ukraine, as well as in Baltic republics, Moldova, Georgia, etc. They state that expansion of Russian language brings to *degradation* (the term well known to the ecologists) of ethnic culture and hence to *degradation* of the people's morality, of living conditions, even of physical environment.

Such an opinion seems rather reasonable and fruitful but still lacking scientific background and hence bringing sometimes to inadequate conclusions. We are going to analyze the situation using *level approach*, so common to ecology.

### **An individual (a common Ukrainian) level**

An *individual* in this case should mean a *common Ukrainian*. A nationalist would insist that it is *uncomfortable* for this common Ukrainian when

<sup>2</sup> D. S. Likhachov, 1984, *Velikoye naslediye* (Great Heritage), Sovremennik, Moscow.

surrounding people speak predominantly the language, which is not native for him, when, adapting to these circumstances, he has not only to learn the alien language but to speak it, to use it in communications with doctors, with governmental officers, to hear lectures in it in the university and so on.

It is uncomfortable, indeed. But for whom? Discussing the notion of “a *common Ukrainian*”, we should distinguish between Ukrainian-speaking and Russian-speaking ethnic Ukrainians. Those for whom Russian has become the native language do not seem to feel any discomfort living in Russian-speaking surrounding. So, mentioning Ukrainians, we mean only those for whom Ukrainian language remains native.

We should also distinguish between two groups of the Ukrainian-speaking. Let us call them “*culturally conscious*” and “*cultureless*” Ukrainians. The former are those who are conscious and sensitive to the language. For them it is *valuable*, they desire to speak it correctly, according to some cultural standards and regulations. The latter just speak it as their mother tongue but do not care very much for any standards; actually, they speak just their personal language and are quite satisfied if they understand and are understood by those they are talking with.

Such a distinguishing wouldn't be so important if we were discussing ecological problems of, say, Latvian or Georgian language. Russian-speaking environment seems to be equally uncomfortable for a *culturally conscious* or a *cultureless* Latvian. But it is not so for Ukraine.

Ecological problems may seem rather similar at the individual level, no matter which language or which pair of languages is under discussion. They are, surely, but still there exist some differences. Linguistic and cultural *culturelessness* is characteristic (within ex-USSR) only to Ukrainians and Byelorussians, as their languages are closely related with the *Empire* language. This enables the very existence of such a phenomenon as *Sourzhik* and at the same time makes it relatively easy even for *culturally conscious* persons to understand and speak Russian.

It is not so for other ex-Soviet peoples, whose native languages are not Slavic and often even not Indo-European. Even more difficult is it for non-Soviet Slavic peoples: although Russian words and grammar are nearer to theirs, they have not, unlike Latvians etc., heard and seen these words around themselves since their childhood.

Anyway, the discomfort can be weakened or strengthened, dependent on the concrete person's mentality and self-consciousness. If a language is considered as the one of a *great nation*, which is interesting, useful and prestigious to know, one will accept it with pleasure. If it is treated as the language of *occupants*, any adaptation seems very, very difficult, even painful.

Still, some discomfort exists, even for Ukrainians, even for those without any hostility to Russia and Russians. Though very close to each other, these languages do differ.

Many Russians, especially within Russia, are convinced that Ukrainian is something like spoiled Russian and there is nothing easier for a Russian than to understand it. But never will a Russian understand Mykhaylo Kotsyubynsky's or Ivan Franko's prose without at least elementary acquaintance with Ukrainian. What is true, he will easily understand a saleswoman at Kiev or Kharkov marketplace.

This is so because, being formally a Ukrainian-speaking Ukrainian, the saleswoman is in fact a *cultureless* Ukrainian and speaks not Ukrainian but *Soorzhik*. Since her childhood, she has heard both Ukrainian and Russian speech around herself and she has never tried to distinguish between them, to reflect what is correct and what is wrong in her own speech. Such a mixture of languages in her environment doesn't disturb her, she doesn't feel it as uncomfortable.

Who does, is a *culturally conscious* Ukrainian. It is his or her individual environment that is really damaged by the expansion of Russian language.

### The Ukrainian nation level

Speaking about Ukrainian *nation*, we consider nation as something different from the totality of individuals. *Nation* as a national consciousness, ethnic culture, the system of traditions, customs, standards, values, including normative language, exists independently of the individuals; the latter can just adopt it and afterwards, perhaps, contribute in it and thus somehow influence and slightly change it.

It is existence of *nation* that makes it possible for an *individual* (a *culturally conscious* one) to call himself or herself a Ukrainian, a Russian and so on. It is *nation* that provides *comfortable environment* for him or her.

What is good for a *nation*? Or, speaking in ecological terms, when can we say that its environment is *healthy*? Or, still narrower, what is a *healthy* language, assuming English, German, Italian or Dutch as examples of *healthy*, normally developing languages?

It can be said that a *healthy* language doesn't lose speakers. Moreover, it is spoken not only by those for whom it is the language of their nationality. In certain areas it is the language common for everybody, it is spoken in the streets and public institutions, although at home some people may use some other language.

Such a language is developing *harmonically*. Some new words appear in it, some become archaic. The new words may come from other languages, but often they emerge spontaneously out of the glossary already existing.

The language possesses a well developed vocabulary for colloquial speech and for a scientific report, for poetry and for a military command, and there exist standards known to, or felt by any literal person, that indicate which words and expressions are good in the given situation.

From this point of view, Ukrainian can hardly be called a *healthy* language, although it is getting on rather fine in comparison with many other languages within ex-Soviet Union.

There is a quite reasonable opinion that a language can develop normally only in an independent state, where it is not affected by any *Empire* language. Indeed, in the circumstances when Russian dominated in the Empire, Ukrainian could hardly elaborate its own military, diplomatic, technological, mathematical, etc. vocabulary.

However, not everything is so clear. It is true that none of the nations having no independent state can be considered *healthy* from the mentioned point of view. But is independence enough? Of course, not. It is well known that English, French, Portuguese have saved their positions in many former colonies, at the expense of indigenous languages. Are the latter *healthy*? From the other hand, English is not equal (just like French used to be not equal in 18-th and 19-th centuries) with "indigenous" languages even in Germany or Italy.

A hypothesis can be put forward that the signs of *healthiness* formulated above are not universal. Perhaps there can exist various levels of *healthiness*, corresponding with the cultural potential of any given language.

In this case not only English may be considered *healthy*, but also Swedish, although people in Sweden use English widely without demanding that it be replaced by the state language in all the cases. And, perhaps, Swahili, or Bengali, or Kikongo as well.

Anyhow, all this is not the case for Ukrainian. All the languages mentioned, together with respective nations, exist in their own stable niches, and those niches are not similar to each other, maybe some of them would seem uncomfortable for another nation but do suit its own one. However, none of those languages is losing speakers, none of them is treated with negligence in its homeland. Here is really an ecological problem.

### **The regional population level**

There may be doubts as to the very existence of such an *ecological level*. In any part of Ukraine, in any significant settlement, you can meet, generally speaking, both Ukrainian-speaking and Russian-speaking people. While expansion of Russian is uncomfortable for the former, it should be comfortable for the latter. So, these two groups of population seem to have different *ecological interests*.

However, there is another point of view, worth considering. In contemporary Ukrainian literature, you can find a raw of typical characters, starting with *Volod'ka Loboda* from Oles' Honchar's "The Cathedral"<sup>3</sup>. This type is an assimilated, *rootless* Ukrainian guy, desiring to make a career, who does not appreciate being Ukrainian, is not interested in national history and traditions, tries to speak only Russian. Of course, his Russian is more like *Soorzhik*, of course, he does not know Russian culture either. Together with everything national, he neglects his parents, his native village, the people and the landscape (the *environment!*) around him.

The idea of Ukrainian writers, expressed not only through their works, but also in their articles and interviews, is transparent: those assimilated *Volod'kas*, being neither Ukrainian nor Russian, are dangerous for their whole surrounding, no matter Ukrainian or Russian. Bureaucracy, criminality, environmental damage around us all stem from *Volod'kas'* rootlessness.

Such a character can be found not only in Ukrainian literature. Chinghiz Aytmatov, Kyrgyz writer, writing in Russian as well as in Kyrgyz, has brought a new word into "Soviet" language<sup>4</sup>. This word, taken from a folk legend (in fact, very probably, invented by Aytmatov himself), is "*mankoort*", which means a human being deprived of memory and hence dangerous for people and nature<sup>5</sup>.

We can find *mankoorts* also in the works of some Russian authors. The most prominent example is Valentin Rasputin's "The Fire"<sup>6</sup>. Rasputin (well known as both nationalist and environmentalist) shows the people who have left their villages desiring "easy life" and "*big ruble*". Everything said above about *Volod'ka* can be applied to these people, with just one exception: they didn't give up their native language, being and remaining Russian.

No doubt, *mankoorts* as a phenomenon do exist and are really ecologically dangerous. Those decision-makers who have spoiled Baikal, Aral and Ukrainian *black earth*, aren't they *mankoorts*? However, there can be some doubt, whether it is the process of changing Ukrainian for Russian that brings to *mankoortism* in Ukraine. Maybe, it is low cultural level that is primary, not a linguistic transition?

---

<sup>3</sup> Honchar's "The Cathedral" ("Sobor") was published in 1968, first in Ukrainian and afterwards in Russian.

<sup>4</sup> We may speak about "Soviet" language here, as the word "*mankoort*" became very soon extremely popular with intellectuals of all peoples within the Soviet Union.

<sup>5</sup> Aytmatov's "And the Day Lasts Longer than a Century" ("I dolshe veka dlitsa den") where this word was introduced was written in Russian; published in 1986.

<sup>6</sup> Rasputin's "The Fire" ("Pozhar") was also published in 1986.



Moreover, the process of transition is in reality much more complex than it seems to nationalists. To change for Russian, a Ukrainian-speaking Ukrainian should, as a rule, first be *cultureless* (although even here exceptions are possible). But afterwards the same person may learn and adopt Russian culture, i. e. become a “*culturally conscious Russian*”. This is still more probable for his children who will be brought up from the very beginning as Russian-speaking. There is no room for *mankoortism* here.

It can be added that not all *cultureless* Ukrainians change for Russian. But those who don't are also ecologically dangerous, just like Rasputin's characters.

### **The Mankind level**

The level of the *Mankind*, the World, Global human culture taken as a whole is not obvious either. Using this notion means insisting that the problems of Ukrainian language, or any other, affect somehow the environment of, say, an Afro-American policeman, or a Spanish carpenter, or a South-Korean businessman who have, perhaps, never heard about Ukraine and Ukrainians. May we do so?

*Ecological thinking* is Global thinking. It means, first of all, understanding that our Earth is very small and vulnerable, that building a hydropower station in Siberia brings to climatic changes in China, that a particle of a pollutant thrown out in Western Europe can be found afterwards in the rainwater in Mongolia or in the meat of Antarctic whales.

The *degradation* of an ethnic culture also changes something in the whole world. First, the very notion of ethnic culture includes such an aspect as the traditions of economic activity adapted to the natural environment of the given nation. When people give up their ethnic culture they give up these traditions as well. Just recollect *Volod'ka Loboda*. We have seen that he is dangerous for his surrounding. But, as his decision-making affects the natural environment, he is dangerous for the whole world as well. As it was shown, the interdependence between ecological *mankoortism* and giving up one's native language is rather complex but still it does exist.

Moreover, each ethnic culture has been contributing into the Global culture of the Mankind. Any elementary educated person throughout the world knows at least the names of Shakespeare, Goethe or Tolstoy. Their works enrich the mental life of the policeman, the carpenter and the businessman mentioned above (at least through their school teachers or some other writers). James Aldridge, Hans Fallada or Vladimir Tendryakov (taking the same nations) are much less popular outside and even inside their countries but, no doubt, those who know them do not regret either.

It is clear that the very existence and normal development of respectively English, German or Russian culture and language have been

the precondition for the works of those writers to appear. It is true also for music, fine art, cinema, architecture, philosophy, pedagogy and other spheres of culture, whether language-oriented or not.

Now let us return to Ukrainian culture. Maybe, its contribution shall be estimated as rather modest if compared with Italian, French, English or German culture. Still, such names as Taras Shevchenko, "the bard of Ukraine" and a painter, or Grygory Skovoroda, original 18-th century philosopher and poet, are, to be sure, of Global prominence. Nikolay Gogol may be added here, worldwide known Russian writer, Ukrainian by origin, with strong sentiments to Ukraine; perhaps one third or more of his works are devoted to Ukraine, although written in Russian but using a lot of Ukrainian words and expressions. Already mentioned Kotsyubynsky and Franko, although less popular, shouldn't be forgotten, as well as Lesya Ukrayinka, prominent poetess, Mykola Lysenko, composer, Alexander Dovzhenko and Sergey Paradzhanov (Armenian by origin), film directors, Anton Makarenko (wrote in Russian) and Vasyl Sukhomlynsky, pedagogues and writers, etc.

Ukrainian culture has influenced Russian culture, which is, generally speaking, better known in the world. Besides Gogol, many other Russian intellectuals either were Ukrainian (among them Vladimir Vernadsky, great philosopher and scientist, Nikolay Miklukho-Maklay, anthropologist and traveler, one of the first explorers of the New Guinea Papuans, and others, not to mention some prominent revolutionaries and state leaders, Marshals or airspace constructors), or had lived in Ukraine for a significant period of their lives and reflected it in their works (among them Alexander Pushkin, Maxim Gor'ky, Alexander Kuprin, Anna Akhmatova, Mikhail Bulgakov, Isaac Babel and many others).

Ukrainian songs are popular throughout Russia. A lot of Ukrainian words have become Russian. In any Russian restaurant, as well as in many Russian families you will meet *borsch* and *vareniki* in the menu.

So, Russian culture wouldn't be what it is without Ukrainian culture. And the Global human culture wouldn't be what it is without both Russian and Ukrainian culture. Thus the menace to further existence of the latter may be treated as an ecological menace to the whole culture of the Mankind.

However, just one remark should be made. Analyzing the lists given above allows to see that, despite the great importance of Ukrainian language for the culture of the nation, Ukrainian culture might in some cases exist in other linguistic forms: Skovoroda wrote his poems in archaic Slavonic, Franko and many other writers used Galician dialect, in many features different from classical Ukrainian, and a lot of intellectuals, beginning with Gogol and including even Shevchenko (in his prose,

diaries and several poems) wrote in Russian, remaining still within the framework of Ukrainian cultural tradition.

### **The problem of Russian language in Ukraine: an individual level**

It has been mentioned that governmental efforts and a strong ideological campaign in the mass-media are being undertaken in contemporary Ukraine to change the linguistic situation that has been existing by now, i. e. to broaden the sphere of functioning of Ukrainian language.

No matter how successful have these efforts been, they bring to some environmental problems as to Russian language, in the first turn for Russian-speaking *individuals*.

Indeed, any broadening the Ukrainian language sphere is possible only at the expense of Russian. The more schools teaching in Ukrainian, the fewer Russian ones, i. e. the less opportunity to get education in Russian. The more legal demands to use only Ukrainian in certain spheres, such as teaching at the universities, communication at state offices, advertising and so on, the more necessity to speak alien language. Just the same if in reality the number of Ukrainian-speaking people in the streets and in the shops increases. Wouldn't it be *uncomfortable*?

Of course, there is a great difference, often underestimated by Russian people, between studying Ukrainian and studying *in* Ukrainian (the former is just learning another language). Still, while such an underestimation exists, discomfort exists too.

By the way, some Ukrainian nationalists, estimating the problem, find it reasonable to distinguish between three categories of Russian-speaking people within Ukraine<sup>7</sup>. The first are Russian-speaking ethnic Ukrainians. They should be treated not as individuals having their rights and interests but as *ill people* (some authors use also such already known labels as "traitors" and "mankoorts"). These people simply must *recover* and return to Ukrainian, whether it is comfortable for them or not.

The second category are ethnic minorities. For them speaking Russian is considered not a guilt but a sort of misfortune. That is Russian Empire and Soviet Communists who are guilty that these decent people have been deprived of their native languages (*rodnoy yazyk*, or, in Ukrainian, *ridna mova*). The only problem is to help them in returning to those languages.

And, at last, the ethnic Russians. All they need and have right for is just speaking their mother tongue inside their families and friendly companies, enjoying theaters, newspapers, perhaps broadcasting in Russian, teaching

---

<sup>7</sup> It is no use to give precise references here, as this point of view is rather typical; it would be enough to say that the text below is just retelling the formulations of a certain article (in the newspaper "Vilna Dumka", 1993) which is much alike a lot of others.

in Russian at secondary (general) school for their children. Just like in the United States or in France.

There is still another, more radical, point of view, which can be seldom met in Ukraine but is rather popular in some others of the new independent states. According to it, the Russians in the given country are even not an ethnic minority but just “*occupants*”. The only problem with them is to help or to make them go back, to their Russia, where they would be free to feel as comfortable as they wish.

It seems interesting just to mention these opinions, while there is no room to criticize them here. For an ecologist, the proper approach is to study environmental comfortability without discussing any moral or juridical backgrounds of comfort for certain individuals or groups.

### **The problem of Russian language in Ukraine: the Russian nation level**

It has been mentioned already that there exist some differences in ecological problems at the *individual* level for various languages or, if interaction is under discussion, various pairs of languages. Herefrom, by the way, it is easier to understand that there is no symmetry between *comfortability* of a Ukrainian (or even Latvian, like any other ex-Soviet) in Russian-speaking environment and that of a Russian in other language-speaking environment; and the latter would be relatively higher if “other language” is Ukrainian.

Still there is much similarity in all the cases discussed, as a human being is nothing but human being. It might be easier for a certain intelligent Estonian or even Swahili to master Russian up to the level of one’s second native language than for a certain *cultureless* Ukrainian. But things are much more complicated at the level of *nation*.

While human beings have very much common in their physiology, psychology and, hence, ecology, *nations* are drastically diversified. This phenomenon is much more like diversification between animals of various classes and species than like that between human individuals.

Ecology of some small Northern peoples like Chukchi or Mansi demands that their culture, so primitive from the point of view of European traditions and so sophisticated in its coexistence with natural environment, be just left for itself. Any rude attempts to bring here what Europeans call “civilization” just destroy that original civilization, vulnerable like soil or flora of taiga and tundra.

Ecology of a nation like Ukrainian has been discussed earlier.

Ecology of Russian nation is something quite different. It is an *Empire* nation. This is not a label, just definition. It happened so that since 16-th century this nation has been formed and developed not only inside

but as well outside its traditional ethnic territory. It is no use saying that Russians are so bad that they have expanded to the lands that do not belong to them. It would be as reasonable as blaming wolves or foxes for killing and eating hares and mice: that is just their way of living.

It is impossible to say that the problems of Russian culture are to be solved within Russian state in its new borders. What is known today as Russian culture, which is a significant part of Global human culture, has been created not only by Russians but as well by Russian-speaking Germans, Greeks, Jews, Tatars, Georgians, Armenians, Buryats, etc. And by Russian-speaking Ukrainians among them. It has been created not only in Moscow and Saint-Petersburg / Leningrad but as well in Siberia and Caucasus, in Tashkent and Kishinyov (not Chisinau), in Riga and Minsk. And, perhaps, in the first turn – in Odessa, Kiev, Crimea, Dniepropetrovsk, Kharkov. And it was influenced by cultural traditions of all those lands and peoples.

In these aspects Russian culture is much alike other Empire nations. But there is also one specific feature.

Russian culture has been always highly centralized, or, better to say, *centripetal*. Never have Russians been a *diasporic* nation – unlike Jews or Armenians, never have they had any significant *diaspora* – unlike not only Poles, Greeks, Chinese or, by the way, Ukrainians, but unlike also such Empire nations as English and German.

The Russians and the Russian-speaking who had to emigrate, have never formed communities which would be a loyal ethnic group within the host country; neither did they form a self-sufficient community like English-speaking Americans or Australians did. They either assimilated with the host society, forgetting or trying to forget their ethnic identity, or went on feeling themselves a part of Russia. Among intellectuals, Nabokov is an example of the first variant, while a lot of others, from Turgenev to Solzhenitsyn, followed the second way.

So, Russian culture makes up a monolithic totality, though including a number of regional subcultures as particles of this totality. Among these subcultures, the one of Odessa, in Ukraine, should be mentioned here. Combining a lot of ethnic cultural traditions, especially Russian, Jewish and Ukrainian, known for its local patriotism, Odessa has been the Motherland of a lot of Russian writers, actors, musicians, etc.

However, Russian-speaking people anywhere look at Moscow (sometimes together with Leningrad as the second capital) as at the cultural *metropolis* (this may in some cases mean admiration and in others jealousy or even hatred). It has been typical that a lot of writers, journalists, film directors, singers and so on, born in Siberia, on Don or in Odessa and

known as patriots and bards of respective areas and towns, migrated to the capital (capitals) and lived there for some time and often for the whole life, remaining regional patriots and hymning their “*micro-Motherland*”. By the way, it has been so for many bilingual representatives of non-Russian national cultures as well, including Ukrainians, from Shevchenko (who died in Saint-Petersburg) to Vitaly Korotych.

Now a lot of regions and towns that had been feeding Russian culture with melodies and literature topics, with glosses and, most important, with creative persons of various origin are outside Russian state. Russian is no more state language there. If nationalistic forces in respective states succeed, these feeding processes will be interrupted forever and, probably, in some areas have already been interrupted.

It is a real *environmental challenge*.

It can be said that the *ecological interest* of Russian nation is that Russian language be still widespread in former Soviet republics, that it be studied at school, that the Russian-speaking there keep using it at all spheres of social life and participate in further developing Russian culture in tight contacts (including free migration) with all other Russian-speaking people.

### **The first step to the marketing approach: the notion of competition**

So, we can conclude that the socio-cultural environment of Ukrainian *individuals*, of Ukrainian *nation*, of the *Mankind* culture as a whole and, perhaps, even of Russian-speaking population of Ukrainian towns is being damaged by linguistic expansion of Russian. From this point of view, it would be good if this expansion stops and is replaced with extensive reverse process.

From the other hand, the socio-cultural environment of Russian-speaking *individuals* within Ukraine, of Russian *nation* and of the *Mankind* culture as a whole (as the latter is interested in saving Russian culture not less, if not even more, than Ukrainian) will suffer if the sphere of using Russian shortens, be it from geographical, demographic or functional point of view.

Who is right?

This is an incorrect question for an ecologist. Who is right – a hare running away from a wolf to save its life or the wolf pursuing the hare to provide food for its children and save their lives? Who is right – the wolf or a fox trying to intercept the hare for its own children?

Fortunately, human beings know some other ways of solving their controversies. Of course, they use war as well, and they use state compulsion, even violence, but still there is another, human instrument,



known as *fair competition*. It is *competition* that serves as a background of democratic and market society.

Some elements of competition have been always (i. e. since 17-th or 18-th century) present in Russian-Ukrainian linguistic and cultural interaction together with elements of compulsion. Their correlation has been different and is worth special analysis.

Compulsion started just when Ukraine was incorporated into Russian Empire. (It should be reminded that, although Ukraine united with Russia, in 1654, voluntarily, this union presumed a broad autonomy, which was afterwards gradually abolished by Russian tsars.) This incorporation created unequal preconditions for the competition.

By the way, competition in *unequal preconditions* is not something unfamiliar to democracy and market economy and can be hardly considered as unfair. Competing people are always unequal in their abilities, in educational level, in their wealth and starting social position, and this inequality affects their respective success. However, is it possible to eliminate this inequality?

So, competition took place in the course of both 19-th and 20-th centuries. Not always was this competition fair. But it can be stated that it was really fair during the Soviet period.

### **Russian-Ukrainian linguistic competition: a little history**

In Russian Empire, Russian was the only state language. It was the only language in administration, in higher education, in court; there were several exceptions in very specific situations but never for Ukrainian. As for Ukrainian, it was specially prohibited by a series of laws in 70-s of 19-th century (so called *Valuyev laws*, for that time prime minister). To be more exact, its usage was prohibited in all spheres but fiction, poetry and folklore. Later, restrictions were softened but still existed. Certainly, it wasn't the case of fair competition.

But much has changed after 1917. Here commentaries are needed. It is habitual in contemporary press and literature, both Russian and Ukrainian, both nationalistic and liberal-democratic, that October revolution and Soviet power are treated as the symbols of evil. There is no room here to discuss this very complex item. But only one statement should be put forward here: alongside with evil, that power has done something good. It can be said, in particular, about ethnic and linguistic policy.

The best argument would be just a simple description of the position of Ukrainian language at least during the last 45 years before the crash of the Soviet Union.

First, there existed both Ukrainian and Russian primary and secondary schools. That means that in the former all subjects were taught in Ukrainian.



The number of Ukrainian and Russian schools tended to be proportional to the ratio of children in certain settlement whose parents wanted them to be taught in respectively that or that language.

Was it really so? It is the lack of Ukrainian schools that has been one of the most popular arguments of Ukrainian nationalistic politicians and intellectuals. And here I, the author of this article, affirm, on the basis of my personal experience, that there was no such a lack. Who is right?

Never have I met in nationalistic media any negation of the formulation given above. The typical formulation in those media is that in the city  $N$  there are only  $X$  Ukrainian schools while Ukrainians comprise as much as  $Y$  per cent of the population. And the fact that  $Z$  per cent of this  $Y$  want that their children be taught at Russian school is either ignored or considered as having no importance. So, what is lack from one point of view, is not from another.

It is the fact that in villages and small towns (except Russian-speaking Crimea) the only existing school or all the schools used to be Ukrainian. The proportion of Ukrainian and Russian schools was different in the cities of Western and Eastern Ukraine: it was much higher in, say, Ternopol' than in Lugansk.

Ukrainian language was an obligatory subject at Russian school, starting with the 2-nd year. And starting with the 4-th or 5-th year the pupils studied Ukrainian literature. Respectively, Russian was studied at Ukrainian school.

As for higher school, an obligatory entering test was native language, in the form of composition (one of three proposed topics was to be chosen). In Russia it was Russian. In Ukraine it was either Russian or Ukrainian, according to the free choice of those under testing. In practice, for those who had studied well and were good enough in both languages it meant a good chance to choose among not three but six topics.

At higher school, both languages were used. The choice usually depended on the lecturer, sometimes on the University administration. Usually, in Lvov or Chernovtsy most subjects were taught in Ukrainian while in Odessa or Donetsk in Russian.

Newspapers in Ukrainian were published in all oblasts and rayons (again, except Crimea). There were Ukrainian theaters in each oblast center and in some major non-oblast cities. In several of them, there existed also Russian newspapers and theaters. A lot of fiction and special literature was published in Ukrainian, including translations from other languages, among them from Russian.

In these conditions, was the competition fair? Could it be anything else done in favor of Ukrainian language?

I think, it could. Starting with the late 70-s it became officially possible to avoid learning Ukrainian at school for those who did not want it. There was no studying History of Ukraine as a special subject. All the dissertations, whether Candidate or Doctor, had to be written only in Russian and then to be approved in Moscow.

All this, of course, was no good for Ukrainian culture. However, it should be recognized that it was quite unlike the situation before 1917. The competition was fair, or, let us say, almost fair.

Then why didn't Ukrainian language succeed in this competition? Because it was *unequal* competition, although *fair*, and little could be changed if the failures mentioned were corrected. There were two reasons for this inequality.

First was the heritage of juridical inequality before 1917. There had been no tradition in Ukrainian culture as for many spheres of intellectual activity; the attempts of the Soviet power to develop Ukrainian culture faced this lack of tradition, together with strong public treating Ukrainian as a vulgar peasant language.

The second reason was much more complex and would exist even if the Empire linguistic policy hadn't been so unfavorable. When Ukrainian parents were choosing the language of teaching for their kid, they were in fact choosing his or her future *space of activity*, both social and geographical one. Speaking Russian made it possible to live and be active in the framework of the whole Empire (later Union) and to reach any social position. Without proficiency in Russian one could choose the place of living only within Ukraine (while emigration was practically forbidden); his or her social sphere was limited: military career was excluded, like the top positions in any other field, as, say, administrative or scientific activity presumed regular communications outside Ukraine.

So, it was staying in the framework of the Soviet Union that made the preconditions of the competition between two languages unfavorable for Ukrainian.

### **The next step to the marketing approach: the notion of non-commercial marketing**

Now Ukraine is an independent state. Does it mean that the preconditions of competition are now equal? They are not, surely. And this inequality is much more complex now.

First, it is Russian that is in an unequal state now. It is not the state language any more, and there is legal base for anti-Russian compulsion. Those who demand that, say, teaching at the universities be only in Ukrainian are formally quite right.

Moreover, without any compulsion, some reasons of preference for Russian do not exist any more. The son does not need to know Russian to become an officer of Ukrainian Army. At higher school he may demand to be taught in his native language; if he doesn't want to study in his country, he may choose any, and it might be more important to learn English instead of Russian.

So, it will be possible to make a career in Ukraine without proficiency in Russian but it will be impossible without proficiency in Ukrainian.

All it doesn't mean that today's preconditions are so favorable for Ukrainian. Independence has changed much, but much has remained. There is a huge number and high proportion of Russian-speaking, especially among intelligentsia. Almost all Ukrainian-speaking (and, by the way, other languages speaking, Hungarian or Crimean Tatar for example) are practically fluent in Russian. There are traditional cultural, economic and personal linkages with Russia, with other ex-Soviet countries and with the newest Russian-speaking diaspora in Europe, America and Israel.

It should be reminded again that in Ireland, despite its long independent status, Irish is practically not spoken and that in a lot of African and Asian countries the languages of former parent states still serve as the languages of government, science, higher education and so on. So, independence doesn't guarantee that Ukrainian language shall win the competition with Russian and gain the position of Polish in Poland or Danish in Denmark.

Speaking in the terms of *competition*, the three centuries history of Ukraine's being a part of Russian Empire / Soviet Union has created some real and unremovable *advantages* for Russian language here, while today's independent status is creating some *advantages* of another kind for Ukrainian.

There is a temptation, like always in the case of competition, to use compulsion as an instrument. This temptation is extremely high for Ukrainian side. Such a compulsion already exists, for example when a Russian-speaking professor is made to give lectures in Ukrainian, and his predominantly Russian-speaking audience are made to listen them. To say nothing about moral and juridical aspects, there seem to be few chances that such a compulsion will be efficient.

Does such a temptation exist for Russian side? It does, for sure. Nationalists exist in Russia (and among Russians within Ukraine) just like they exist among Ukrainians, and there are extremists among them, too. The forms of "compulsion" (violence, better to say) from their side, if one day they are powerful enough, are terrible to imagine, including aggression and civil war. Ukrainian nationalists do not even dream about violence in such a scale. But, for many reasons, including public fear of

extremism and its possible consequences, the probability of such a variant seems to be close to zero.

The way to solution of the problems has been invented. It is *marketing*. Or, to be more exact, *non-commercial marketing*, presuming using marketing methods (such as *market studies, life cycle analysis, segmentation, promotion and advertising*, etc.) in a competition for some non-accountable benefits.

The ideas of marketing, being new and sounding exotic and fashionable, have been enormously popular in both Russia and Ukraine during the last two decades. Western handbooks have been and are being translated, original (respectively original) works have been and are being published. But very little interest has been given to the notion of non-commercial marketing.

My hypothesis is that marketing methods can be efficiently used in solving the problems mentioned above. What is needed is public recognition of the problems as not only ecological but marketing ones, self-determining the institutions to become marketing agents, evaluating competitive chances, elaborating methods of competing for the realistic market niche.

### **Marketing approach considerations for Ukrainian language**

When we speak about public *recognition* of a problem as a marketing one, it means, on Ukrainian side, just understanding that the direct way is not always the best one. If you want millions of people to respect your language, to learn your language, to read and speak your language, the easiest way is to order it together with banning the rival one. This is what Russian tsars and Valuyev used to practice. It is well known that they failed. So, you should act like all market agents do: somehow make your "*commodity*" *attractive* for the "*customer*"; create the conditions when the "*customer*" desires to buy your "*commodity*", not your *competitor's*.

Who should understand it? Answering this question is just determining those who are to become *marketing agents*. The problem is not very complicated in Ukraine. Such forces do already exist and are even institutionalized. Those are Ukrainian writers, with their organizations, Ukrainian language scholars, with their research and educational institutions, nationalistic politicians, with their parties and media. To be included in this list are all culturally conscious common Ukrainians, the language teachers etc.

More intricate is the question whether Ukrainian Government should act in the same direction. A nationalist would answer positively. But, from democratic point of view, there is some doubt. Certainly, at the international level, if a linguistic marketing problem occurs, it is the duty of any governmental officer to feel oneself a partisan of the State language.

But inside the country, the Government should be the one of national consensus, not of a civil war.

Of course, if the democratically elected President is a nationalist, and so are the majority of the Parliament, they would pursue the certain policy; but even in this case they will be limited with some democratic considerations (while journalists or writers may feel no restrictions). Still, this is what the nationalistic forces can aspire for, reaching this target can be the field of their activity in the framework of democratic mechanisms. And the latter are, in their essence, nothing but market mechanisms.

Very interesting is the question of the *market niche*. This seems to be the field where there remains still much to be recognized. And the first idea to be recognized is the thesis that there exists no single standard position of a "*healthy language*" as the target situation for any nation.

There are languages, traditionally studied at school, although not spoken in everyday life, in various countries. Both in Russia and Ukraine, a guest from Germany or France, especially from an English-speaking country, will easily find people knowing his or her language; and if the guest is from Italy, Sweden or Netherlands, it is very probable that he or she speaks English, perhaps German or French. Russian has also tended to belong to this type of languages, partially due to some compulsion.

Would it be realistic to dream that one day Ukrainian will become such a language? It seems doubtful.

Maybe, it would be more realistic to hope that one day Ukrainian will gain the position of Dutch in the Netherlands or, better, Bulgarian in Bulgaria, where Turks, former conquerors, are free to use their language within their community, but ethnic Bulgarians do not need to know it? That for a foreigner visiting Ukraine it won't be enough to know Russian? This is more realistic, indeed, but still does not seem attainable either.

As a commentary, it should be added that such a revolution, if accomplished, would dramatically change the cultural environment of Ukrainian nation. A Ukrainian who cannot read Gogol or even Shevchenko's prose doesn't seem to be something ecologically better than a Soorzhik-speaker.

A realistic goal is that Ukrainian be well known and spoken, if necessary, by each citizen of Ukraine. That one cannot become a state officer, a physician, a lawyer, a Candidate of science, a militiaman without proper knowledge of it. That it be the language in which communication within Ukraine is carried out between, say, a Hungarian-speaking Hungarian and a Romanian-speaking Romanian, or between both of them and a Russian.

Of course, market is market. Some companies are bold enough to set the goals that seem unrealistic and unattainable to experts, and sometimes

they manage to succeed. So, an expert should say: if you want to risk, do risk. But do recognize it as a *risk*, not an easy thing.

Now, what could be the *marketing instruments* for gaining the target positions? *Political activity* has been mentioned. Then, a steady *media campaign*, but a very accurate one. No accusations, no blaming, no insulting. It is the communication with a potential customer, and the communication language should be appropriate.

However, a much more efficient method is increasing attractiveness of the language and culture. If people in Ukraine (and why not outside Ukraine) know that a certain Ukrainian TV program is worth seeing, that a certain Ukrainian magazine regularly publishes novels, poems and articles that are worth reading and so on and so forth, they will see it and read it, as they do understand this language, at least a little, as it is not so difficult for a Russian-speaker to learn Ukrainian. So just *initiate* such programs and magazines, *sponsor* them, *advertise* them (advertising is a well known marketing instrument). It sounds very simple although is very complicated and should take a long time.

### **Marketing approach considerations for Russian language**

For Russian language, the problem hasn't been properly *recognized* yet. While Ukrainian culture can be compared with an ill person, seeking a way for recovery, the appropriate comparison for Russian would be an ill child who is feeling bad but does not understand what is happening to it.

As for the Russian-speaking within Ukraine, they tend to treat the problem just as one of everyday troubles, which are abundant today.

Among democratic intellectuals in Russia, the idea is typical that all the misfortunes and difficulties are just the heritage of the damned Communist rule and of the Soviet Union as its embodiment. They think that democratic system and market economy are the universal medicine, as under them all the problems are to be solved automatically.

Russian nationalists are better aware of the problem. But their idea is that the problem is of political character, that it is the crush of the great Russian Empire under another name, and this is what should be solved. The thing they do not understand at all is the intrinsic international essence of today's Russian culture. The ideas of consensus, of respect to the rival's culture and interests are alien to them as well.

After *recognition* of the problem, the realistic target *market niche* should be found. This seems to be much easier to deal with than in the case of Ukrainian. Russian language promotion policy is to be defensive, not offensive.

Today's position of Russian in the world has been rather strong. It still serves as the native language of millions within all the ex-Soviet states, as



well as in such countries as the United States, Israel, Germany, Greece and others. It is familiar to the rest of the new independent states population, to a lot of educated people in ex-socialist countries, to the children of emigrants. It is studied at some higher or even secondary schools in the West, in Japan, in China, in India. It is used as one of the official languages of the United Nations and some other international organizations.

The task of conserving this position is enormously difficult but still seems realistic. Having lost the status of an economic superpower and hardly being a military one, Russia still remains a cultural superpower. This can be used, but only if all the difficulties are recognized and the pessimistic scenario (which is not discussed here because of its obviousness) probability is taken into account in order to avoid it.

What would be unrealistic indeed, is any attempt to compete with English for its niche in the world. Maybe, several decades later, on the wave of future economic prosperity (why not dream a little) but not today and not tomorrow.

After all, the question of *marketing agents* would be complicated. There are at least two groups of interests, which are difficult to be brought together institutionally: those of the Russian-speaking within Ukraine and those of Russian culture, relating not only to Ukraine. The former are not institutionalized. I. e. there is hardly any countrywide organization, be it a political party, a creative union (of writers or something like this), at least a magazine or a newspaper, to proclaim defending the interests of the Russian language and culture in Ukraine, being at the same time quite loyal to Ukrainian state. (Some parties, like Communists, and some politicians do or did proclaim it but only as a part of their program, the part that has proved to be refusable).

In Russia, there are institutions of three kinds. The first is Russian Government; the second are nationalistic organizations and media; the third are various and scarce remnants of All-Union network, still uniting the intellectuals in some fields of activity from all or many new independent states or even from other countries.

As Russian language promotion is an external problem for Russia (unlike Ukrainian promotion for Ukraine) the Government seems to be the appropriate institution to participate in it. But it should be remembered that the Russian-speaking abroad are predominantly either citizens of foreign states or the people eager to obtain this citizenship. So the direct support of their linguistic interests when the latter are subject to some unfriendly official measures is hardly a good business for the Government. What can be such a business, is supporting public organizations efforts, including financial support and, if necessary, initiating these efforts or forming such organizations.



By the way, there exists anxiety within Russian political and intellectual circles (not only nationalistic) as to decreasing the role and influence of Russia in the world policy. Just recollect the unsuccessful diplomatic attempts to stop NATO eastward expansion or to make various relations within SNG more regular and formal. Some intellectuals are very skeptical to such attempts pointing out that it is only Russia's own economic growth that can bring its influence back, not diplomacy, not admonishment, nor military threat.

Right they are, but, while economic growth in the nearest future seems not very probable, perhaps, linguistic and cultural marketing could do some geopolitical work? This is the reason for the government to participate in it.

As for Russian nationalists, they are as noisy as their hostile colleagues in Ukraine, but have much less chances to do any positive work. This is so, as there doesn't exist practically anybody to replace the Ukrainian nationalistic intellectuals in their niche. So, the latter simply have to become more reasonable and moderate (and some of them will surely do). In Russia, fortunately, there do exist other intellectual and political forces to do the work.

Among such forces, the first to be mentioned are international (SNG-wide) writers' organizations and media, e. g. the monthly magazine "*Druzhba Narodov*", then, the International (worldwide) Association of Russian Language and Literature Teachers (*MAPRYaL*). These institutions are doing much, although the media mentioned have, unfortunately, lost a good deal of their Soviet period popularity.

But there are institutions that potentially can do much more - they should just feel themselves engaged. This is, first, Russian Academy of Sciences which could establish a body (commission, committee, institute or something like this) responsible for steady elaborating the standards of Russian vocabulary, spelling, grammar, etc. in the new political and cultural situation. Of course, such a body should include the representatives (linguists, writers, journalists, teachers, theater and film producers) of both Russian-speaking population from the new independent countries and the *Dalneye Zarubezhye* (USA, Germany, Israel, etc.) diaspora. Second, a great work could be done by such popular (among all Russian-speaking readers and spectators anywhere) and democratic media as "*Izvestiya*", "*Komsomolskaya Pravda*", Moscow TV programs, etc. The important problem is that, even in Soviet times, those media, being done by Moscow journalists, tended to underestimate their All-Union functions and to be oriented at metropolitan audience. Similarly, now they underestimate their All-Russia function, and the functions of uniting all the Russian-speaking remain simply unrecognized.

## Some other linguistic problems

It has been already said that there are ethnic minorities in Ukraine, less than 2 per cent of its population each (while Russians comprise about 20 per cent), and, of course, these minorities have their own cultural and linguistic ecological problems.

The first minority to be mentioned are Ukrainian Jews (Ashkenazim) who, despite mass emigration, still rank third among the nations of Ukraine (and first among the minorities). Of other diasporic peoples, there are Gypsies and, very scarce now, Germans and indigenous Armenians.

Then, there are representatives of the dominant peoples of adjacent countries: Byelorussians, Poles, Czechs and Slovaks, Hungarians, Romanians and Moldavians. Greeks and Bulgarians, whose countries "border" upon Ukraine via Aegean and Black Seas, may be included to the same type.

In Crimea, there live indigenous peoples: Crimean Tatars, Crimean Jews (Crimchaks) and Karaim, the two latter very small. Gagaooz, another indigenous nation, inhabit Southern part of Odessa oblast, as well as adjacent regions of Moldova.

One more people to be mentioned are Ruthenians in Transcarpathia. Speaking a dialect of Ukrainian, they are considered just a specific ethnic group of Ukrainian nation. This is the official point of view, and a lot of Ruthenians adopt it, but others, numerous as well, consider themselves a separate nation with their own language. As for other Carpathian ethnic groups (Gutsools, Boiky, Lemky), they do not reject belonging to Ukrainian nation.

The typical problem for all the listed minorities, as well as for all minorities elsewhere, is that of degradation of native language and culture under the pressure of a dominating nation. This is just the problem already described on the example of Ukrainian language. The difference, for the most peoples listed (to be more exact, for those from the second group), is that the problem emerges predominantly at the *individuals* level, as the national culture has good chances to be developed within respective national states. Still, the problems of individuals shouldn't be neglected either.

Another problem, specific for the new independent states and usually underestimated, has been the two-level character of ethnic pressure, as the minorities have lived in Ukraine as a part of Soviet Union, in fact Russian Empire. In such cases there is often a tendency to treat the *remote "landlord"* friendlier than the *close* one.

In some ex-Soviet republics (Ukraine does not seem to be in that number, although respective ideas sometimes are expressed by nationalists), the close, and from now the only "landlords" have contributed significantly

into forming such a tendency. The nationalistic intellectuals of those republics tend to consider themselves as victims and to ignore the multi-level character of ethnic problems. The only problem recognized by them is often the one of their own nation, together with analogous problems of other dominating nations of the new states. Thus, a Lithuanian will rather understand a Ukrainian than a Russian in Ukraine or a Gagaoz. When, say, Georgians desire to be an independent nation, it is a noble struggle for freedom. When the Abkhaz in Georgia desire just the same, it is separatism.

The remote "landlord" is preferable even in the cases where there is no traditional hostility. In India, Bengali, Maratkhi and other major peoples prefer to use English (if some other language but the native is necessary) than Hindi. There are not so many British people in Calcutta or Bombay, so speaking English there does not give any advantages to anybody, but Hindi-speaking people are abundant and using Hindi is considered an advantage for them.

In Ukraine, the remote, and now, under independence, still more remote "landlord" are Russians. And it is quite typical that Hungarians or Poles, even being not Russian-speaking, tend to use Russian rather than Ukrainian in respective situations.

Crimean Tatars seem to be the only but very significant exception. Although being very often Russian-speaking and practically never Ukrainian-speaking, they usually stress their solidarity with Ukrainian nationalists. For them, living in Russian-speaking and often nationalistic surrounding, for them, who had suffered so much being exiled (and the idea of exile came from Moscow, not Kiev), it is Ukrainians that are the remote "landlord".

Very specific is the problem of Yiddish, the language of European Jews. This language has suffered degradation like all others but the Renaissance of ethnic self-consciousness, typical to all Soviet nations, did not bring to revival of Yiddish. Instead, the Jews now study Hebrew.

There is no problem at an *individual* level, as there are practically no Yiddish-speaking individuals. It is difficult to speak about the *nation* level problem, as the nation that would use this language does not exist any more. The typical contemporary Jewish self-consciousness is sensitive to Israel as the embodiment of the nation; the idea of reviving a self-sufficient Ashkenazim culture in diaspora is now alien to most Ukrainian (or Russian) Jews.

At the same time, there is, of course, the problem at the *Mankind* level, as Yiddish culture has indeed contributed into the Global culture. Moreover, there exists as well such a phenomenon as Jewish culture in Russian (in the framework of the whole Empire / Union), which had formed inside

Russian / Soviet Jewry. Common people belonging to it, as well as some writers and other intellectuals coming out of them, spoke Russian but either remembered Yiddish, or at least knew some words and expressions and treated it as their national language. This culture, reflected in the works of Isaac Babel, Anatoly Rybakov or Efraim Sevela, is still alive but is dying together with the nation.

Surprisingly, the problem is of high importance at the level of *regional population*. Jewish emigration is a heavy loss for the whole population of Ukraine (as well as Russia), even for those who do not recognize or do deny this. And emigration is closely linked with the change of self-consciousness. Those who used to appreciate their Yiddish- or Russian-speaking were oriented at staying in their country. Those for whom Jewish language is Hebrew are oriented at Israel and will leave tomorrow if not today.

So, in Ukraine (again, like in Russia), it should be recognized as a problem by Slavic intelligentsia.

Just a few words about “Romanians and Moldavians” mentioned above. There is an interesting problem here.

Moldavians had lived both in Romania and in Soviet Moldavia, as well as in adjacent regions of Ukraine. In Romania they are considered an integral part of Romanian nation, speaking Romanian language or, perhaps, its dialect. In Soviet Union, they were treated as a separate nation speaking Moldavian. While Romanian language is based on Latin alphabet (since late 19-th century), Soviet Moldavian had traditionally used Cyrillic letters.

Now, Moldavian intellectuals in independent Moldova proclaim that they are Romanians but a lot of common Moldavians do not accept this self-determination, nor changing for Latin system of writing. This is a conflict within Moldova, but it should be reflected somehow in Moldavian communities in Ukraine.

Knowing very little about the plot of the problem, I cannot be a judge here. It is necessary just to indicate the existence of the problem, which is very much like the one of Ruthenians. In its essence, the problem is of both linguistic and political character, it isn't to be discussed deeply here, but it should be marked that such conflicts do give birth to really ecological problems.

Anyhow, for those who desire to participate in solving the cultural ecological problems of ethnic minorities, very diversified and complicated, the marketing considerations should be helpful, like those formulated above for Ukrainian and Russian.

Aleksander Kuczabski

## **The social support for administrative-territorial reform in Ukraine: key role of self-government**

Ukraine belongs to the states that in the end of XX century came into phase of social-economic transformations. Among the other young democracies of Central-Eastern Europe that overcome totalitarian past, problems of reforms in Ukraine took noticeably greater scale. The indicator of depth of these problems is delay with realization the reform of administrative-territorial system.

If we want to define factors of administrative-territorial reform it worth to use precious experience of polish experts that relatively not long ago were solving this problem in practical way. J. Regulski (2002, p. 13-29) defines four principal factors of reform the administrative-territorial division: by political will, by social support, by knowledge of experts and by great selflessness of people implementing the reform. It is clear that under democratic conditions just social support of the reforms would play key role. Defining the main directions in realization the administrative reform, M. Lesechko and A. Chemerys accent the attention on that (М. Д. Лесечко, А. О. Чемерис, 2001, p. 104). In turn, V. Oluyko, P. Slobodyanyuk and M. Bayuk are being connecting the successfulness of realization the administrative-territorial reform with "support of local communities and all the people" (В. М. Олуйко, П. Я. Слободянюк, М. І. Баяк, 2005, p. 325).

Ukraine shares the values that typical for most of the states so-called civilized world, what secures conditions for harmonious combination the own national interests with supranational and global interests. As M. Lesechko and A. Chemerys contend, "Ukraine though slowly and inconsistently, but joins to achievements of contemporary civilized process and accept model of European development as a model" (М. Д. Лесечко, А. О. Чемерис, 2001, p. 94). However, declaring the democratic values in Ukraine finds no adequate implementation in strategy of national development. The reasons for this are consequences of totalitarian past, rudiments of which determine some distrust of population to public policy, restraint and distrust to environs, what to main extend causes marginalization

of Ukraine in world context. According to conviction of O. Vannikov and G. Morozova in spite of beginnings of democracy, Ukrainians still deeply connected with totalitarian type of state structure what does not allow hoping on fast reforms (О. ВІННІКОВ, Г. Морозова, 1998, р. 2). Beside this, as M. Lesechko notes, "there are no ready universal recipes of democracy after long years of totalitarian regime" (М. Д. Лесечко, 2006, р. 24).

The number of secondary processes that substantially impede democratic transformations accompanies value re-orientation of Ukrainian society from totalitarianism to democracy. In particular, social-economic crisis, peak of which fall at middle 1990s, to serious extent undermined trust of population to values of democratic character. In social development appeared two trends. From one side, the restraint of Ukraine regarding the other states was strengthening, from the other side – dimensioned internal disintegration had happened. As several scientists note "in second half of 1990s the deformation of social-economic relation in process of activity of the most diverse layers of population of Ukraine achieved critical level" (М. І. Долішній, Л. Т. Шевчук, Я. В. Шевчук, 2004, р. 11-12).

The indications of social-economic gap comparing to neighbour countries, that strengthened in 1990s, negatively influence on re-integration and, respectively, on the level of structuredness of territorial supersystem. The processes of making Ukraine a periphery are getting deeper. At the opinion of M. Lesechko and A. Chemerys "Ukraine fall within peripheral zone and the perspective to rise up in world hierarchy is more and more problematic (М. Д. Лесечко, А. О. Чемерис, 2001, р. 95). In consequence of significant marginalization of Ukraine, issues of social transformations, to great extent lost its urgency and move away at second plan. At opinion of Y. Marchuk, stated in 1998 "our society is still not sufficiently prepared in psychological sense to radical transformations; thousands and thousands of people, in particular declining years, completely not understand a thing, why common for them system of life values is being reformed" (Є. Марчук, 1998, р. 32).

Consequently, the specific character of Ukrainian context force us treat carefully the use of progressive foreign experience of territorial administration. According to opinion of O. Moshak "it is not worth to content with proposal concerning the realization in Ukraine one or other European principles just because in the states with other level of economic development, other level of development the civic society, other type of political culture and established state traditions they demonstrate their efficiency (О. Мошак, 2006, р. 48-49).

As Y. Surmin notes, "the political system of Ukraine is typical transitional political system of society that pass from authoritarianism to democracy" (Ю. Сурмін, 2003, р. 181). The secondary consequence of transformational processes is always disintegration. As I. Adizes contended, "when change



happens, subsystems did not change synchronously – some faster than the others” (І. Адзіс, 2006, р. 10). The problem is that in Ukraine society is being transformed slower than the political and legal system. Trying to correspond to requirements that put to system of territorial administration in leading countries of the world, Ukraine attempts to form legal system that, in many cases is inadequate to social expectations and considerably pass ahead the level of development of the social relations. The negative indications of such state of art are detachment of some legal regulations from life realities. Probably because of this, by the words of M. Lesechko and A. Chemerys “the legal nihilism prevails in Ukraine, starting from the highest level of power and finishing at the level of citizens (М. Д. Лесечко, А. О. Чемерис, 2001, р. 95). At opinion of M. Baranchuk, “the problem of formation and strengthening the constitutional-legal mechanism of territorial organization of state authority in Ukraine is being solved probably in the most critical way among the other problems” (В. Баранчук, 1998, р. 66).

Starting regulations of contemporary political and legal system of territorial administration in Ukraine were defined as power sovereignty of the people and social justice. Their legal securing in general corresponds to standards generally accepted in civilized world. In particular, article 5 of Constitution of Ukraine recognizes local governments as one of the main forms of implementation the direct power of people (В. Ф. Опришко, 1999, р. 21). However, constitutional declaration of some freedoms of citizens in sphere of territorial administration is not provided with specific mechanisms of their practical implementation. As V. Oluyko underlines, “we have complete absence of real mechanisms of direct sovereignty of the people in solving the state and local problems” (В. М. Олуйко, 2005, р. 318).

The lack of approved mechanisms of implementing the principles of sovereignty of the people in territorial administration of Ukraine influences not so much from underdevelopment and inefficiency of domestic legal systems as it is connected with absence of mighty recipient, interested in implementation and practical use of new legal regulations. Above all we mean here unavailability of the prevalent majority of Ukrainian citizens to take part in realizing own constitutional right for public administration and local self-government.

Y. Zhovnirchik in this context contends, “The prevalent majority of citizens do not show any civic activity” (Я. Жовнірчик, 2004, р. 234). In consequence of this the mechanisms of sovereignty of the people that demonstrated their efficiency and effectiveness in leading countries of the world, in Ukrainian conditions still did not shape concrete measuring. Comparing to other European states the level of socialization is still quite low. According to sociological surveys 69.3% of Ukrainians do not belong to any organizations at all, only 21.2% are members of trade-unions, 3.6%



– political parties, 3.0% – clubs of interest, 2.6% – NGOs (Ю. ЯКИМЕНКО, 2002, p. 5–7). However, even such statistics does not represent real state of art, because only less than half of members take active part in activity of above-mentioned organizations.

One of the reasons of excessive social indifference of Ukrainians is defined as purposeful policy of USSR times when ruling Communist party completely usurped right to form and realize public policy, violently suppressing alternative ways to influence on decision-making processes. As O. Moshak underlines within this context, “in Ukraine for many years such type of ruling regime had been existing that practically excluded opportunities for citizens to participate in process of taking the important for society decisions, what, in its turn, did was not conducive for increasing the level of citizen’s participation and forming the structures of civic society (О. Мошак, 2006, p. 48).

Under such conditions, the reforms of system of territorial administration may not bring expected result if simultaneously to institutional changes and legal regulations respective changes in civic society will not occur.

At M. Lesechko opinion “Ukraine at contemporary stage (as well in historical past) belongs to the states with low synergy, that substantively impedes in consolidation of society and getting the “synergetic effect” in order to break free from lingering social crisis and reach the level of the civilized countries” (М. Д. Лесечко, 2002, p. 54). Situation is being complicated with the fact that essential feature of transformation processes in Ukraine was lingering social-economic crisis of 1990s. As S. Sahanenko notes, “the particular qualities of transitional period more able to generate political apathy, disappointment and indifference, instead of activity (С. Є. Саханенко, 2001, p. 133).

Solution of this problem should be considered not in implementation the declarative legal regulations, which wittingly impossible to realize on practice, but in development the specific mechanisms of social activation, self-organization and self-government. As V. Grigoryev contend, “the appeals to activate self-activity of the people are still declarative, if they do not guarantee real rights and opportunities for realization the self-government” (В. Григорьев, 2001, p. 86).

The driving force of self-government is existence of optimal social structure of society, where most active members in quantitative and qualitative sense become able to generate political leadership and to organize passive layers of society (О. Г. Кучабський, 2008). S. Pirozhkov and A. Pavlyuk directly connect increase of the role of local self-government in state administration with existence of its real bearer – conscious, independent, well-to-do citizens (С. Пирожков, А. Павлюк, 2005, p. 9). It is considered that it is too early to speak about formation of capable bearer

of local democracy in Ukraine. Just because of this, as B.Andresyuk notes "the idea and value of self-government in Ukraine are still in sphere of ideal, they did not materialize in specific forms of life and organizational structures (Б. Андресюк, 2000, р. 41). Consequently, as V. Kuybida notes, "the mighty potential of basis of the democratic structure of Ukraine – local self-government – is still not equipped and to great extent is outstanding (В. С. Куйбіда, 2001, р. 153).

The lack of persons, ready for active and systematically participation in realization the local interests through self-organization of citizens testifies about tendency to make pronouncements for effect if we speak about territorial administration in Ukraine. Y.Zhovnirchyk, for instance, quite critically estimates situation with self-organization of local communities that must be grounded upon civic activity of population (Я. Жовнірчик, 2004, р. 234). In this context, some domestic scientists prejudice existence in Ukraine the main subject of local self-government – territorial community. S. Sahanenko pays attention that territorial communities in Ukraine exist mostly *de jure, de facto* they did not arise (С. Є. Саханенко, 2001, р. 134). As L. Kyrychenko notes, "territorial communities still does not exist – there is only the whole of living at the certain territory" (Л. Кириченко, 2001, р. 101). O. Pavlov holds similar opinion: "the community so far exists nominally, not like self-governing institute, but as the whole of inhabitants of certain territory" (О. І. Павлов, 2005, р. 80).

The analysis of development the territorial communities in Ukraine argues mostly about insufficient level of local self-organization, weak structuring of territorial subsystems, their low capability". The problems of coming into being of territorial communities in Ukraine at this stage are accompanied by, according to V.Parhomenko, the absence of proper interests to election of local councils, participation in their work, disinterestedness of citizens in issues of local budget, their evasion from tax and community payments, careless treatment of community property that is in their common corporative property (В. Пархоменко, 1999, р. 8). It is considered that main precondition for appearance of real territorial community is appearance of common interest (Л. Кириченко, 2001, р. 101). Exactly in this aspect of the problem, it is worth to concentrate attention when solving the problems of improvement the administrative-territorial structure.

The absence of real capability of territorial communities in Ukraine is evidence of tendency to make pronouncements for effect if we speak about institute of self-government, its alienation from real needs of population. Participants of the Sixth All Ukrainian municipal hearings, that took place 29 June – 2 July 2000 noted that local self-government in Ukraine at the contemporary stage is declarative to great extent (В. Кравченко, 2000,

p. 45). At the same time, according to conclusion of V. Kuybida, institute of local self-government in Ukraine is still incomprehensible for wider layers of population (В. С. Куйбіда, 2001, p. 153).

S. Kryzhanivsky apropos of this contends that existing today in Ukraine model of local self-government is not really and efficiently operating (С. Крижанівський, 1998, p. 137). It is considered that system of local self-government in Ukraine, de-facto still does not took shape, but “elements of this system are present and continue to develop” (О. Д. Лазор, О. Я. Лазор, А. О. Чемерис, 2007, p. 47–48). M. Puhtynskyu considers that the main reason why mechanism of local authority is still not working in self-governing conditions is absence, first, of financial-economic basis (М. Пухтинський, 1996, p. 68). Instead L. Kyrychenko contend about absence of legal, organizational, material and in particular financial, institutional, information, functional, ideological, personnel and other fundamentals of local self-government in Ukraine (Л. Кириченко, 2001, p. 100). In consequence of this, as V. Oluyko notes, “we have half-alive local self-government only at the level of cities of oblast level (in small towns, urban villages and villages its completely suffocated by lack of money, in rayons and oblasts – by the vertical line of state executive power)” (В. М. Олуйко, 2005, p. 318). At the same time one considers that instead of series of problems, connected with formation of institute of self-government in Ukraine nevertheless it is possible to observe certain progress in this direction. In particular, Y. Klyuchkovsky contends that local self-government in Ukraine maybe gradually, maybe with difficulties but is developing (Ю. Ключковський, 2002, p. 200).

As V. Kravchenko notes, “the process of formation the local self-government in Ukraine take place extremely complicated, it is closely connected with democratization of social life, development of our independent state at principles of constitutionality, restriction the functions of state by law and civic society” (В. Кравченко, 1997, p. 35). T. Nagalevskyu perceives the main reason of absence the real self-government in absence of civic society in Ukraine as the basis of self-government and public policy at all (Т. Нагалецький, 2001, p. 73).

At R. Bezsmertny opinion, in Ukraine there is no understanding that exactly the local governments must take care of “everyday problems of the human since his/her birth and till the last breath in life” (Р. Безсмертний, 1996, p. 10). Instead, one can observe cardinally opposite picture. As Y. Zhovnirchuk notes, “institutions of local self-government ... often show hostility concerning active attempts of citizens to assert own rights” (Я. Жовнірчук, 2004, p. 234). Respectively the series of negative stereotypes in relations between citizens and local authority is forming, what at opinion of V. Mamonova is one of the reasons of low level of citizen’s participation,

NGOs, business to management of local affairs (В. Мамонова, 2004, р. 72).

Lack of real mechanisms of sovereignty of the people at the level of territorial communities in Ukraine corresponds with absence of understanding the sense of self-government at local and central levels. As M. Girnyak notes, among the representatives of state authority there are unconcealed opponents of European model of local self-government who consider that for Ukrainian people allegedly is characteristic peculiar mentality, incompatible with democratic model of self-government (М. Гірняк, 2001, р. 141). At the same time radically oriented reformers appeal for immediate transfer of western models of self-government to national ground. The symbiosis of sluggishness of thinking of conservative part of Ukrainian elite bears danger what was noted by A. Gazaryan in 1992. At his opinion, because of such conceptual confrontation exists the danger of appearance the "municipal chimeras" which from one side duplicate old solutions not acceptable under new conditions, and from the other side – suggest wittingly absurd new solutions (А. Газарян, 1992, р. 64–65).

The absence of common approaches and common vision concerning conceptual issues of instutualization of self-government in Ukraine is reflected at capability of municipal structures. As N. Nyzhnyk notes, "contemporary functional structure of municipal institutions is far from that in the countries with developed system of self-government" (Н. Р. Нижник, 1997, р. 42). In its turn, it creates additional barrier between municipal institutions and the public. Consequently, the mechanism of organization of the local authority loses elements of control, and favourable ground for abuse of power from the side of local officials appears. As M. Lesechko and A. Chemerys state, "under young and imperfect local self-government one can observe exaggeration of the role of administrative structures" (М. Д. Лесечко, А. О. Чемерис, 2001, р. 98). At the same time at belief of V. Melnychenko "when there is no organized civic society and political-legal culture, adequate to conditions of representative democracy the concentration of power at post-Soviet area in many cases does not accompany with concentration of responsibility for its practical implementation" (В. Мельниченко, 2004, р. 112).

The secondary negative consequences which conduct the contradictions of domestic model of self-government are system indications of irresponsibility from the side of municipal institutions, corruption and abuses from officials, substitution of goals serving the interests of community for serving the own mercantile interests. As S. Sahanenko notes, quite often certain part of "representatives" of local interests are not real bearers of them" (С. Є. Саханенко, 2001, р. 95). The above-listed problems of

functioning of municipal institutions in Ukraine gave to V. Nanivska reasons to characterize administration at local level as “fatal inefficient” (В. Нанівська, 2005).

The facts of incompetence, inefficacy, irresponsibility and inactivity that have place in system of local self-government in Ukraine were connected by M. Korniyenko first with absence of proper democratic traditions, political and legal culture (М. Корнієнко, 1997, р. 38–39). At the same time, M. Kosyuta defines legal nihilism of local executives as the reason of increasing the number of legal abuse in institutions of executive power and municipal institutions in Ukraine (М. Косюта, 2001, р. 62).

The problems of formation the local self-government in Ukraine give reasons to contend that existing model of organization of local authority is not able to stir up self-organization of local residents. On the contrary, inconsequence of municipal reform and significant faults concerning implementation the institutes of self-government by the many characteristics conducted to converse effect at all – alienation and distrust of population to self-government as institute of power. Numerous sociological surveys witnesses that for today neither councillors nor community is ready to constructive dialogue (І. Буднік and others, 2002, р. 6). Aforementioned facts gave reasons to scientists to state that in Ukraine people in fact are disappointed in decency of power and its local institutions (В. М. Олужко, П. Я. Слободянюк, М. І. Баяк, 2005, р. 319).

В. Kalynovskyu, basing on sociological surveys, contends that municipal institutions in Ukraine do not use trust of major part of population, and their activity does not excite proper concernment (В. Калиновський, 2001, р. 135). Illustrating the problem at example of Dnipropetrovs’k, О. Bogdanova pays attention to the fact that only one third of local residents are able to name their local councillor (О. Богданова, 2001, р. 9). D. Belyu notes that in Ukrainian society one can observe disquieting trend of estrangement the people from local authority (Д. Бєлий, 2002, р. 3). The reason of this should be considered in lack of efficient mechanism of feedback between councillors and voters what causes passivity of voters concerning dealing the problems of local community.

Alongside with this the indifference of population to realization of local power corresponds with significant level of distrust to institutions responsible for realizing this power. According to sociological opinion of the Institute of sociology of the National Academy of Science “Ukrainian society: sociological monitoring in 1994–2003” the level of trust to municipal institutions in 2003 was: complete distrust – 24.7%, mostly distrust – 27.8%, hard to say, trust or no – 31.7%, mostly trust – 13.9%, completely – 1.4% (З. Варналій (ed.), 2005, р. 26). Answering the question of opinion poll made in 1998 in Odessa: “Who, in your opinion, to greater extent gives



voice and consistently stand up for interests of population?" – only less than a quarter of city residents named city council and executive committee, the absolute majority (60%) thinks that nobody expressed and stood up their interests (С. Є. Саханенко, 2001, p. 132). Ukrainians in general are dissatisfied with state of art in their communities (49% dissatisfied and 13% satisfied), so they set up clear complaints to local authority (Н. Паніна, 2005, p. 106).

On the contrary, to local level, at the regional level (oblast and rayon) the territorial self-government is in much more complicated situation. Rayon and oblast council that do not have own executive bodies are dependent on state administrations, delegating them part of own authority. The institute of delegated authority allows government to have full control under local self-government. It gave reasons to V. Lytvyn to contend that at the level of rayons and oblasts the local self-government has eclectic character (В. Литвин, 2005). A. Bazir is more categorical in his conclusions. He contend that "at the regional level in Ukraine there is no full value local self-government but only the model of imitation the local self-government (А. Базір, 2000, p. 44). Solution of the problem of formation the regional self-government in opinion of S. Grabovskyy is in formation the territorial units of rayon and oblast level based on free will of territorial communities, their common interests, stated in proper decisions (С. Грабовський, 2001, p. 6).

Total absence of control and irresponsibility of system of municipal institutions in Ukraine became the reason of inefficient administration, what in its turn is additional argument in favour of wide scale reform of administrative-territorial structure. But it is worth mentioning that solution of this problem is not as much in changes of administrative-territorial units, but mostly in scientific grounded municipal reform, able to turn back to municipal institutions their initial essence and nature. In this case, self-government can become the driving force of reform the y administrative-territorial structure of Ukraine.

## References:

- Regulski J., 2002, Polski samorząd po dziesięciu latach [in:] S. Michałowski (ed.) Samorząd terytorialny III Rzeczypospolitej – dziesięć lat doświadczeń, UMCS, Lublin.
- Адізес І., 2006, Ідеальний керівник: Чому ви не можете стати ним, і що робити з цього приводу: Нова парадигма менеджменту, Вид. дім «Києво-Могилянська академія», Київ.
- Андресюк Б., 2000, Самоврядування. Чого ми від нього очікуємо? [in:] Віче, №1, Київ.

- Базір А., 2000, Сучасні тенденції реформування місцевого самоврядування в Україні [in:] Нова політика, №6, Київ.
- Баранчук В., 1998, Роль місцевого самоврядування в становленні та реформуванні системи територіальної організації державної влади в Україні [in:] Вісник державної служби України, №4, Київ.
- Безсмертний Р., 1996, Влада громади: дійсність чи перспектива [in:] Місцеве самоврядування, №1, Київ.
- Бєлий Д., 2002, Передмова [in:] О. Лиховид, Що потрібно знати про місцеве самоврядування, Штрих, Херсон.
- Богданова О., 2001, Конфіденційність по-дніпропетровськи [in:] Український регіональний вісник, №28, Київ.
- Буднік І., Герасимчук С., Грязнова О. [and others], 2002, Розвиток місцевого самоврядування в Україні: Посіб. для новообраних депутатів місцевих рад, ГО "Молодіжна ініціатива", Київ.
- Варналій З. С. (ed.), 2005, Політика регіонального розвитку в Україні: особливості та пріоритети, НІСД, Київ.
- Вінніков О., Морозова Г., 1998, Питання економічного розвитку самоврядних громад в Україні [in:] Аспекти самоврядування, Ч. 2, Київ.
- Газарян А., 1992, Некоторые теоретические предпосылки и проблемы местного самоуправления в пост-тоталитарном обществе, Центр исследования проблем самоуправления, Клайпеда.
- Гірняк М., 2001, Європейська хартія місцевого самоврядування в правовому полі України: аналіз ситуації [in:] Людина і політика, №3, Київ.
- Грабовський С., 2001, Місцеві вибори: а може це можливість політичного затінку? [in:] Український регіональний вісник, № 28, Київ.
- Григорьев В., 2001, Пути становления и конституционного закрепления принципа разделения государственной власти и местного самоуправления в Украине [in:] Юридический вестник, №1, Київ.
- Долішній М. І., Шевчук Л. Т., Шевчук Я. В., 2004, Територіальна суспільна система як об'єкт дослідження регіональної економіки України [in:] М. І. Долішній (ed.) Соціально-економічні дослідження в перехідний період. Регіональні суспільні системи: зб. наук. пр., Вип. 3 (XLVII), Ч. 1., НАН України, Інститут регіональних досліджень, Львів.
- Жовнірчик Я., 2004, Формування дієздатних і самодостатніх територіальних громад [in:] Управління сучасним містом, №10-12 (16), Київ.
- Калиновський Б., 2001, Господар міста – кожен із нас [in:] Віче, №9, Київ.



- Кириченко Л., 2001, Народовладдя і місцеве самоврядування в Україні [in:] Право України, №6, Київ.
- Ключковський Ю., 2002, Концепція розвитку регіонів і становлення національної держави в Україні [in:] Микола Плав'юк: Україна – життя моє. Т. 3: Та долю іншу він обрав – душі неспокій, Київ.
- Корнієнко М., 1997, Місцеве самоврядування та «урядова вертикаль» [in:] Місцеве самоврядування, №3-4, Київ.
- Косюта М., 2001, Актуальні проблеми забезпечення законності в діяльності місцевих органів влади [in:] Право України, №12, Київ.
- Кравченко В., 1997, Статут міста: утопія чи реальність [in:] Місцеве самоврядування, №1-2, Київ.
- Кравченко В., 2000, Проекти схвалено. Час діяти! [in:] Людина і влада, №5-6, Київ.
- Крижанівський С., 1998, Територіальній громаді – належні повноваження. Місцеве самоврядування і соціальне партнерство [in:] Місцеве самоврядування, № 5-6, Київ.
- Куйбіда В. С., 2001, Конституційно-правові проблеми міського самоврядування в Україні, Літопис, Львів.
- Кучабський О. Г., 2008, Шляхи підвищення ефективності державного управління в контексті еволюції компонентно-функціональної структури суспільства [in:] Ефективність державного управління: зб. наук. пр., Вип. 14/15, ЛРІДУ НАДУ, Львів.
- Лазор О. Д., Лазор О. Я., Чемерис А. О., 2007, Територіальна організація влади в Україні, Дакор, Київ.
- Лесечко М. Д., 2002, Основи системного підходу: теорія, методологія, практика, ЛРІДУ УАДУ, Львів.
- Лесечко М. Д., 2006, Экономическая стратегия Украины на современном этапе [in:] Роль местного самоуправления для местного развития, Белосток.
- Лесечко М. Д., Чемерис А. О., 2001, Адміністративна реформа: досвід Польщі та українські реалії [in:] Актуальні проблеми державного управління: наук. зб., Вип. 4, ОФ УАДУ, Одеса.
- Литвин В., 2005, Вітчизняному самоврядуванню чітку стратегію [in:] Голос України, Спецвипуск, 26 квітня, Київ.
- Мамонова В., 2004, Управління територіальним розвитком: методологічні засади [in:] Управління сучасним містом, №7-9 (15), Київ.
- Марчук Є., 1998, Не чекати поки розсудить історія [in:] Місцеве самоврядування, №1/2, Київ.
- Мельниченко В., 2004, Вплив децентралізації та деконцентрації публічної влади на стабілізацію державного управління [in:] Вісник Національної Академії державного управління. – № 2, Київ.

- Мошак О., 2006, Принцип субсидіарності: європейський досвід та українська перспектива [in:] Актуальні проблеми державного управління: зб. наук. пр., Вип. 3 (27), ОРІДУ НАДУ, Одеса.
- Нагалецький Т., 2001, Україна: вибір моделі розвитку самоврядування [in:] Узагальнення польського досвіду місцевого самоврядування та перспективні напрямки розвитку самоврядування в Україні, Агентство „Україна”, Київ.
- Нанівська В., 2005, Я впевнена, що цю реформу реалізують, так само, як і впевнена, що її ще істотно перероблятимуть, Київ: [http://dialogs.org.ua/dialog.php?id=22&op\\_id=597](http://dialogs.org.ua/dialog.php?id=22&op_id=597)
- Нижник Н. Р., 1997, Україна - державне управління, шляхи реформування, УАДУ, Київ.
- Олуйко В. М., 2005, Україна на шляху до держави самоврядних територіальних громад [in:] Університетські наукові записки, №1/2, Хмельницький.
- Олуйко В. М., Слободянюк П. Я., Баюк М. І., 2005, Адміністративно-територіальний устрій Поділля. Історія і сучасність, Хмельницький.
- Опришко В. Ф. (ed.), 1999, Закон «Про місцеве самоврядування в Україні». Науково-практичний коментар, Київ.
- Павлов О. І., 2005, Сільські територіальні громади: об'єктно-суб'єктна сутність [in:] Менеджер. Вісник Донецької державної академії управління, №3, Донецьк.
- Паніна Н. В., 2005, Українське суспільство 1994–2005: соціологічний моніторинг, «Вид-во Софія», Київ.
- Пархоменко В., 1999, Проблеми місцевого самоврядування в Україні 1990-х років, Ін-т демократії ім. Пилипа Орлика, Київ.
- Пирожков С., Павлюк А., 2005, Адміністративно-територіальна реформа в Україні: актуальні питання методології та практики [in:] Економіка України, №7, Київ.
- Пухтинський М., 1996, Система місцевого самоврядування в Україні [in:] Вісник Української Академії державного управління, №1, Київ.
- Саханенко С. Є., 2001, Адміністративно-територіальний та муніципально-територіальний устрій: проблеми співвідношення та реформування [in:] Управління сучасним містом, № 4-6, Київ.
- Сурмін Ю., 2000, Міське самоврядування та громадянське суспільство: моніторинг суспільної думки [in:] Актуальні проблеми державного управління: зб. наук. пр., Вип. 2 (2), ДФ УАДУ, Дніпропетровськ.
- Якименко Ю., 2002, Громадянська активність в Україні: чи приречені ми мати те що маємо? [in:] Дзеркало тижня, №41, Київ.

Tomasz Michalski

## **International transitions in Central Europe after 1989**

### **Introduction**

In the late 80s of the last century it became obvious that a centrally planned economy based on socialist principles in their communist version is inefficient (see: I. T. Berend, 1996; A. Biagini, T. Guida, 1998), thus marking the beginning of the end to the system of communist states.

Transformation processes in European post communist countries after 1989 were multifaceted and developed on various levels. For the purpose of this study we can divide them into changes of external nature (international) and internal (national).

Transformations determined by external factors include two processes of global significance and three of regional significance<sup>1</sup>. The study also presents the impact of communist system disintegration on the new role of borders and migrations.

### **Global transformations**

Global transformations include one destructive and one integration process. The destructive process was the disintegration of international organisations controlled by the former Union of Soviet Socialist Republics (USSR), and the integrating process involved the expansion of the North Atlantic Treaty Organization (NATO) and the European Union (EU).

International control institutions of the former USSR over satellite states included the Warsaw Pact (WP)<sup>2</sup> and the Council for Mutual Economic

---

<sup>1</sup> There are numerous publications on the issue, the following have been accounted for in this paper: A. Ágh, 1999; E. Cziomer, 2000; B. Kostrubiec, J. Łoboda, 1997; T. Michalski, 2006; T. Palmowski, 2000; Z. Radics, 2006; E. Standtmüller, 1998; J. Wendt, 2004; J. Wojnicki, 2003; J. Wróbel, 2005.

<sup>2</sup> Official name: Treaty of Friendship, Cooperation and Mutual Assistance (Russian: Договор о дружбе, сотрудничестве и взаимной помощи; Ukrainian: Варшавський договір про дружбу, співробітництво і взаємну допомогу).

Assistance (Comecon)<sup>3</sup>. The former was established in 1955 as a military treaty<sup>4</sup>. Its formal objective was joint defence against the risk of imperialism on the side of the United States and Western Europe. In reality this was a pact of offensive nature targeted at aggression towards Western Europe. The political structure of the Pact was dissolved in Prague on July 1 1991, ending the existence of the Pact.

The Council for Mutual Economic Assistance established in 1949 also embraced countries outside Europe<sup>5</sup>. The Council was to support the development of centrally planned economy, the intensification of technical progress and accelerated industrialisation, growing work efficiency and growing prosperity of member states. It was dissolved on June 28, 1991.

The establishment of two new international organisation by Russia can be deemed to be an attempt to save Russia's former position of a superpower. The first organisation, called to being in 1991, was called the Commonwealth of Independent States (CIS)<sup>6</sup>, associating former USSR countries except for Estonia, Lithuania, Latvia and Georgia<sup>7</sup>. Its objectives include: common foreign policy, economic cooperation, development of a common communication/transport system and protection of the natural environment, joint migration and combating crime policy. The second organisation is the Union State of Russia and Belarus<sup>8</sup>. Its present form dates back to 2000, following earlier agreements (the earliest originating in 1996). This is a pseudo federation of both countries, which in future is to lead to full economic integration (including a currency union) of both countries.

The accession of independent states to NATO and EU resulted in changes of influence in this part of Europe, i.e. diminishing zone of direct Russian

---

<sup>3</sup> Russian: Совет экономической взаимопомощи; Ukrainian: Рада Економічної Взаємодопомоги.

<sup>4</sup> Apart from the USSR it embraced Albania (1955–1969), Bulgaria, Czechoslovakia, GDR (years: 1956–1990), Poland Romania, Hungary.

<sup>5</sup> Apart from the USSR, the following held membership: GDR (1950–1990), Bulgaria, Czechoslovakia, Poland, Romania, Hungary, Albania (up to 1961 when it stopped participating in the work of the organisation but officially did not leave the structure), Mongolia (since 1962). Cuba (since 1972), Vietnam (since 1978). Additionally, there were countries that held the status of observers and associate members.

<sup>6</sup> Russian: Содружество Независимых Государств; Ukrainian: Співдружність Незалежних Держав.

<sup>7</sup> The situation of Georgia is complicated. In 1993 it accessed the Commonwealth of Independent States, CIS, but withdrew from its military structures in 2006, and on 18 August 2008, the Georgian Ministry of Foreign Affairs advised the Executive Secretariat that Georgia was withdrawing completely from CIS and that the decision entered into force after a year so that officially Georgia was no longer a member of CIS with April 18 2009. [[http://www.mfa.gov.ge/index.php?lang\\_id=ENG&sec\\_id=36&info\\_id=7526](http://www.mfa.gov.ge/index.php?lang_id=ENG&sec_id=36&info_id=7526) and following pages].

<sup>8</sup> Russian: Союзное государство России и Беларуси; Belarusian: Саюзная дзяржава Расіі і Беларусі.

influence, both political and economic (see Г. Д. Музлова, 2002; J. Wendt, 1999). Accession to NATO took place in three stages: in 1990 in result of the German union, territories of the former German Democratic Republic (GDR) became part of NATO; next accession of the Czech Republic, Poland and Hungary to NATO structures; five years later followed by Bulgaria, Lithuania, Latvia, Estonia, Slovak Republic, Slovenia and Romania. EU expansion eastwards also followed a three stage pattern: in 1990 it covered former GDR; in 2004 the Czech Republic, Estonia, Lithuania, Poland Slovenia and Hungary and countries that formerly were not part of the communist block: Malta and Cyprus (in fact only the Greek part of the country); in 2007 also Bulgaria and Romania.

### Regional transformations

There is a wide spectrum of international transitions in the area under study that are not of global nature. Those considered to be of major significance are: disintegration of federal states in the region, growing nationalism and development of regional integration groups.

In the communist period the region included three federation states: USSR, Yugoslavia and Czechoslovakia. The Union of Soviet Socialist Republics (USSR) formerly disintegrated in 1991. Disintegration progressed in the military sphere (Estonia, Lithuania, Latvia) and non military sphere (other countries). In effect all the republics gained independence. Nevertheless, this process is not yet complete as there remain pseudo states such as Transnistria<sup>9</sup> (other less popular names: Pridniestrovie, Trans-Dniester, Transdniestria) in Moldavia, South Ossetia<sup>10</sup> and Abkhazia<sup>11</sup> in Georgia and fights in Chechnya<sup>12</sup> on the territory of the Russian Federation. The disintegration of Yugoslavia started in 1991 and ended officially in 2003. In this period all former republics gained independence, the majority by military action (except for secession of Macedonia and Montenegro which followed a peaceful process). Unfortunately, this process is not yet complete. Evidence of the above is the emerging of independent Kosovo<sup>13</sup> from the former autonomic region in Serbia in 2008, though its statehood is still not recognized on the international forum. Furthermore, at the end

<sup>9</sup> Moldovan/Romanian: Republica Moldovenească Nistreană; Russian: Приднестровская Молдавская Республика; Ukrainian: Придністровська Молдавська Республіка.

<sup>10</sup> Georgian: სამხრეთ ოსეთი; Russian: Южная Осетия.

<sup>11</sup> Georgian: აფხაზეთი; Russian: Абхазия.

<sup>12</sup> Chechen: Нохчийчоь / Нохциуь; Russian: Чечня.

<sup>13</sup> Albanian: Kosova / Kosovë; Serbian Cyrilic: Косово; Serbian Latin: Kosowo. However, according to Serbian nomenclature this region is called: Kosowo and Metohija (Albanian: Kosovë e Metohi; Serbian Cyrilic: Косово и Метохија; Serbian Latin: Kosovo i Metohija).

of the 1992–1995 war Bosnia and Herzegovina<sup>14</sup> were divided into two state bodies forming a federation: the Federation of Bosnia and Herzegovina and Serb Republic<sup>15</sup>. Another problem is the conflict in eastern Macedonia<sup>16</sup> between Macedonians and Albanian separatists (see A. Mungiu-Pippidi, 2006).

In view of the USSR and Yugoslavia disintegration processes the most peaceful disintegration was that of Czechoslovakia in 1992 (see M. Rusková-Sučanská, 2006).

Growing nationalism adopts various forms<sup>17</sup>, with a significant impact of ethnic homogeneity of the states. R. Siemieńska (2001) identifies five groups of countries: (1) of nearly homogeneous ethnic structure: Poland, Czech Republic, Hungary, Slovenia; countries with numerous ethnic minorities inhabiting the regions for centuries: Bulgaria, Romania, Slovakia; (3) countries from the Baltic Council subjected to strong Russianization after World War II; (4) other European former Soviet Union republics subjected to strong Russian influence and of pro Russian population orientation; (5) countries in the area of former Yugoslavia involved in military conflicts in the region. Growing nationalism trends are the cause of disintegration of federal states and establishment of pseudo independent states. Examples are given in the paragraph above. An illustration of less publicised conflicts is the existence of Gagauzia<sup>18</sup> in Moldavia, problems connected with the numerous minority in former Soviet satellite countries (A. Braun, 2000). Apart from Transnistria in Moldavia there is a clear conflict about the Autonomous Republic of Crimea<sup>19</sup> in Ukraine (R. Szporluk, 2000).

<sup>14</sup> Bosnian, Croatian, Serbian Latin: Bosnia and Herzegovina; Serbian Cyrillic: Босна и Херцеговина.

<sup>15</sup> A special status is held by Brčko District (Serbian Cyrillic: Брчко дистрикт).

<sup>16</sup> Due to protests raised by Greece, where part of the historical Macedonia territories lie, we can also come across the name of former Yugoslav Republic of Macedonia (FYROM).

<sup>17</sup> Analysing mechanisms generating nationalistic trends in Central and Eastern Europe (mainly: “old nationalism” in the form of XIX fights for the right to define an institutionalised, public form of national existence, a drive for national or religious fundamentalism as a reaction to the collapse to the old system of values, connected with communism concurrently a still undeveloped new world of meaning and political identity, a mix of nationalities ( as an effect of the regions past). T. Sokołowski (2001) identifies the following kinds of nationalism: (1) resulting from the relations between countries, where one was the oppressed and the other the oppressor; (2) consequences of relations between sitting nations and later settlers; (3) where the roots lie in the existence of cultural transborder regions; (4) resulting from the unequal positions of nations in a common state.

<sup>18</sup> Gagauzian: Gagauziya or Gagauz-Yeri; Moldovan/Romanian: Găgăuzia; Russian: Гараузия,

<sup>19</sup> Ukrainian: Автономна Республіка Крим; Russian: Автономная Республика Крым; Crimean Tatar: Qırım Muhtar Cumhuriyeti.



Apart from territories of the former USSR, numerous Hungarian minority conflicts can be seen in neighbouring countries<sup>20</sup> and the disadvantageous situation of Gipsies (see D. Ringold, M. A. Orenstein, E. Wilkens, 2005).

After the fall of the communist countries system many new groups formed in the region. They can be divided into those connected with Russia' drive to maintain its influence in the region of the former USSR and satellite states, and groups independent of Russia.

The most important in the first group is the Commonwealth of Independent States and the Union State of Russia and Belarus already referred to in the previous chapter. Several other organisations should be mentioned like Eurasian Economic Community<sup>21</sup> (EAEC or EurAsEC), Collective Security Treaty Organization<sup>22</sup> (CSTO). The informal CIS-2<sup>23</sup> and related oddity the Community for Democracy and Human Rights, also known as the "Commonwealth for Democracy and Rights of Nations"<sup>24</sup>, which associate pseudostates not recognized on the international arena: Abkhazia, South Ossetia and Transnistria.

The second group of organisations includes those originating as grass roots movements without the participation of Moscow, which appeared before the fall of the socialist country systems, and which extended their range of activity after disintegration. The most important seems to be the Visegrád Group<sup>25</sup>, the establishment of which in 1992 was its greatest achievement. Others are the Central European Free Trade Agreement (CEFTA)<sup>26</sup> and the Central European Initiative (CEI) (originating in the seventies of XX century, under the present name since 1992), which is a kind of consultative body. Furthermore, organisations of significance in the Baltic Region include the Council of the Baltic Sea States (CBSS) established in 1992 and the much smaller Baltic Assembly<sup>27</sup> which was

---

<sup>20</sup> According to B. Kovrig (2000) out of *circa* 13 million ethnic Magyars, *circa* 3 million lived in neighbouring countries (1620 thousand in Romania, 567 thousand in Slovakia, 341 thousand in Serbia, 170 thousand in Ukraine, 25 thousand in Slovenia and 4 thousand in Austria).

<sup>21</sup> Russian: Евразийское экономическое сообщество, ЕврАзЭС.

<sup>22</sup> Russian: Организация Договора о Коллективной Безопасности (ОДКБ~ОДКВ) or simply: The Tashkent Treaty (Гашкентский договор).

<sup>23</sup> Russian: Содружество непризнанных государств (СНГ-2).

<sup>24</sup> Russian: Сообщество "За демократию и права народов".

<sup>25</sup> Former: Visegrád Triangle.

<sup>26</sup> Following EU enlargement in 2004 and 2007, Albania, Bosnia and Herzegovina, Croatia, Montenegro, Macedonia, Moldavia, Serbia and Kosowo remained members of CEFTA.

<sup>27</sup> A continuation of Baltic Entente from the years 1934-1940, associating Estonia, Lithuania and Latvia.

established two years earlier. In the Black Sea region the Organization of Black Sea Economic Cooperation (BSEC), established in 1992, associating apart from countries around the Black Sea also Albania, Armenia, Azerbaijan, Greece, Moldavia and Serbia play an important role. Also the Black Sea Forum for Partnership and Dialogue (BSF) established in 2006 plays a certain role and TRACECA (the Transport Corridor Europe-Caucasus-Asia)<sup>28</sup>.

A kind of counterweight for Commonwealth of Independent States is the GUAM Organization for Democracy and Economic Development<sup>29</sup>, which was established in 1997 and the Community of Democratic Choice established in 2005.

The processes referred to above overlap with others, including the most distinct drive resulting from state revisionism. These touch most of the countries in the studied region (R. Czarkowski, 2001; T. Sokołowski, 2001), though the most dangerous is Russian revival of imperialist trends, this time built on nationalism (see A. J. Gregor, 1998; A. Ingram, 2001; H. I. Łatkowski, 2001).

### **New meaning of borders versus migration**

The international and in part national transformations described above have resulted in changing the meaning of borders. Every political border to a greater or smaller extent is a barrier in free flow of goods, services and people (W. Maik, J. Parysek, 1978). These changes have resulted in a wide diversification of roles of the relatively uniform role of borders (see J. Kitowski, 2003; T. Michalski, 2008.), with effects that have a macroregional and mezoregional impact. In the first case this is growing mobility of society and related demographic and health consequences (see T. Michalski, 2000, 2003a, 2003b) and growing trade exchange and changes in transport directions (see T. Komornicki, 2003; J. Wendt, 1999, 2001).

The majority of countries in the region experience economic driven migration. People travel mainly to wealthy countries in Western Europe, less often to US and Canada. However, in the case of the poorest countries in the region we can note work based migration also to neighbouring less wealthy countries<sup>30</sup>. This process overlaps with factors of regional nature. The first half of the nineties of the past century showed migration of Russian language population of Lithuania, Latvia and Estonia (see A. Gubrynowicz, 2005; P. de Rauglaudre, 1999), which can be seen as the departure of former

<sup>28</sup> Russian: Транспортный коридор Европа-Кавказ Азия (ТРАСКЕА).

<sup>29</sup> The name is an acronym of the first letters of Member States; Georgia, Ukraine, Uzbekistan, Azerbaijan and Moldavia.

<sup>30</sup> See T. K. Bauer, J. P. Haisken-DeNew, Ch. M. Schmidt, 2005; E. Hönekopp, H. Mattila (eds.), 2008; A. Masoor, B. Quillin (eds.), 2007.

colonies from the colony territory. The war in Bosnia and Herzegovina caused the flight of its inhabitants to neighbouring countries, especially Croatia and Serbia. Due to the numerous minorities outside Hungary, the country experiences a positive migration balance (see I. D. Molnár, 2006). What more, before the accession to the EU, future member states started to tighten their immigration policies<sup>31</sup>.

The mezoregional aspect concerns the significance of the new role of borders for the cross border regions. In this scope, though the will to cooperate to establish Euroregions is declared, we can see clear differences on state borders which became EU Members in 2004 and 2007<sup>32</sup> and other states. This is particularly vivid in the case of borders with states of the Commonwealth of Independent States<sup>33</sup>.

## Summary

The communist system caused the obvious cultural and economic diversity of subjugated societies to fall into a "coma". The disintegration of the system in 1989 contributed to their revival. The best example of the above is the disintegration of state federations. Two other factors contributed to the process. The first is related to globalisation and reaction to it expressed by the appearance of groups of international and regional significance. The second process is related to Russia's drive to regain, at least partially, its influence in the area of the so called close border (former USSR republics) and further (former satellite socialist countries).

For the average citizen these processes are noted in terms of the changing role and significance of borders. Nevertheless, the extent of changes differs from border to border. The most evident changes can be seen on the borders of new EU Member States and the least evident on the external EU borders.

## References:

- Ágh A., 1999, Processes of democratization in the East Central European and Balkan states: sovereignty-related conflicts in the context of Europeanization, *Communist and Post-Communist Studies*, Vol. 32, p. 263–279.

---

<sup>31</sup> For example in 1998 – 49 – (9.7%) out of 506 persons applying for refugees status in Slovakia received the status, whereas in 2003 only 7 applicants out of 7568 were granted the refugee status, i.e. 0.1% (P. Vermeersch, 2005).

<sup>32</sup> See S. Ciok, 2003, 2004; A. Faur, 2006; B. Stojkv, K. Stojkov-Sutilovic, 2000; T. Stryjakiewicz, 1998; I. Zainea, 2006).

<sup>33</sup> See A. Ilieş, D. Drugas, 2006; D. C. Ilieş, 2008; A. Ilieş, J. Wendt, W. Grama, 2008, T. Palmowski (ed.), 2007; T. Palmowski, 2000; M. Rościszewski, 2000; B. Słowińska, 2004.

- Bauer T. K., Haisken-DeNew J. P., Schmidt Ch. M., 2005, *International Labour Migration, Economic Growth and Labour Markets: the Current State of Affairs* [in:] M. Macura, A. L. MacDonald, W. Haug (eds.) *The New Demographic Regime. Population Challenges and Policy Responses*, United Nations, New York & Geneva, p. 111–135.
- Berend I. T., 1996, *Central and Eastern Europe, 1944–1993: detour from the periphery to the periphery*, Series: Cambridge Studies in Modern Economic History, 1, Cambridge University Press, Cambridge.
- Biagini A., Guida T., 1998, *Pół wieku realnego socjalizmu: Europa Środkowowschodnia od II wojny światowej do upadku rządów komunistycznych*, Wydawnictwo Wyższej Szkoły Pedagogicznej w Rzeszowie, Rzeszów.
- Braun A., 2000, *All Quiet on the Russian Front? Russia, Its Neighbors, and the Russian Diaspora* [in:] M. Madelbaum (ed.) *The New European Diasporas. National Minorities and Conflict in Eastern Europe*, Council for Foreign Relations Press, New York, p. 81–158.
- Ciok S., 2003, *The financing of international cross-border co-operation between Central- and East-European countries by the European Union* [in:] J. Kitowski (ed.) *Eastern dimension of European Union*, Series: Geopolitical Studies, vol. 11, Institute of Geography and Spatial Organization PAS, Warsaw, p. 405–413.
- Ciok S., 2004, *Pogranicze polsko-niemieckie. Problemy współpracy transgranicznej*, Wydawnictwo Uniwersytetu Wrocławskiego, Wrocław.
- Czarkowski R., 2001, *W kręgu konfliktów narodowościowych i roszczeń terytorialnych w Europie Środkowo-Wschodniej* [in:] S. Helanrski (ed.) *Nacjonalizm. Konflikty narodowościowe w Europie Środkowej i Wschodniej*, Wydawnictwo Adam Marszałek, Toruń, p. 167–179.
- Cziomer E., 2000, *Europa Środkowo-Wschodnia* [in:] E. Cziomer, L. W. Zyblikiewicz (eds.) *Zarys współczesnych stosunków międzynarodowych*, Wydawnictwo Naukowe PWN, Warszawa-Kraków, p. 280–298.
- Gregor A. J., 1998, *Fascism and the New Russian Nationalism*, *Communist and Post-Communist Studies*, Vol. 31, No. 1, p. 1–15.
- Gubrynowicz A., 2005, *O Estonii i Łotwie nieortodoksyjnych uwag kilka*, *Międzynarodowy Przegląd Polityczny*, 12, p. 123–138
- Hönekopp E., Mattila H. (eds.), 2008, *Permanent or Circular Migration? Policy Choices to Address Demographic Decline and Labour Shortages in Europe*, International Organization for Migration (IOM) Regional Mission for Central and South Eastern Europe, Budapest.
- Ilieş A., Drugas D., 2006, *Carpathian Euroregion and the European Union External Frontier. Aspects of Political Geography* [in:] I. Süli-

- Zakar, I. Horga (eds.) Regional development in the Romanian-Hungarian cross-border space – from national to European perspective, Debreceni Egyetem Kossuth Egyetemi Kiadója, Debrecen, p. 119–128.
- Ilieș A., Wendt J., Grama V., 2008, The Romano/Romanian euro-regional trans-frontier cooperation at the EU external frontier (2008). The Euro Region “Siret-Prut-Nistru” – elements of political geography, *Revista Română de Geografie Politică*, Anul. X, no. 2, p. 100–107.
  - Ilieș D. C., 2008, Premises of transboundary cooperation in the geoparks area at the external order of EU, The subject master of the northern sector of the Romanian-Ukrainian Border, *Revista Română de Geografie Politică*, Anul. X, no. 1, p. 15–26.
  - Ingram A., 2001, Broadening Russia’s borders? The nationalist challenge of the Congress of Russian Communities, *Political Geography*, Vol. 20, p. 197–219.
  - Kitowski J., 2003, Eastern border of European Union – opportunities and threats [in:] J. Kitowski (ed.) Eastern dimension of European Union, Series: Geopolitical Studies, vol. 11, Institute of Geography and Spatial Organization PAS, Warsaw, p. 95–111.
  - Komornicki T., 2003, Przestrzenne zróżnicowanie międzynarodowych powiązań społeczno-gospodarczych w Polsce, Series: Prace Geograficzne IGiPZ PAN, no 190, Warsaw.
  - Kostrubiec B., Łoboda J., 1997, Przemiany społeczno-gospodarcze i przestrzenne w Europie Środkowo-Wschodniej w latach dziewięćdziesiątych, Series: Acta Universitatis Wratislaviensis, Studia Geograficzna LXVII, Wydawnictwo Uniwersytetu Wrocławskiego, Wrocław.
  - Kovrig B., 2000, Practitioner Nation: Hungarian Minorities in Central Europe [in:] M. Madelbaum (ed.) The New European Diasporas. National Minorities and Conflict in Eastern Europe, Council for Foreign Relations Press, New York, p. 19–80.
  - Łatkowski K. I., 2001, Współczesne rosyjskie nurty nacjonalistyczne [in:] S. Helanrski (ed.) Nacjonalizm. Konflikty narodowościowe w Europie Środkowej i Wschodniej, Wydawnictwo Adam Marszałek, Toruń, p. 180–187.
  - Maik W., Parysek J., 1978, Klasyfikacja i charakterystyka barier wzrostu w gospodarce przestrzennej, *Biuletyn KPZK PAN*, Z. 99, p. 32–57.
  - Masoor A., Quillin B. (eds.), 2007, Migration and Remittances. Eastern Europe and Former Soviet Union, The World Bank, Washington.
  - Michalski T., 2000, Selected Aspects of Epidemiological Safety in Poland [in:] J. Kitowski (ed.) Eastern Borders of European Integration Process, Series: Papers and Monographs of the Department of Economy, No. 19, Rzeszów, p. 169–178.

- Michalski T., 2003a, Granica państwowa barierą w dyfuzji chorób – przykład Polski [in:] J. Runge (ed.) *Granice. Obszary przygraniczne. Euroregiony*, Wydawnictwo Uniwersytetu Śląskiego, Katowice, p. 280–287.
- Michalski T., 2003b, The enlargement of the European Union vs. epidemiological safety (case study of the northern aspect of the integration) [in:] T. Palmowski, G. Fedorov, V. Korneevets (eds.) *Economic, geopolitical and social problems of co-operation between Kaliningrad and Poland*, series: Coastal Regions 6, Wydawnictwo „Bernardinum”, Gdynia-Pelplin, p. 130–141.
- Michalski T., 2006, A Geographic Approach to the Transformation Process in European Post-Communist Countries [in:] T. Michalski (ed.) *The Geographical Aspects of the Transformation Process in Central and East-Central Europe*, Wydawnictwo „Bernardinum”, Pelplin, p. 7–26.
- Michalski T., 2008, Global, continental and regional context of the functioning of New Union borders, *TILTAI*, 1 (42), p. 7–14.
- Molnár I. D., 2006, Nationalities and migration of Hungarians in Transcarpathia [in:] I. Süli-Zakar, I. Horga (eds.) *Regional development in the Romanian-Hungarian cross-border space – from national to European perspective*, Debreceni Egyetem Kossuth Egyetemi Kiadója, Debrecen, p. 213–220.
- Mungiu-Pippidi A., 2006, Democratization without Decommunization in the Balkans, *Orbis*, Vol. 50, No. 4, p. 641–655.
- Palmowski T. (ed.), 2007, *Pogranicze polsko-rosyjskie. Problemy współpracy transgranicznej z obwodem kaliningradzkim*, Wydawnictwo „Bernardinum”, Pelplin-Gdynia.
- Palmowski T., 2000, *Rozwój regionów transgranicznych w procesie integracji Europy Bałtyckiej*, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk.
- Radics Z., 2006, The change of external economic contacts in Central Europe between 1989 and 2003 in the respect of studying the CEFTA [in:] I. Süli-Zakar, I. Horga (eds.) *Regional development in the Romanian-Hungarian cross-border space – from national to European perspective*, Debreceni Egyetem Kossuth Egyetemi Kiadója, Debrecen, p. 137–142.
- Rauglaudre de P., 1999, Russophones in Latvia: a geopolitical approach [in:] M. Koter, K. Heffner (eds.) *Multicultural Regions and Cities, Region and Regionalism*, No. 4, p. 56–62.
- Ringold D., Orenstein M. A., Wilkens E., 2005, *Roma in an expanding Europe. Breaking the poverty cycle*, The World Bank, Washington.
- Rościszewski M., 2000, New functions and new geopolitical challenges of the Polish eastern borders [in:] J. Kitowski (ed.) *Eastern borders of European integration process*, series: Papers and Monographs of the Department of Economy, No. 19, Rzeszów, p. 13–37.



- Rusková-Sučanská M., 2006, Rozpútanie nacionálnych vášní a sporov medzi Českým a Slovenským národom po roku 1989 a ich význam pri rozdeľovaní ČSFR [in:] B. Halczak (ed.) Mniejszości narodowe w Europie Środkowo-Wschodniej po upadku komunizmu, Oficyna Wydawnicza Uniwersytetu Zielonogórskiego, Zielona Góra, p. 309–316.
- Siemieńska R., 2001, Narody Wschodniej i Środkowej Europy o sobie i innych [in:] A. Jasińska-Kania (ed.) Trudne sąsiedztwa. Z socjologii konfliktów narodowościowych, Wydawnictwo Naukowe „Scholar”. Warsaw, p. 47–77.
- Słowińska B., 2004, Współpraca transgraniczna w Europie Środkowej i Wschodniej w świetle procesu integracji europejskiej. Problemy, doświadczenia, perspektywy [in:] W. Bieńkowski, J. Grabowiecki, H. Wnorowski (eds.) Rozszerzenie Unii Europejskiej na wschód a rozwój współpracy transgranicznej, Wydawnictwo Uniwersytetu w Białymstoku, Białystok, p. 123–139.
- Sokołowski T., 2001, Typologia nacjonalizmów i ich przejawy w konfliktach narodowościowych Europy Środkowej i Wschodniej [in:] S. Helanrski (ed.) Nacjonalizm. Konflikty narodowościowe w Europie Środkowej i Wschodniej, Wydawnictwo Adam Marszałek, Toruń, p. 39–48.
- Standtmüller E., 1998, Państwa Europy Środkowo-Wschodniej w procesie integracji Europejskiej [in:] A. Antoszewski, R. Herbut (eds.) Demokracje Europy Środkowo-Wschodniej w perspektywie porównawczej, Wydawnictwo Uniwersytetu Wrocławskiego, Wrocław, p. 205–222.
- Stojkov B., Stojkov-Sutilovic K., 2000, Perspectives of cross-border cooperation between Bulgaria, Yugoslavia and Romania in the Danubian area [in:] Международна научна сесия. Географски Институт БАН 1950–2000. Сборник от доклади, Географски Институт Българска Академия на Наука, София, p. 262–268.
- Stryjakiewicz T., 1998, The changing role of border zones in the transforming economies of East-Central Europe: the case of Poland, *GeoJournal*, Vol. 44, No. 3, p. 202–213.
- Szporluk M., 2000, Russia, Ukraine, and the Breakup of the Soviet Union, Hoover Institution Press, Stanford.
- Vermeersch P., 2005, EU enlargement and immigration policy in Poland and Slovakia, *Communist and Post-Communist Studies*, Vol. 38, p. 71–88.
- Wendt J., 1999, Geopolityczne aspekty tranzytu w Europie Środkowej, Series: Geopolitical Studies, vol. 6, Institute of Geography and Spatial Organization PAS, Warsaw.

- Wendt J., 2001, The geopolitical aspects of transit in Central Europe [in:] M. Autousich, V. Kolossow, M. Pada Pagnini (eds.) *Europe between Political Geography and Geopolitics*, T. II, Societa Geographica Italia, Roma, p. 651–659.
- Wendt J., 2004, *Przestrzenne zróżnicowanie i uwarunkowania przenikania systemu demokratycznego w Polsce i w Rumunii*, Carta Blanca, Warsaw.
- Wojnicki J., 2003, *Przeobrażenia ustrojowe państw postjugosłowiańskich 1990–2003*, Wyższa Szkoła Humanistyczna im. Aleksandra Gieysztora, Pułtusk.
- Wróbel J., 2005, *Szczyt GUUAM w Kiszyniowie*, Centre for Eastern Studies in Warsaw [<http://www.osw.waw.pl/pub/koment/2005/04/050428.htm>].
- Zainea I., 2006, Normalization of the Romanian-Hungarian relations and Euro-Atlantic integration [in:] I. Süli-Zakar, I. Horga (eds.) *Regional development in the Romanian-Hungarian cross-border space – from national to European perspective*, Debreceni Egyetem Kossuth Egyetemi Kiadója, Debrecen, p. 53–60.
- Музлова Г. Д., 2002, Внешняя торговля стран центрально-восточной Европы: региональные тенденции 1990-х годов, *Известия Ройской академии наук. Серия географическая*, № 2/2002, p. 63–70.

Stefan Buzar, Andreas Papastamou

## **Network theory and town twinning: implications for urban development policy in post-socialist Europe<sup>1</sup>**

### **Introduction: network theory matters**

“The 21<sup>st</sup> century is a landmark in the development of urban space, it is the first century where the residents of cities constitute part of a single network space” (P. Hall, U. Pfeiffer, 2000).

The idea of networks is an old one even within geography. Without going back too far, it can be said that networks were a popular idea for positivists in the 1960s and the 1970s, following the publication of such seminal works as *Locational Analysis in Human Geography* (P. Haggett, 1965) and *Network Analysis in Geography* (P. Haggett, R. Chorley, 1969). Networks then fell out of popular use in the 1980s when the Marxist critique of political economy dominated most debates. However, this idea has once again entered the spotlight since the mid-1990s, with the rapid pace of globalization and the increased role of information technology in everyday life. Today talk of networks can be found across all manner of literatures in human geography and the social sciences, and is even the rationale for new journals.

Metaphors of cities as networks have often been deployed to make unrepresentable urban space intelligible and negotiable for certain ends, even though such representations undoubtedly have their own limitations, blind-spots, and consequences. Examples of “network city” metaphors include: the city as an organism and disease (stemming from the Chicago School), the city as a machine (e.g. Corbusier’s high modernism), the city as a system (e.g. L. S. Bourne, J. W. Simmons (eds.), 1978), the city as text (e.g. J. Donald, 1992), the city as a world (e.g. P. Hall, 1966), and the “global city” (e.g. S. Sassen, 1991). As A. Barry (2000, p. 283) points out “It is quite normal to think of the urban as a series of networks: both social and technological. Indeed, the city is often visualised using a network

---

<sup>1</sup> Part of the background research for this paper was supported by the Ministry of Education, Youth and Sports of the Czech Republic, project no. MSM0021620831: ‘Geographic Systems and Risk Processes in the Context of Global Change and European Integration’.

diagram, particularly by those who are unfamiliar with its complexity, and with the details of particular places. Think of the underground, subway or bus map given to new visitors to a city by the tourist authorities. ... Through networks and through diagrams of networks the scale and complexity of the city is made manageable”.

The main concern we have about the idea of “cities as networks” is that this metaphor has become too tied-up with recent advances in technology and economic growth. We thus argue in favour of a more spatialised understanding of networks, one that could help imbue urban development policy with new insights about the management of international co-operation frameworks. Linking network theory and urban development theory also has important implications for human geography *per se*, since it points to some of the enabling and constraining factors that influence the construction and extension of social networks across space.

### **Components of networks**

Urban networks transfer knowledge, experiences, norms, values, culture, and therefore development across space. According to the World Bank (1999), “knowledge is like light, weightless and intangible, it can easily travel the world, enlightening the lives of people everywhere” (also see S. Parker, 2000, p. 233). Knowledge also illuminates economic transactions, revealing preferences, giving clarity to exchanges, informing markets. And it is the lack of knowledge that causes markets to collapse, or never to come into being. Knowledge bases and absorptive capacity create knowledge systems: recent economic literatures define these codes and links as network goods. Their value is increased through use over time (N. Economides, 1995).

However, the networks of knowledge – whether regional, sector-based or technological – are not limited only in the framework of organisation. They also act as informal models of confidence, fame and moral values. Their degree of acceptance by participating ensures decreased costs of monitoring and control, while the expected profit from the exploitation of their operation covers the possibly high costs of adaptation and failure in previous stage.

Formally, networks are composed of links that connect nodes. It is inherent in the structure of a network that many components of a network are required for the provision of a typical service. Thus, network components are complementary to each other. Also, there are close substitutes for each of these components, and the combination of these components will not result in identical services. The various links and nodes on the network are costlessly combinable to produce demanded goods and services. It is

*compatibility that makes complementarity actual.* In the 1970s, partly prompted by the antitrust suit against AT&T, there was a considerable amount of research on the efficiency gains from joint operation of complementarity components of networks (W. J. Baumol, et al, 1982).

In the 1980s and 1990s, after AT&T was unbundled, and the reduced role of IBM in the setting of technical standards in computer hardware and software, economic research focused on issues of interconnection and compatibility. Costs of transmission have fallen dramatically with the introduction of fiber-optic lines, and these cost reductions have transformed the telecommunication industry from a natural monopoly to an oligopoly (European Commission, 1994). Thus, the questions of interconnection, compatibility, interoperability, and coordination of quality of services has gained paramount importance.

Networks exhibit positive consumption and production *externalities*, due to the complementarity between their components. The value of a unit of a good increases with the expected number of units to be sold (J. Rohlfs, 1974, p. 16–37; S. Oren, S. Smith, 1981, p. 467–487). This is exemplified by the fact that financial exchange markets also exhibit network externalities (N. Thrift, 1994, 1996, 1998b; N. Thrift, A. Leyshon, 1992; A. Leyshon, N. Thrift, 1997), since minimal liquidity is necessary for the transaction to occur. Reciprocal compatibility increases competition for the individual components, but the issue of compatibility and coordination becomes more complicated if there are many networks. Research in this area is hampered by the lack of established models of coalition formation in non-cooperative settings. However, we do know that, in many cases, vertical integration is a decision that is more flexible (and less reversible) than a decision on compatibility. The lack of vertical integration leads to a reduction in quality. Externalities attracts potential investors, and increases output and competition (competitive and network effects) (N. Economides, 1996).

In network markets, and more generally in markets with network externalities where firms and consumers interact in more than one period, history matters. Both consumers and firms make production and consumption decisions based on the size of an installed base and on expectations of its increases over time. The same underlying technology and consumers preferences and distribution can lead to different industrial structures depending on the way things start. Thus, strategic advantages, such as first mover advantages, can have long run effects (W. B. Arthur, 1988, 1989, p. 116–131; P. A. David, 1985, p. 332–337). Network externalities and historical events are particularly important in the speed of adoption of an innovation that creates services on a network that, driven by the externality, can expand so quickly as to exhibit increasing prices even when marginal costs are falling over time (for example in case of the Fax market in the US and Japan (N. Economides, 1996).

The global economy is historically a new reality, since has the capacity to work as a unit in real time on a planetary scale. Indeed, the relentless expansion of the international economy of the past, always trying to overcome limits of time and space – as Fernand Braudel and Immanuel Wallerstein have taught us – became truly global on the basis of the new infrastructure provided by information and communication technologies. This globality concerns the “core processes and elements of the economic system” (M. Castells, 1996, p. 92–93). Moreover, “Networks constitute the new social morphology of our societies, and the diffusion of networking logic substantially modifies the operation and outcomes in processes of production, experience, power, and culture” M. Castells (1996, p. 469).

### **Examples of urban cooperation networks in Europe**

Historically, cities –as places of cultural, religious, political, military and economic significance – have played a major role in broader economic and social development trends (P. J. Taylor, 2004). It has been argued that, while non-economic activities have organized space hierarchically, economic activity creates de-centered networks (J. Jacobs, 1984). According to J. Borja (1998) the city is a physical, political and complex cultural product that we have characterized in our ideology and our values as a concentration of population and activity, a social and functional mixture, capable of self-government and an area of symbolic identification and civic participation. The city is thus a place of encounter, exchange, where urbanity equals culture and trade; thus we can talk of a city of place and not a mere nexus of flux (J. Borja, 1998).

The globalization process has led to a new urban system/network in which cities have to become more prominent, more competitive, and more integrated within the world system (P. J. Taylor, 2004; S. Sassen, 1998, 2001, 2002). “Networks of cities” such as World Cities, Eurocities or Sister Cities are among the well known examples of interaction and cooperation of the cities at the regional and global level. Sharing their experiences and their cultures within these networks can lead to development of common spatial and social strategies, and to further cooperation.

The contemporary city constitutes a primary setting for social life and interrelation; and subsequently for solidarity. In the face of individualism, the city is a setting for solidarity. In the face of isolation, it’s a setting for communication. The city, then, is a setting and an educational agent which practices public opinion and freedom before the concentration of power; expresses pluralism before the tendency to gregariousness; defends citizenship before the unequal distribution of power; strives for solidary individuality before the tendency towards individualism. It provides the fabric for the civic customs that create the sense of reciprocity, which in



turn gives rise to the feeling that there are interests which must be protected. It unites with its bonds of community living. It allows the formation of human beings who are aware both of their duties and of their rights. The city is, therefore, *educative*, per se: there is no question that urban planning, culture, the schools, sport, environmental and health, economic and budget issues, and matters related to transport and traffic, safety and services, the media, etc. include and generate forms of citizen education.

From “*amphiktyonies*” in Ancient Greece, to the commercial networks of the Middle Age and the Renaissance, and to the ideas of Scottish town planner Sir Patrick Geddes (P. Geddes, 1915; Annon, 1923, p. 329–330, P. Geddes, 1924, p. 166) there is evidence to suggest the existence of urban networks, rather than hierarchies of cities. It is not by accident that at an international conference on the subject held in Los Angeles (21<sup>st</sup>-23<sup>rd</sup> October, 1999) attracted many speakers including established academics such as Sir Peter Hall and Saskia Sassen, community leaders such as the mayors of Berlin, São Paulo and Sydney, and powerful individuals such as the President of the World Bank. However, it was not the individual contributors, but rather the title of the conference itself that attracted the most attention (A. J. Scott (ed.), 2001; R. Simmonds, G. Hack (eds.), 2000).

One of the first contemporary forms of institutionalized urban networking was provided by the sister city movement, which was used by municipalities to define their interests at the international level after the Second World War (A. Vion, 2002, p. 623–640). At a White House Conference in 1956, President Eisenhower insisted that the development of international relationships should be drawn in local level with the involvement of individuals which will be fostered by sister city, county and state affiliations that would lessen the chance of future world conflicts (SCI, 2004) Sister City International (SCI) became an independent non profit organization in 1967.

The Sister City movement in Europe (also known as “town twinning” or “jumelages”) has been accelerated by the European Union. Within it, the idea of twinning aims “to provide the opportunity to find out more about the daily lives of citizens in other European countries, to talk to them and exchange experiences, and to develop joint projects on issues of common interest, such as local integration, the environment, economic development, and cultural differences” (EU, 2004). Beside the similar approach of the US equivalent, EU Town Twining aims pioneering the development of European Citizenship as well. The European Commission (Media, Dir. P7) finances this process (Europe for Citizens Programme, 2007–2013) aiming to create dynamic, multilateral, multicultural, and sustainable urban networks.

## Linking network theory with urban development co-operation: lessons for the post-socialist context

A useful pathway into the connection between urban development theory and network analyses has been provided by F. Belussi and F. Arcangeli (1998), who develop a two dimensional typology of networks based upon: (i) capability-building forms of learning; and, (ii) the frequency of changes in network membership and the overall pattern of network activities. In moving along the first dimension in the direction of increasing dynamism, they identify *static*, *adaptive* and *creative* forms of learning. Along the dimension of network evolution, or what they term the axis of operational flexibility, networks are characterized by their retractability (the extent of observed changes to the Networking costs and profit opportunities (F. Belussi, F. Arcangeli, 1998).

W. Zelinsky (1999), however, claims that the choice of a sister city is not a random process but is based on any number of criteria including “historical connections, shared economic, cultural, recreational and ideological concerns, similar or identical place names, and, to a certain extent, the friction of distance (W. Zelinski, 1991, p. 1). Within this context, K. O’Toole (1999, 2000) defines three “phases of the sister city movement”:

- The “associative phase”, where the primary objectives of these types of twining relations are based on notions of international friendship, cultural exchange and a general international awareness.
- The “reciprocative phase” that is characterized by the growth of educational exchange systems which provide a safe and relatively cheap way of running an exchange program, especially with homestay arrangements keeping costs to a minimum.
- The “commercial phase” that does not ignore or abandon the earlier phases, but municipalities, by handling the role of entrepreneurship in order to “seize the new opportunities offered by globalization and localization” (World Bank, 2000), are attempting to take advantage of the relationship to further local economic aims, and to create business opportunities (W. Zelinsky, 1990). This is a recent phenomenon, where the networks and relationships among cities have driven to city-to-city affiliations through economic scenes.

R. Cremer et al (1991) and B. Ramasamy and R. Cremer (1998) have developed an “integrated approach to the analysis of sister cities”, claiming that cultural understanding and friendship between cities can sustain sister city relationships and develop economic activities within trade, tourism and investment. This feature drives municipalities and local authorities to act as entrepreneurs in order to contribute to the economic and social dynamism of cities. The new trend of establishing economic and business

relationships indicate a new perspective of international local representation in the global arena.

Still, there is relatively little insight into how the overall structure of the network influences the “appropriateness” of local relationships for knowledge sharing. Relationships in networks are considered as balanced and without tensions. The sources for motivation and ability are sought in the direct relationships, leaving the wider network conditions in creating the opportunity out of considerations. For successful knowledge sharing, there should be a “fit” between opportunity, motivation and ability (L. Argote et al., 2003).

The issues faced in the development of international frameworks for urban co-operation in the post-socialist context is illustrated by the experience of the “BALCINET” network, established in December 2000 in Thessaloniki. The network, which unites the 32 largest cities in the Balkan region, has been active in several areas of co-operation:

- Joint appearance before the European Union regarding issues of common interest (exchange of information and experience on EU membership).
- Strengthening of local self-governments in the Balkans (cooperation in the area of financial decentralization).
- Co-operation in the manufacturing sector (joint participation in fairs and promotion of economic development in the region).
- Culture, sports and education (establishment of the International Inter Balkan University; organization of youth municipal parliament of the cities – members of the network).
- Co-operation in the area of new technologies (improvement of communication between the cities in the region as well as the communication with the citizens via introduction of new technologies).

Interviews with leading members of this networks indicate that its development has been influenced by three factors:

- Opportunities: these are established through relevant contacts between cities. Three aspects have to be satisfied in this instance, as recognized by theories of social capital (J. Nahapiet, S. Ghoshal, 1998): First, a connection between civil society agents is needed to safeguard knowledge transfer. People must have contact with others for gathering new knowledge. Second, such types of relations should be “appropriate” for knowledge transfer. Third, knowledge must also be shared in order to achieve organisational learning.
- Motivation: this depends on the efforts undertaken by organizations and individuals, as well as direct relationships and reputation. The amount of effort is consequently related to cognitive ability and

absorptive capacity (B. Nooteboom, 2000). It can also take effort to maintain a social relationship. In this case, effort is connected with an individual's position in a social network (M. T. Hansen, 1999). Direct relationships are more prone to effective knowledge transfer (Uzzi, 1997). Reputation also affects motivation: generally, one may assume that knowledge transfer and sharing is facilitated when one's reputation is improved. Being perceived as an expert enhances the readiness to share and transfer knowledge (Borgatti and Cross, 2003). Reputation as a motivator has, as a precondition, a tight social network through which reputational effects are realized. Effort and reputation as motivators for knowledge sharing and transfer, both, presuppose a tight social network.

- Ability: in some instances, it could take too much effort to transfer knowledge, in which case it is also time-consuming due to levels of cognitive and absorptive capability (B. Nooteboom, 2000). This is especially the case when people from diverse disciplinary backgrounds need to share their knowledge. J. S. Brown and P. Duguid (2001) state that successful knowledge transfer only takes place between people with the same background knowledge and the same experience in practice. Cognitive similarity is also correlated with social networks as people with tight connections develop "relation-specific heuristics" that facilitate understanding (M. T. Hansen, 1999).

### **Conclusion: from "cities as networks" to "city networks"**

In this paper, we have argued that the concept of "city networks" can help imbue urban development theory with contemporary insights from network theory. The application of compatibility and co-ordination concepts to the field of urban networks can be a choice of policy strategy in developed world cities. However, most research in the field of globalization and world cities has been on hierarchies and has been economic (from Hymer to Reed to Friedmann to Sassen, etc.). Given that the recent work on networks has also tended to be economic, there is still a need to do more research on the cultural, social, and political networks that bind cities together. We need to do more research on what D. Massey (1999) has termed the power-geometry of networks: on the asymmetry of the actor-networks that link together cities. We need to expand the number of qualitative methodologies we use (see J. V. Beaverstock et al., 2000b) in order to understand how city networks can – or cannot – lengthen and function. Although there is essentially no difference "between 'macro' and 'micro' or 'global' and 'local' actors; longer networks can simply reach further than shorter networks" J. Murdoch (1997a, p. 331), the manner in which such systems are extended and practiced across space has major implication for the articulation of democracy and the public interest.

## References:

- Allen J, Massey D., Cochrane A., Charlesworth J., Court G., Henry N., Sarre P., 1998, *Rethinking the Region*, Routledge, London.
- Allen J., Massey D., Pryke M. (eds.), 1999, *Unsettling Cities*, Routledge, London.
- Amin A, Massey D., Thrift N., 2000, *Cities For The Many Not The Few*, The Policy Press, Bristol.
- Anon, 1923, A World League of Cities, *The Sociological Review*, XV, p. 329–330.
- Argote L., McEvily B., Reagans R., 2003, Managing Knowledge in Organizations: An Integrative Framework and Review of Emerging Themes, *Management Science*, 49(4), p. 571–582.
- Arthur W. B., 1988, Self-Reinforcing Mechanisms in Economics [in:] P. W. Anderson, K. J. Arrow, D. Pines (eds.) *The Economy as an Evolving Complex System*, Addison Wesley, London.
- Arthur W. B., 1989, Competing Technologies, Increasing Returns, and Lock-in by Historical Events, *The Economic Journal*, 99, p. 116–131.
- Barry A., 2000, Water, [in:] S. Pile, N. Thrift (eds.) *City A-Z*, Routledge, London.
- Baumol W. J., Panzar J., Willig R., 1982, *Contestable Markets and the Theory of Industry Structure*, Hartcourt Brace Jovanovich, New York.
- Beauregard R. A., 1995, Theorizing the global-local connection [in:] P. Knox, P. Taylor (eds.) *World Cities in a World System*, Cambridge University Press, Cambridge.
- Beaverstock J. V., Doel N. A., Hubbard P. J., Taylor P. J., 2001a, Attending to the World: Competition/Co-operation and Co-efficiency in the World City Network. Available at: <http://www.lboro.ac.uk/gawc/rb/rb20.html>
- Beaverstock J. V., Hoyler M., Pain K., Taylor P. J., 2001b, Comparing London and Frankfurt as world cities: A relational study of contemporary urban change, Anglo-German Foundation for the Study of Industrial Society, London.
- Beaverstock J. V., Smith J., 1996, Lending jobs to global cities: Skilled international labour migration, investment banking and the City of London, *Urban Studies*, 33(8), p. 1377–1394.
- Beaverstock J. V., Smith R. G., Taylor P. J., 1999, A roster of world cities, *Cities: The International Journal of Urban Policy and Planning*, 16 (6), p. 445–458.
- Beaverstock J. V., Smith R. G., Taylor P. J., 2000a, World city network: a new metageography?, *Annals of the Association of American Geographer*, 90, p. 123–134.

- Beaverstock J. V., Smith R. G., Taylor P. J., Walker D. F. R., Lorimer H. N., 2000b, Globalization and world cities: some measurement methodologies, *Applied Geography*, 20, p. 43–63.
- Beaverstock J. V., Smith R. G., Taylor P. J., 1992, The global capacity of a world city: a relational study of London, [in:] E. Korfman, G. Youngs (eds.) *Globalization: theory and practice*, Pinter, London.
- Belussi F., Arcangeli F., 1998, A typology of networks: flexible and evolutionary firms, *Research Policy*, 27, p. 415–428.
- Bingham N., 1996, Object-ions: From technological determinisms towards geographies of relations, *Environment and Planning D: Society & Space*, 14, p. 635–658.
- Borgatti S. P., Cross R., 2003, A Relational View of Information Seeking and Learning in Social Networks, *Management Science*, 49(4), p. 432–445.
- Borja J., 1998, *La ciutat del futur i el futur de les ciutats*, Borja, Nel·lo, Vallès Fundació Campalans, Barcelona.
- Borja J., Castells M., 1997, *The Local and the Global: Management of Cities in the Information Age*, Earthscan, London.
- Bourne L. S., Simmons J. W. (eds.), 1978, *Systems of Cities: Readings on Structure, Growth, and Policy*, Oxford University Press, Oxford.
- Brown J. S., Duguid P., 2001, Knowledge and Organization: A Social-Practice Perspective, *Organization Science*, 12(2), p. 198–213.
- Button G. (ed.), 1991, *Ethnomethodology and the human sciences*, Cambridge University Press, Cambridge.
- Callon M., 1991, Techno-economic networks and irreversibility [in:] J. Law (ed.) *A Sociology of Monsters: Essays on Power, Technology, and Domination*, Routledge, London.
- Callon M., Law J., 1995, Agency and the hybrid Collectif", *South Atlantic Quarterly*, 94, p. 481–507.
- Camagni R., Salone C., 1993, Network urban structures in northern Italy: elements for a theoretical framework, *Urban Studies*, 30(6), p. 1053–1064.
- Castells M., 1977, *The Urban Question: A Marxist Approach*, Edward Arnold, London.
- Castells M., 1983, *The City and the Grassroots: A Cross-Cultural Theory of Urban Social Movements*, University of California Press, Berkeley.
- Castells M., 1989, *The Informational City*, Blackwell, Oxford.
- Castells M., 1996, *The Rise of the Network Society*, Blackwell, Oxford.
- Castells M., 1997, *The Power of Identity*, Blackwell, Oxford.
- Castells M., 1998, *End of Millennium*, Blackwell, Oxford
- Castells M., 1999, Grassrooting the space of flows, *Urban Geography*, 20(4), p. 294–302.



- Castells M., 2001, *The Internet Galaxy: Reflections on the Internet, Business, and Society*, Oxford University Press, Oxford.
- Castells M., Hall P., 1994, *Technopoles of the World: The Making of 21<sup>st</sup> Century Industrial Complexes*, Routledge, London.
- Cohen R. B., 1981, *The new international division of labour, multinational corporations, and urban hierarchy* [in:] M. Dear, A. J. Scott (eds.) *Urbanization and Urban Planning in Capitalist Society*, Methuen, New York.
- Colonomos A., 2001, *Transnational Networks: Old Game, New Rules* [in:] M. C. Smouts (ed.) *The New International Relations: Theory and Practice*, Hurst, London.
- Corporation of London, 2000, *London – New York Study. The Economies of Two Great Cities at the Millennium (Executive Summary). Final Report Sections 1, 2, & 3*, The Corporation of London, London.
- Crabtree J., 2002, *The cult of Castells*, *Prospect* (February), p. 50–54.
- Cremer R. D., Bruin A., Dupuis A., 2001, *International Sister-Cities, Bridging the Global-Local Divide*, *American Journal of Economics and Sociology*, 60(1), p. 377–401(25).
- Cremer R., Gounder R., Ramasamy B., 1996, *Guidelines for New Zealand-Asia Sister City Relationships: Economic Rationale for an Integrated Approach*, Department of Economics, Massey University, Palmerston North.
- David P. A., 1985, *Clio and the Economics of QWERTY*, *American Economic Review*, 75(2), p. 332–337.
- Deleuze G., Guattari F., 1983, *On the Line*, *Semiotext(e)*, New York.
- Donald J., 1992, *Metropolis: The City as Text* [in:] R. Bocoock, K. Thompson (eds.) *Social and Cultural Forms of Modernity*. Cambridge, Blackwell, Oxford.
- Economides N., 1996, *The Economics of Networks*, *International Journal of Industrial Organization*, 14(2).
- European Commission, 1994, *Europe and the Global Information Society*, Bangemann Report.
- Foster S. L. (ed.), 1996, *Corporealities: Dancing knowledge, culture and power*, Routledge, London.
- Foucault M., 1986, *Of other spaces*, *Diacritics*, 16, p. 22–27.
- Friedmann J., 1986, *The world city hypothesis*, *Development and Change*, 17, p. 69–83.
- Friedmann J., 1995, *Where we stand: a decade of world city research* [in:] P. Knox, P. Taylor (eds.) *World Cities in a World System*, Cambridge University Press, Cambridge.
- Friedmann J., 2000, *Reading Castells: Zeitdiagnose and social theory*, *Environment and Planning D: Society & Space*, 18, p. 111–120.

- Friedmann J., Wolff G., 1982, *World City Formation: An Agenda for Research and Action*, *International Journal of Urban and Regional Research*, 3, p. 309–344.
- Fuller S., 1999, Review Essay: *The Information Age (3 Vols.)* by Manuel Castells [in:] *Science, Technology, & Human Values*, 24(1), p. 159–166.
- Garfinkel H., 1967, *Studies in Ethnomethodology*, Prentice Hall, Englewood Cliffs, NJ.
- Geddes P., 1915, *Cities in Evolution*, Benn, London.
- Geddes P., 1924, *A World League of Cities*, *The Sociological Review*, XVI, p. 166.
- Geddes P., 1949, *Cities in Evolution*, Williams & Norgate, London.
- Graham S., Marvin S., 1996, *Telecommunications and the city: electronic spaces, urban places*, Routledge, London.
- Graham S., Marvin S., 2001, *Splintering Urbanism: Networked Infrastructures, Technological Mobilities, and the Urban Condition*, Routledge, London.
- Haggett P., 1965, *Locational Analysis in Human Geography*, Edward Arnold, London.
- Haggett P., Chorley R., 1969, *Network Analysis in Geography*, Edward Arnold, London.
- Hall P., 1966, *The World Cities*, Weidenfeld & Nicolson, London.
- Hall P., 1998, *Information technology, globalization and regional development* [in:] S. G. E. Gravesteijn, S. Griensven, M. Smidt (eds.) *Timing Global Cities*, *Netherlands Geographical Studies*, Utrecht.
- Hall P., Pfeiffer U., 2000, *Urban Future 21: A Global Agenda For Twenty-First Century Cities*, E & FN Spon, London.
- Hannerz U., 1996, *Transnational Connections*, Routledge, London.
- Hansen M. T., 1999, *The Search-Transfer Problem: The Role of Weak Ties in Sharing Knowledge across Organization Subunits*, *Administrative Science Quarterly*, 44, p. 82–111.
- Hinchcliffe S., 1996, *Technology, power, and space - the means and ends of geographies of technology*, *Environment and Planning D: Society & Space*, 14, p. 659–682.
- Hymer S., 1972, *The multinational corporation and the law of uneven development* [in:] J. Bhagwati (ed.) *Economics and World Order from the 1970s to the 1990s*, Collier-MacMillan, New York.
- Jacobs J., 1984, *Cities and Wealth of Nations*, Vintage Books, New York.
- Johnston R. J., 2000, *World City* [in:] R. J. Johnston, D. Gregory, G. Pratt, M. Watts (eds.) *The Dictionary of Human Geography*, Blackwell, Oxford.

- Knox P., 1998, Globalization and world city formation [in:] S. G. E. Gravesteijn, S. Griensven, M. Smidt (eds.) *Timing Global Cities*, Netherlands Geographical Studies 241, Utrecht.
- Latour B., 1987, *Science in Action*, Open University Press, Milton Keynes.
- Latour B., 1993, *We Have Never Been Modern*, Harvester Wheatsheaf, Hemel Hempstead.
- Latour B., 1999, On recalling ANT [in:] J. Law, J. Hassard (eds.) *Actor Network Theory and after*, Blackwell, Oxford.
- Law J., 1986, On the methods of long-distance control: vessels, navigation and the Portugese route to India [in:] J. Law (ed.) *Power, Action & Belief: A New Sociology of Knowledge?* Routledge, London.
- Law J., Hassard J. (eds.), 1999, *Actor Network Theory and after*, Blackwell, Oxford.
- Law J., Hetherington K., 2000, Materialities, spatialities, globalities [in:] J. Bryson, P. Daniels, N. Henry, J. Pollard (eds.) *Knowledge, Space, Economy*, Routledge, London.
- Leyshon A., Thrift N., 1997, *Money/Space: Geographies of Monetary Transformation*, Routledge, London.
- Marais H., 2000, Sink or Swim, *Leadership* (August), p. 60-64.
- Massey D., 1994, *Space, Place & Gender*, Polity Press, Cambridge.
- Massey D., 1999, Power-geometries and the Politics of Space-Time, Hettner-Lecture, Department of Geography, University of Heidelberg.
- Massey D., 2000, Understanding Cities: An interview with Doreen Massey, *City*, 4(1), p. 135-144.
- Massey D., Allen J., Pile S. (eds.), 1999, *City Worlds*, Routledge, London.
- McGuigan J., 1999, *Modernity and Postmodern Culture*, Open University Press, Buckingham.
- McGuire S., Chan M., 2000, The NY-LON life, *Newsweek*, 13<sup>th</sup> November, p. 40-47.
- Merleau-Ponty M., 1962, *The Phenomenology of Perception*, Routledge & Paul Kegan, London.
- Meyer B., Geschiere P. (eds.), 1999, *Globalization and Identity: Dialectics of Flow and Closure*, Blackwell, Oxford.
- Mulgan G., 1991, *Communications and Control: Networks and the New Economics of Communication*, Polity, Cambridge.
- Murdoch J., 1997a, Towards a geography of heterogeneous associations, *Progress in Human Geography*, 21(3), p. 321-337.
- Murdoch J., 1997b, Inhuman/nonhuman/human: actor-network theory and the prospects for a nondualistic and symmetrical perspective on

- nature and society", *Environment and Planning D: Society & Space*, 15, 731–756.
- Murdoch J., Marsden t., 1995, The spatialization of politics: local and national actor-spaces in environmental conflict, *Transactions of the Institute of British Geographers*, 20, p. 368–380.
  - Nahapiet J., Ghoshal S., 1998, Social Capital, Intellectual Capital, and the Organizational Advantage, *Academy of Management Review*, 23(2), p. 242–266.
  - Naisbitt J., Aburdene P., 1990, *Mega-Trends 2000*, Sidgwick & Jackson, London.
  - Nooteboom B., 2000, Learning by Interaction: Absorptive Capacity, Cognitive Distance and Governance, *Journal of Management and Governance*, 4, p. 69–92.
  - O'Toole K., 1999, Sister Cities and the Organization of Global Space [in:] R. J. Johnston, P. J. Taylor, M. J. Watts (eds.) *Geographies of Global Change*, Blackwell, Oxford.
  - O'Toole K., 2000, Local to Local: Interpretations of Globalization in Sister City Relations, *Third Sector and State Partnerships Conference*, 13-14 December, Melbourne, Australia.
  - Ong A., 1999, *Flexible Citizenship: The Cultural Logics of Transnationality*, Duke University Press, London.
  - Oren S., Smith S., 1981, Critical Mass and Tariff Structure in Electronic Communications Markets, *Bell Journal of Economics*, 12(2), p. 467–487.
  - Parker S., 2000, Knowledge is like Light. Information is like Water, *Information Development*, 16(4), p. 233–238.
  - Pile S., Thrift N. (eds.), 2000, *City A-Z*, Routledge, London.
  - Reed H., 1981, *The Pre-eminence of International Financial Centers*, Praeger, New York.
  - Rohlfs J., 1974, A Theory of Interdependent Demand for a Communication Service, *Bell Journal of Economics*, 5(1), p. 16–37.
  - Rose G., Thrift N., 2000a, Special Issue on Performance and Performativity (Part 1), *Environment and Planning D: Society & Space*, 18(4).
  - Rose G., Thrift N., 2000b, Special Issue on Performance and Performativity (Part 2)", *Environment and Planning D: Society & Space*, 18(5).
  - Sassen S., 1991, *The Global City: New York, London, Tokyo*, Princeton University Press, Princeton, N.J.
  - Sassen S., 1994a., *Cities in a World Economy*, Pine Forge Press, London.
  - Sassen S., 1994b, The urban complex in a world economy, *International Social Science Journal*, 139, p. 43–62.

- Sassen S., 1998, *Globalization and Its Discontents: essays on the new mobility of people and money*, The New Press, New York.
- Sassen S., 1999a, *Global financial centres*, *Foreign Affairs*, 78(1), p. 75–87.
- Sassen S., 1999b, *Servicing the global economy: Reconfigured states and private agents* [in:] K. Olds, P. Dicken, P. P. Kelly, L. Kong, Yeung (eds.) *Globalisation and the Asia-Pacific*, Routledge, London.
- Sassen S., 2001, *The global city: New York, London, Tokyo*, Princeton University Press, Princeton, N.J.
- Sassen S., 2002, *Global networks, linked cities*, Routledge, New York.
- Scott A. J. (ed.), 2001, *Global City-regions: Trends, Theory, Policy*, Oxford University Press, Oxford.
- Sharkey W., 1993, *Network Models in Economics*, mimeo.
- Short J. R., Kim Y., Kuus M., Wells H., 1996, *The dirty little secret of world cities research – data problems in comparative analysis*, *International Journal of Urban and Regional Research*, 20(4), p. 697–719.
- Simmonds R., Hack G. (eds.), 2000, *Global City Regions: Their Emerging Forms*, Spon Press, London.
- Smith M. P., 2001, *Transnational Urbanism*, Blackwell, Oxford.
- Smith R. G., 2001, *The Urban Moment* edited by Beauregard RA & Body-Gendrot S", *Environment and Planning B*, 28 (4).
- Soja E., 1989, *Postmodern Geographies: The Reassertion of Space in Critical Social Theory*, Verso, London.
- Soja E., 2000, *Postmetropolis: Critical Studies of Cities and Regions*, Blackwell, Oxford.
- Stetter A., 2000, *Goods* [in:] N. Barley (ed.) *Breathing Cities: The Architecture of Movement*, Birkhauser, Berlin.
- Taylor P. J., 1981, *Geographical scales within the world-economy approach*", *Review V*(1), p. 3–11.
- Taylor P. J., 1982, *A materialist framework for political geography*, *Transactions of the Institute of British Geographers*, 7, p. 15–34.
- Taylor P. J., 2001, *Specification of the World City Network*, *Geographical Analysis*, 33(2), p. 181–194.
- Taylor P. J., 2004, *World City Network. A Global Urban Analysis*, Routledge, London.
- Taylor P. J., Catalano G., Walker D. R. F., 2001a, *Exploratory Analysis of the World City Network*. Available at <http://www.lboro.ac.uk/gawc/rb/rb50.html>
- Taylor P. J., Walker D. R. F., Catalano G., Hoyler M., 2001b, *Diversity and Power in the World City Network*. Available at: <http://www.lboro.ac.uk/gawc/rb/rb56.html>

- The World Bank, 1999, *Knowledge for Development, 1998–1999*, Oxford University Press, New York.
- The World Bank, 2000, *World Development Report 1999/2000: Dynamics Cities as Engines of Growth*, Oxford University Press, New York.
- The World Bank, 2004, *Building Market Institutions in South Eastern Europe*, Oxford University Press, New York.
- Thomas H. (ed.), 1996, *Dance in the City*, MacMillan, London.
- Thrift N., 1989, The geography of international economic disorder [in:] R. J. Johnston, P. J. Taylor (eds.) *A World in Crisis*, Blackwell, Oxford.
- Thrift N., 1993, The Light Fantastic: Culture, Postmodernism and the Image [in:] G. L. Clark, D. Forbes, R. Francis (eds.) *Multiculturalism, Difference & Postmodernism*, Longman Cheshire, Melbourne.
- Thrift N., 1994, On the social and cultural determinants of international financial centres [in:] S. Corbridge, N. Thrift, R. Martin (eds.) *Money, Power and Space*, Blackwell, Oxford.
- Thrift N., 1995, A Hyperactive World [in:] R. Johnston, P. Taylor, M. Watts (eds.) *Geographies of Global Change: Remapping the World in the late Twentieth Century*, Blackwell, Oxford.
- Thrift N., 1996, *Spatial Formations*, Sage, London.
- Thrift N., 1997, The still point: resistance, expressive embodiment and dance [in:] S. Pile, M. Keith (eds.) *Geographies of Resistance*, Routledge, London.
- Thrift N., 1998a, Distance is not a safety zone but a field of tension: mobile geographies and world cities [in:] S. G. E. Gravesteijn, S. Griensven, M. Smidt (eds.) *Timing Global Cities*, Netherlands Geographical Studies, Utrecht.
- Thrift N., 1998b, Always here and there: the City of London [in:] T. Unwin (ed.) *A European Geography*, Longman, Harlow.
- Thrift N., 1998c, Virtual Capitalism: The Globalisation of Business Knowledge [in:] J. Carrier, D. Miller (eds.) *Virtualism: A New Political Economy*, Berg, Oxford.
- Thrift N., 1998d, The Rise of Soft Capitalism [in:] A. Herod, G. Tuathail, S. Roberts (eds.) *An Unruly World? Globalization, Governance, and Geography*, Routledge, London.
- Thrift N., 1999a, Steps to an Ecology of Place [in:] D. Massey, J. Allen, P. Sarre (eds.) *Human Geography Today*, Polity, Cambridge.
- Thrift N., 1999b, The place of complexity, *Theory, Culture & Society*, 16, p. 31–69.
- Thrift N., 2000a, Not a straight line but a curve, or, cities are not mirrors of modernity [in:] D. Bell and A. Haddour (eds.) *City Visions*, Longman, London.



- Thrift N., 2000b, *The First Telematic City? The City of London* [in:] N. Barley (ed.) *Breathing Cities: The Architecture of Movement*, Birkhauser, Berlin.
- Thrift N., 2000c, *With child to see any strange thing: Everyday life in the city* [in:] G. Bridge, S. Watson (eds.) *A Companion to the City*, Blackwell, Oxford.
- Thrift N., 2000d, *Performing Cultures in the New Economy*, *Annals of the Association of American Geographers*, 90(4), p. 674–692.
- Thrift N., 2001, 'It's the romance, not the finance, that makes the business worth pursuing': disclosing a new market culture, *Economy & Society*, 30(4), p. 412–432.
- Thrift N., Leyshon A., 1992, *In the wake of money: The City of London and the Accumulation of Value* [in:] L. Budd, S. Whimster (eds.) *Global Finance & Urban Living: A Study of Metropolitan Change*, Routledge, London.
- Uzzi B., 1997, *Social Structure and Competition in Interfirm Networks: The Paradox of Embeddedness*, *Administrative Science Quarterly*, 42, p. 35–67.
- Vion A., 2002, *Europe from the Bottom Up: Town Twinning in France during the Cold War*, *Contemporary European History*, 11(4), p. 623–640.
- Virilio P., 1991, *The Lost Dimension*, Semiotext(e), New York.
- Warf B., 1999, *Telecommunications and the changing geographies of knowledge transmission in the late twentieth century* [in:] G. Roberts (ed.) *The American Cities & Technology Reader: Wilderness to Wired City*, Routledge, London.
- Whatmore S., 1997, *Dissecting the autonomous self: hybrid cartographies for a relational ethics*, *Environment and Planning D: Society & Space*, 15, p. 37–53.
- Zelinsky W., 1991, *The Twinning of the World: Sister Cities in Geographic and Historical Perspectives*, *Annals of the Association of American Geographers*, 81(1), p. 1–13.

Valeriy Rudenko

## **Geographical problems of natural resources potential evaluation in Ukraine**

“...People and intelligentsia must understand that once the state expenses reduction seems now to be unavoidable, – because of our incredible poverty to come very soon, – the expenses related to study of natural productive forces may not and must not be reduced to the same extent. These are the most productive and necessary expenses ever existing in mankind’s state organizations. The country and the people who become aware of that would overcome crises suffered to day to appear a mighty and happy nation in the future. The nation which will not come to such understanding is a doomed nation” (В. П. Руденко, О. І. Чернюх, 2004, р. 9).

This citing from Academician V. I. Vernadskiy, the first President of the Academy of Sciences, Ukraine, looks like a prophecy at the present-day stage of Ukrainian natural resources potential (NRP) development.

Ukrainian scientists have laid foundations for NRP constructive-geographical and nature utilization problem studies which by their subject and the essence of their analysis have found realization in the major component, branch and complex-territorial (or regional) directions. These studies are characterized by: (1) active attempts to construct humane-optimal natural environment; (2) efforts to evaluate expediency of transformations with all probable consequences consideration; (3) the prospected natural resources evaluation and their industrial use allocation in strict combination with the proposals for nature component features’ changes aimed at the resources higher productivity; (4) natural productive forces monitoring development; (5) accentuation on geographical problems of nature-society interaction management.

Formation of new concepts is initiated, these being of complex character and relating to general trends in the development, rational assimilation, preservation and reproduction of natural productive forces, among the most important of which are: (1) concept of natural productive forces components independence and equivalence, their genetic link with surrounding natural bodies and repeated spatial and temporal development; (2) concept of admissible nature “hand-made” change limits, controlled by impossibility

of natural regularities neglecting; (3) concept of nature-preserving utilization of natural productive forces; (4) concept of admissible limits within purposeful transformation of natural productive forces; (5) concept of the Earth's natural productive forces as manifestations of the integral cosmic process; regular indissolubility of human culture and nature vital manifestations; (6) concept of nature preservation knowledge and outlook formation; (7) concept of Ukrainian balanced development.

Active scientific geographical investigation and its realization in the practice of Ukrainian nature utilization have manifested themselves in interaction of major stages of NRP development doctrine: from complex study of natural productive forces separate components – verification of mutually conditioned links between them – towards disclosure, analysis and purposeful formation of their geographical complexes (complexes of productive forces).

This scientific trend in Ukrainian NRP geographical studies coincides with the “Education Decade for Stable Development”, initiated by Japan and declared by the United Nations Organization (UN Resolution 57/254 of February, 2003). The essence of the world community's approach (strategy) consists in transition from simple rendering of knowledge and skills, necessary for existence in present-day society, to formation of abilities for living and acting in conditions of everyday changes, participating in social development planning, learning to foresee consequences of suggested actions, including those in the sphere of natural ecosystems stability.

Modern by-component and integral (complex) Ukrainian regions' NRP geographical studies base on cognition of complex natural and social regularities within the country's natural productive forces development. The productive forces study proves to be an urgent matter for specialists in evaluative resource knowledge. We believe that Ukrainian economic geographers should mark as priorities and concentrate efforts on the following tasks:

- 1) formation of methodology and instruments for complex ecological-economic evaluation of integral natural resources potential and its separate components;
- 2) defining the role and place of NRP ecological-economic evaluation within the information-cadastral system;
- 3) accumulation of practical experience and conduction of independent whole-state NRP ecological-economic evaluation in conditions of social development stabilization in Ukraine.

Undoubtedly, solution of these problems will require aggregation of considerable intellectual, labor and financial efforts and expenses by both leading scientific and projecting institutions and resource knowledge

practitioners within the soonest time in Ukraine, since we appear to be on a new stage of resource-valuation work at the whole-state scale.

Let us consider the above-stated problems in more detail.

Development of Ukrainian economics of the last years witnesses its natural-resource component role and significance expressed increase. The importance of this chain in the system of state productive forces functioning has been proved by the data for Ukrainian external economic links in 2006, where even a slight view makes evident the prevalence of natural-resource component. In particular, the share of mineral products in Ukrainian import comprised 30.0%, the same of timber and timber products, as well as of stone, gypsum, cement, ceramics, glass products – 2.2%, whereas non-valuable metals and these metals' products in the export structure amounted to 42.8%, mineral products, timber and timber products – 11.7% (Статистичний щорічник України за 2006 рік, 2007, р. 254). This is why it is important to consider the country's natural productive forces value at a regional scale.

It is necessary to note that present-day practice of resource-valuation work disposes of very little information as regards applicable experience and results of its (work) completion. There are certain reasons for the fact, either objective or subjective. Let us consider some of them.

Firstly, Ukrainian economics transition to market bases has itself brought in error in methodology of resource-valuation work. In this connection, we can not but agree with O.L. Kashchenko who states that it seems absolutely impossible today to define land cost (or its sale/purchase price) in Ukraine through the rent (as a capitalized cost). Real cost valuation of national wealth should not proceed from principle of expenses, but from social value of natural wealth. The natural wealth value as an economic resource can be measured through the level of its engagement into economic circulation, whereas natural wealth value as an economic good – through its scantiness (О. Л. Кащенко, 1999).

Solution of such important problem as definition of a unified criterion and generalizing index of ecological-economic evaluation of natural resources potential (NRP) lies within the same methodological scheme. Can the differential revenue – as the material basis for differential rents 1 and 2 or, moreover, its zero and negative index values since 1996 (“anti-rent”) – serve as an integral natural resource wealth index for the territory? We believe that NRP must not be characterized by the partial (differential) productivity of all regional natural resources, but by the integral productivity, expressed in their social use value. The results of monetary evaluation of Ukrainian lands of all property forms, conducted at the beginning of 1997 (Б. М. Данилишин, С. І. Дорогунцов, В. С. Міщенко et al., 1999) are the most demonstrative in this regard. Agricultural lands, comprising 61.9%

of the whole Ukrainian territory (excluding agricultural lands within inhabited localities), where internal normative prices were applied, received only 18.5% of complex land NRP value. At the same time, lands evaluated within inhabited localities (11.3% of the country's territory) received 70.5% of the whole lands total cost. Thus, monetary evaluation of Ukrainian agricultural lands' NRP appeared to be 4 times lower than the lands' cost within inhabited localities, and, when re-calculated per 1 hectare – 27 times lower! (Б. М. Данилишин, С. І. Дорогунцов, В. С. Міщенко et al., 1999). This is why we believe that lands within these localities, as well as lands for railroads, roads or aerodromes, etc. should not be evaluated within the limits of natural resources potential, but within the aggregate resources potential as an integrity.

Secondly, the data presented for Ukrainian NRP evaluation, are usually of selective by-component (“branch”) character, which does not allow for sufficient objectivity of their confrontation and comparison, including those in the aspect of regions. Thus, the authors of “Bowels of the Earth”, the chapter from National Environmental Report, Ukraine, 2000, evaluate the stock of 7 807 prospected deposits of industrial significance in the amount of about 7.0–7.5 trillion USD (Національна доповідь..., 2001). D. Hurskiy, Deputy Head of “Depths of Ukraine”, the National Public Limited Company, reports that as to 120 fossils excavated by mankind, Ukraine enjoys leading position in former Soviet republics, Europe and the world in 98 of them. As regards only prospected stock of natural gas in Ukraine, it amounts to 1 trillion 386 million m<sup>3</sup>, oil – over 1 milliard 100 million tons (Д. Гурський, 2007, р. 11).

At the same time, land potential of our country if measured by Ukrainian standards, costs 0.94 trillion USD, whereas if confronted to German prices – 3.9 trillion USD (Б. М. Данилишин, С. І. Дорогунцов, В. С. Міщенко et al., 1999).

Thirdly, NRP as the element of national wealth of the state should be evaluated in cost indices that actually are a sole criterion of its social value. Undoubtedly, substantiation of the utilized natural resource prices and their realization volumes are the key problems of NRP cost evaluation. B. M. Danylyshyn, S. I. Doroguntsov, V. S. Mishchenko et al. state that “evaluation is conducted proceeding from current prices in economics at the time of evaluation that stay unchanged during the whole period of evaluation in the absence of verified information as to their foreseen changes” (Б. М. Данилишин, С. І. Дорогунцов, В. С. Міщенко et al., 1999). And, further, “in conditions of market economics, world or regional market prices are used for calculations, these being established under the influence of demand and supply. This way of price formation, unlike those fixed under directives, makes the price to appear not only as

a cost standard, but also allows for its functioning as a signal, since price changes reflect in dynamics the goods deficiency level” (Б. М. Данилишин, С. І. Дорогунцов, В. С. Міщенко et al., 1999). These statements suggest that both internal and world current prices for natural resources are used in the process of NRP cost evaluation (Справочник цен..., 2001). Still, it leaves some questions unanswered, among the most important of which are: what will be the evaluation index for the potential of “worse” areas of natural resources; to what extent the current world prices (e.g., for oil and gas) are stable; to what extent do the applied regional inter-state market prices reflect real economic processes in nature utilization industry, in other words, do not they serve in the first place as a monopolist’s political lever etc. As D. Hurskiy states, it is very difficult to explain Ukrainians why they should yearly pay over 15 milliard USD to buy foreign energy when they possess over 40 trillion m<sup>3</sup> of blue fuel – a colossal amount – under their feet (Д. Гурський, 2007, p. 11), and 1.38 times more in 2008 (Обговорили ціну на газ, 2007, p. 2). It is doubtless that there is no scientific substantiation for the level of regional market price for the resource in this case.

The fourth problem of evaluation is that of temporal factor consideration when calculating the value and the structure of natural resources potential of the territory. It is not a prospective or retrospective, but a present-day NRP that should matter. What should be the period that would characterize present-day state of the country’s NRP? As in modern techniques of resource valuation, it covers last 5–7 years as regards land resources, and last 5 years – to evaluate present forest wealth. Natural resources, as most scientists agree, should in this case be re-evaluated no earlier than every five-ten years. Proceeding from the above, NRP as for 2007 can be characterized by evaluation conducted in 1997 where economic activity results in nature utilization branches as for 1990–1996 were calculated. For example, the indices for the state of natural resources in the world as in the World Development Report, 2000–2001 (Доклад о мировом..., 2001), cover periods of 1979–1981 and 1996–1998 as regards land utilization productivity, 1990–1996, when world water resources were evaluated, and 1990–1995, when forest wealth was characterized (Доклад о мировом..., 2001).

At the early years of Ukrainian independence we had calculated the integral (starting) NRP for inter-state comparisons, which in annual expression amounted to 62,45 milliard USD. The present-day Ukrainian NRP level, despite all evaluation proximity and if proceeded from the result-weighting approach, is most probably, lower. The major reason for that is a significant decrease of agricultural lands’ productivity today, since these lands are the basic natural resource in Ukraine.



For expert calculation of Ukrainian NRP value in its first approximation, the category of aggregate resource potential that includes mutually connected labor, material and natural resources can today be applied. With this purpose, let us make use of the data of 2005–2006 to compare the potential of Ukrainian assets with the country's natural resources potential (the value (volume) of these two components, as for our calculations, is nearly equal in cost expression). The Ukrainian NRP value, approximated to the cost of assets, will thus amount in annual measurement to nearly 40 milliard USD (when normative capital investments efficiency is on the level of 0.15) ((Статистичний щорічник України за 2006 рік, 2007, р. 25). As regards calculations by V. A. Baranovskiy and P. H. Shyshchenko, published in 2005, the natural resources potential of Ukraine (defined through the indices of its productivity) amounts to nearly 30 milliard USD (150 milliard hryvnias) (В. А. Барановський, П. Г. Шищенко, 2005).

Thus, it seems evident that the procedure for Ukrainian NRP valuation on a state scale stays to be among the urgent problems to be solved today.

### References:

- Барановський В. А., Шищенко П. Г., 2005, Природно-ресурсний потенціал. Еколого-економічна збалансованість території. Масштаб 1:9 000 000, ВЕЛ, Київ.
- Валовий регіональний продукт за 2001–2005 роки. Статистичний збірник, 2007, Державний комітет статистики України, Київ.
- Гурський Д., 2007, Енергетичний потенціал України, Урядовий кур'єр, 13 лист. 2007, № 212, р. 11.
- Данилишин Б. М., Дорогунцов С. І., Міщенко В. С. et al., 1999, Природно-ресурсний потенціал сталого розвитку України, РВПС України, Київ.
- Доклад о мировом развитии 2000/2001 года. Наступление на бедность, 2001, Изд-во "Весь мир", Всемирный банк, Москва.
- Кащенко О. Л., 1999, Фінанси природокористування, Вид-во "Університетська книга", Суми.
- Національна доповідь про стан навколишнього природного середовища в Україні у 2000 році, 2001, Міністерство екології та природних ресурсів України, Вид-во Раєвського, Київ.
- Обговорили ціну на газ, 2007, Урядовий кур'єр., 6 грудня 2007 р., № 229, р. 2.
- Паливно-енергетичні ресурси України. Статистичний збірник, 2006, Державний комітет статистики України, Київ.
- Руденко В. П., 1999, Географія природно-ресурсного потенціалу України. У 3-х частинах. Підручник, ВД "К.-М. Академія" & Зелена Буковина, Київ -Чернівці.

- Руденко В. П., Чернюх О. І., 2004, Становлення конструктивно-географічних напрямів раціонального природокористування в Україні у першій половині ХХ ст, Ruta, Chernivtsi.
- Справочник цен мирового рынка. Информационно-аналитический бюллетень, № 11., 2001, ОАО Всероссийский научно-исследовательский конъюнктурный институт, Москва, р. 5-34.
- Статистичний щорічник України за 2006 рік, 2007, Держкомітет статистики України, Вид-во "Консультант", Київ.

Natalia Sypion-Dutkowska

## **The spatial and temporal car crime analysis in Szczecin (Poland)**

### **Introduction**

#### *Geography of Crime*

The study of crime has traditionally been the domain of other disciplines such as sociology and it was not until the late 1970s that the “place” and the spatial dimension to crime began to be more fully explored. The police have long recognized the inherent geographical component of crime by sticking pins into maps displayed on walls, where each pin represented a crime event, but that were studies such as those from the “Chicago School” of the 1930s that first demonstrated the importance of geography in understanding crime (S. Chainey, J. H. Ratcliffe 2005).

Crime has its geographies and is a form of behavior that lends itself to the principles and methods of geographical analysis. The recognition of crime patterns at a variety of scales can be traced to studies and reports completed in the early part of the nineteenth century. A modern subdiscipline – geography of crime – has moved from these identifications of patterns to their detailed representation, interpretation and understanding (see D. Herbert, 1982; D. J. Evans, D. Herbert (eds.), 1989; D. Herbert, 2002). There are studies of the places where offenders live and the emergence and persistence of such ‘crime areas’ (see Mapping the War of Crime, 2000; V. Ceccato et al., 2002; G. Young, 2003; V. Ceccato, R. Haining, 2004). There are studies of the places that experience most crime and of the conditions that underpin their vulnerability (F. Wang, W. W. Minor, 2002; J. Malczewski, A. Poetz, 2005; M. Dolata, J. Kotus, 2006; E. Bogacka, 2009). Different types of crime have different geographies. Environmental criminology focuses on crime and place and has extended beyond an interest in the designed or built environment into the role of a more holistic concept of place. People experience crime and they also fear crime and possible victimization, both of these affect their images of the environments in which they live (B. J. Doran, B. G. Lees, 2005). If some of the conditions that contribute to the incidence of crime in space can be identified, it is a short step to

ameliorative policy formation. Criminology is a multidisciplinary field but it does not now encompass a geographical perspective (D. Herbert, 2002).

### *Crime analysis*

The term *crime analysis* refers to a general concept and to a discipline practiced in the police. Different authors have defined crime analysis in many ways, but all of their definitions share these elements:

- crime analysis utilizes systematic methods and information,
- supports the mission of the police agency, and
- provides information to a wide range of audiences.

The five major types of crime analysis are: intelligence analysis, criminal investigative analysis, tactical crime analysis, strategic crime analysis, and administrative crime analysis. They differ from one another in purpose, scope, data, analysis techniques, level of aggregation and confidentiality (Table 1). This influences the public access to data and results of particular analysis.

Table 1. Characteristics of different types of crime analysis

Type of Crime Analysis	Level of Aggregation	Level of Confidentiality
Administrative Crime Analysis	High ↓ ↓ ↓ ↓ Low	Low ↑ ↑ ↑ ↑ High
Strategic Crime Analysis		
Tactical Crime Analysis		
Criminal Investigative Analysis		
Intelligence Analysis		

Source: R. Boba, 2001, modified.

Intelligence analysis and criminal investigative analysis support the every-day, mostly confidential, work of the police. Tactical crime analysis is the study of recent criminal incidents and potential criminal activity through the examination of characteristics such as how, when, and where the activity has occurred to assist in pattern development, investigative lead and suspect identification, and case clearance. Strategic crime analysis is the study of crime problems and other police-related issues to determine long-term patterns of activity as well as to evaluate police responses and organizational procedures. Administrative crime analysis is the presentation of interesting findings of crime research and analysis based on legal, political, and practical concerns to inform audiences within police administration, city government/council, and citizens (S. Gottlieb et al., 1994; D. A. Osborne, S. C. Wernicke, 2003; R. Boba, 2005).

### *Crime mapping and spatial analysis*

The beginnings of crime mapping are different from the beginnings of crime analysis in that crime mapping began through the work of researchers (vs. police) in the 1800s and the early 1900s. The first substantive spatial analysis of crime in the United States was conducted in the 1920s and 1930s by urban sociologists in Chicago. This research focused on linking crime and delinquency to factors such as social disorganization and poverty. In the 1970s and 1980s, improvements in technology and academic developments encouraged the use of crime mapping in police agencies. However, the use of crime mapping did not increase dramatically until the 1990s. Currently, most large police agencies in the USA use some form of crime mapping for one or more of the following purposes: to provide officers and investigators with information on crime incident locations, to make resource allocation (staffing) decisions, to evaluate interventions, to inform citizens about crime in their neighborhoods, and to identify repeat calls for service and crime locations (R. Boba, 2005). Similar processes occurred in the most developed Western countries, like Canada, UK, Germany, Sweden. There are numerous scientific monographs, manuals and handbooks introducing researchers and police officers into crime mapping and spatial analysis with special attention to GIS (e.g. K. Harries, 1999; M. Velasco, R. Boba, 2000; Crime Mapping and Analysis Program, 2004; R. Boba, 2005; S. Chainey, J. H. Ratcliffe, 2005; J. H. Ratcliffe, 2007). Crime mapping and spatial analysis consists of the following areas (S. Chainey, J. H. Ratcliffe, 2005, p. 3):

- recording and mapping police activity, crime reduction projects, calls for service and crime incidents;
- supporting the briefing of operational police officers by identifying crimes that have recently occurred and predicting where crime may occur in the future;
- identifying crime hot spots for targeting, deploying and allocating suitable crime reduction responses;
- helping to effectively understand crime distribution, and to explore the mechanisms, dynamics and generators to criminal activity, through pattern analysis with other local data;
- monitoring the impact of crime reduction initiatives, and
- using maps as a medium to communicate to the public crime statistics for their area and the initiatives that are being implemented to tackle crime problems.

### *GIS in crime analysis*

Since the 1960s GIS has emerged as a discipline in its own right. From its origins in land use applications in Canada to an all-pervasive technology

used today in applications as diverse as in-car navigation, retail store site location, customer targeting, risk management, construction, weather forecasting, utilities management and military planning, GIS has become ubiquitous in modern life. The early use of GIS for mapping crime was often held back by organizational and management problems, issues with sharing information, technical problems and geocoding problems (S. Chainey, J. H. Ratcliffe, 2005, p. 2). These problems were shared with many of the other industries and disciplines trying to implement GIS, and it took several innovators to resolve these issues and show how they could be overcome. In reality many of these problems have not simply gone away, and several new ones have emerged (see J. E. Eck, 2002; L. F. III. Travis, K. D. Hughes, 2002).

A new field of knowledge and a new profession emerged at the crossing of geography, cartography & GIS, and criminology. This paper should be understood as a part of “Crime mapping and spatial analysis” – highly specialized field of applied geography and GIS (Figure 1).

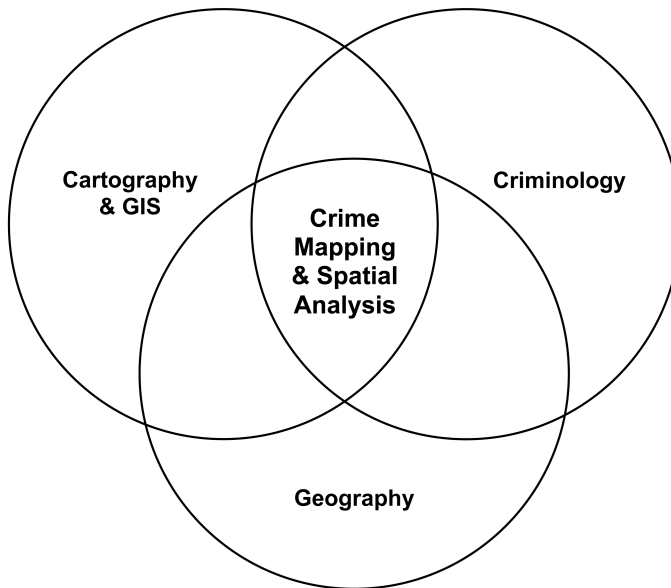


Figure 1. “Crime Mapping & Spatial Analysis” between geography, criminology, and cartography & GIS

Source: Own study.

Crime events, mapped as points, can be aggregated in every developed country in a GIS to geographical administrative or statistical boundaries such as census output areas, block groups, police beats or election polling districts. These counts of crimes by geographic area can be used to create



thematic maps that display the distribution of crime across the study area. Thematic mapping is a very popular technique, yet there are a number of geographical tyrannies associated with this technique that can lead to misinterpreting the geographical distribution of the underlying crime data (S. Chainey, J. H. Ratcliffe, 2005, p. 150 and ff.).

A second problem that affects all types of thematic mapping is the “modifiable areal unit problem – MAUP”. This is where the results of any geographic aggregation process, such as the count of crimes within a set of geographic boundaries, may be as much a function of the size, shape and orientation of the geographic areas as it is of the spatial distribution of the crime data. In essence, when thematically mapped, different boundaries may generate different visual representations of where the hot spots may exist (J. H. Ratcliffe, M. McCullagh, 1999).

A third point to consider is the class boundaries that are set for the thematic map. In general, classes should be organized so as to be as easy to understand as possible. In many cases it is useful to apply a custom range, where each range break is logical. The map should be the central message, and if the audience questions the legend that has been used, then this can distract attention away from the message that is being presented with the map.

## **Crime hot spot – definition and categories**

### *The definition of a hot spot*

One of the first geographical question that is asked when analyzing the crime data is “where are the hot spots”? A hot spot is a geographical area of higher crime rate than the average one. It is an area of crime concentration, relative to the distribution of crime across the whole region of interest (e.g. a city center, census ward or tract, municipal district, county or state). Hot spots are often clusters of crime that can exist at different scales of interest. Knowing where these hot spots of crime are located offers a first step when exploring why these areas may suffer from persistent problems. However, what may initially appear as a fairly straightforward process of mapping crime data and identifying its hot spots can actually be quite challenging and prone to interpretation error. GIS software products offer a variety of techniques for representing spatial patterns, and the functionality between GIS software products may differ, such that what may be possible in one application may be different in another. Many GIS are also supplied with application extensions that offer a range of additional functions for visualizing crime patterns (S. Chainey, J. H. Ratcliffe, 2005, p. 145–148).

One should distinguish between a hot spot and a hot point. The incidents occur at one particular place. Unlike the incidents in a clustered hot spot,

which form one or more clusters, the incidents in a hot point are centered on one address or place. An example is theft from vehicles at a mall, in that all the incidents happen within the parking lot of the mall, which is separate from other businesses and parking lots. By categorizing hot spots, crime analysts can identify different types of problems to analyze further using the techniques, including the context of a problem, the temporal nature of a hot spot, patterns of victimization, and other environmental characteristics that they may encounter through primary data collection (R. Boba, 2005, p. 228).

### *Identifying and categorizing hot spots*

As noted previously, a hot spot is an “area with high crime intensity”. Crime analysts use the methods described in this section to identify geographic patterns of hot spots and to categorize hot spots in order to understand and communicate the spatial relationships of the data. Analysts identify hot spots in several ways, ranging from simple to complex. Crime analysis practitioners and scholars engage in ongoing debate concerning the relative advantages and disadvantages of various methods of identifying hot spots.

Like many other analysis techniques discussed throughout in R. Boba (2005), each of the hot spot identification methods has its own strengths and weaknesses. Table 2. provides a summary of hot spot identification methods and the issues associated with their use.

Table 2. Summary of hot spot identification methods

	<b>Manual Method</b>	<b>Graduated Color Polygon Maps</b>	<b>Grid Maps</b>	<b>Ellipses Maps</b>	<b>Density Maps</b>
<b>Type of feature (point, line polygon)</b>	Graduated points	Polygons	Standardized polygons	Points	Points
<b>Software requirements</b>	Basic GIS	Basic GIS	Basic GIS	Advanced functions or specialized software	Advanced functions or specialized software
<b>Issues</b>	No standardized methodology, dependent on scale	Assumes equal distribution across area	Assumes equal distribution across area; problems with borders	Depends on user selections; erroneously used to predict future crime occurrences	Depends highly on user selections of search radius and cell size; problems with borders; comparison difficult
<b>How often used in Spatial Crime Analysis</b>	Very often	Often	Seldom but use of these methods is becoming increasingly common		

Source: R. Boba, 2005, p. 226.

### *Categories of spatial hot spots*

The important point to consider with all of the following categories is that they relate to the dispersal of crime events *within* the crime hot spot. In other words, it does not significantly matter how you determine a crime hot spot. The important feature is the distribution of points *within* the crime hot spot area (S. Chainey, J. H. Ratcliffe, 2005, p. 279–280). There are three categories of spatial hot spots: dispersed, clustered, hot point (Figure 2).

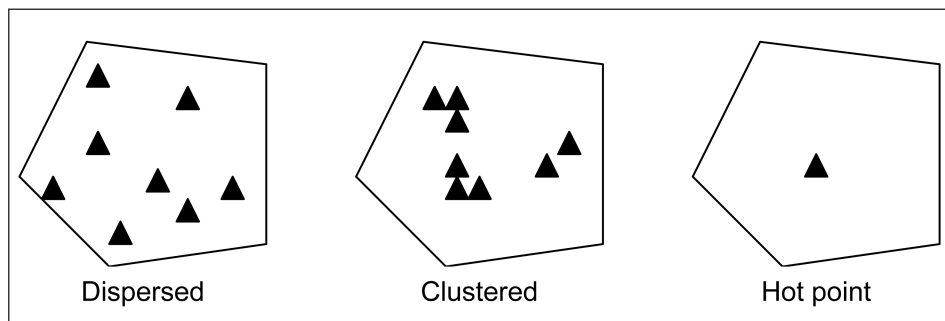


Figure 2. Three different types of spatial hot spots

Source: J. H. Ratcliffe, 2004, p. 11, modified.

“Dispersed” type occurs when crime events are distributed around the whole hot spot area. An example might be where the location of stolen vehicles indicates that cars are stolen from a variety of different places within a housing project, or across a number of car parks surrounding a large shopping mall. This type of spatial hot spot is characterized by a lack of clustering at any one significant location.

When there is clustering at a location, the hot spot is referred to as a clustered hot spot. This does not negate the possibility of crime events at other locations within the hot spot, but there is clear evidence of crime surrounding a particular feature. An example might be where a particular bar is a crime generator for late-night alcohol-fuelled assaults. Often these assaults will not occur actually at the bar (perhaps due to the presence of bouncers and security). These will cluster in the vicinity of the bar in the surrounding street, and there may also be some assaults in other parts of the hot spot.

A hot point is a crime hot spot that is caused by the repeat victimization of a single location. An example could be the generation of a crime hotspot due to repeat burglaries at a school, or a pattern of continued robberies at a corner store late at night. There may be an occasional crime event elsewhere in the hotspot, but the vast majority of crime events in a hot point hotspot will be at one central location. This type of crime hot spot is often identified

visually with kernel density software as a symmetrical shape, such as a circle.

### *Categories of temporal hot spots*

As well as spatial hot spot types, there are general temporal patterns to crime hot spots. There are three categories of temporal hot spots: diffused, focused, acute (Figure 3). A diffused temporal pattern occurs in a hot spot when there is no discernable pattern to the time that the crime events occur. With a focused temporal pattern, there is a time, where criminal activity is significantly more focused than at another. The acute temporal pattern differs from the focused one in that there is almost a negation of the possibility of criminal activity happening at other times outside the acute time periods (J. H. Ratcliffe 2004, p. 12).

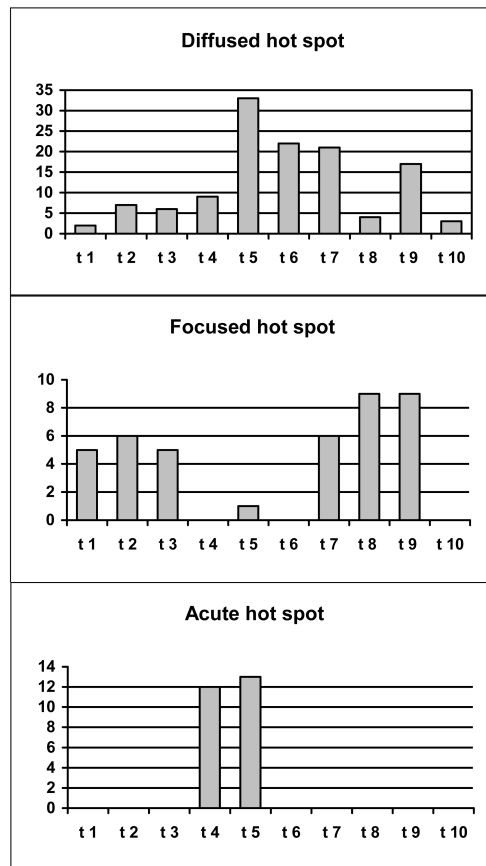


Figure 3. Three different types of temporal hot spots

Source: J. H. Ratcliffe, 2004, p. 11, modified.

## Research objectives

Based on the above presented review of crime geography, GIS applications and methods used in the spatial and temporal crime analysis, research objectives of this paper can be formulated. The general objective is to determine spatial and temporal hot spots of car crime in a big city, using a case study of Szczecin in 2006.

This paper falls into the category of crime analysis, but at the strategic level (cf. Table 1). It limits the potential direct application of the results in the police operations but not in the territorial organization or strategic planning of the policing in Szczecin. There are several related research questions in this paper, both of the cognitive, methodological, and application-oriented nature.

The main cognitive question is following:

1. What is the pattern of spatial distribution of car crimes in Szczecin and where are the hot spots situated?
2. What is the pattern of temporal distribution of car crimes in Szczecin and what kind of hot spots can be identified?

Methodological questions refer to recognition of the available data on car crime and the methods of their analysis with help of GIS tools:

1. What are the data on car crime in Szczecin? Are they available to the public, including the research purposes?
2. How can the available data on car crime be grouped to obtain information on car crime types useful in spatial and temporal analysis?
3. What GIS tools are useful in spatial and temporal car crime analysis and especially in the identification process of hot spots in case of Szczecin?

This paper is not of a directly application-oriented character, even though some of the results could be used in car crime prevention both the self-territorial authorities and also the Szczecin Police Department and its organizational units. Therefore, application-oriented questions can be formulated as follows:

1. Which boroughs as the basic units of the local self-government in Szczecin are most threatened by car crime?
2. Is the territorial organization of the Szczecin Police Department adjusted to the pattern of car crime distribution?

## Study area and data

### *Study area*

The study area is the Commune of the City of Szczecin. The city is situated in the north-west of Poland, where the Odra River meets the Baltic Sea (through the Bay of Szczecin). With approximately 410,000 inhabitants and

a total area of ca 300 sq km, the historic capital of West Pomerania belongs to the most important urban centers of Poland. More than 500,000 inhabitants live in the whole metropolitan area of Szczecin. The trans-border location, maritime and open character and receptiveness to external contacts, growing income disparities – all these factors create a favourable crime environment in Szczecin. Recently, the cities economy suffers from the decline of the traditional maritime sector and lack of new investments. The fact of a “not a good tradition” of settling the Regained Territories in the first post-war years, is also significant.

### *Data and territorial units of observation*

The territorial organization of the Commune of the City of Szczecin is made up by 4 urban districts as planning units and 37 boroughs as auxiliary units of the communal self-government<sup>1</sup> (Figure 4). The territorial organization of the Szczecin Police Department is different. There are 5 police stations, which are divided into 24 police sectors (Figure 5) and 95 police beats. The most of socio-demographic data is available for police sectors, what makes a deeper analysis possible. Generally, the territorial organizations of the Police and the Commune are in Szczecin not compatible. This is an important barrier to effective crime analysis and better crime prevention.

The crime data in Szczecin are collected and made available according to four patterns of the territorial organization of the Szczecin Police Department and the Commune of the City of Szczecin. For each system there exist digital backgrounds:

1. 37 boroughs in four urban districts.
2. 5 police stations.
3. 24 police sectors.
4. 95 police beats.

The car crime statistics is connected with the above mentioned divisions but not consequently. At different levels of territorial organization crime data are collected for different types of crimes.

The following data on the car crimes committed in Szczecin in the year 2006 made available by the Szczecin Police Department and Department of Informatics of City Hall of Szczecin, have been used in this paper:

- tabular data of crimes classified by the Szczecin Police Department into 13 crime types (among them car crimes) according to 37 boroughs,

---

<sup>1</sup> The name borough is used in this paper as translation for the Polish term “osiedle” - settlement. In fact “osiedle” is not an independent commune, as in the British municipal system the borough is, but an auxiliary territorial unit of the big urban self-governmental commune.



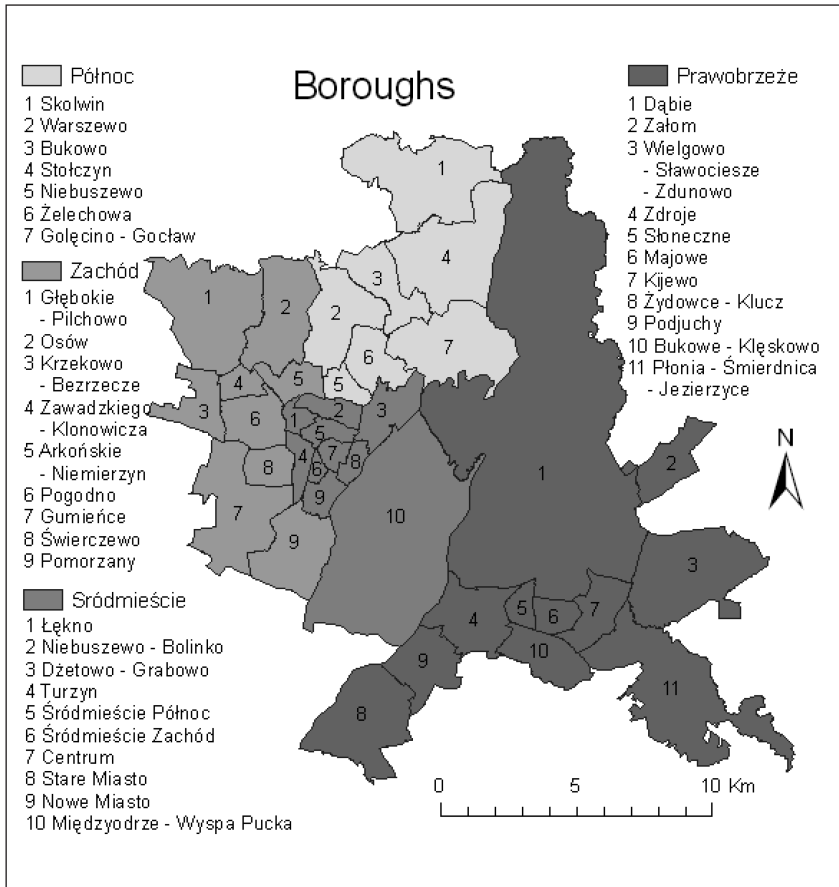


Figure 4. The territorial organization of the Commune of the City of Szczecin

Source: Own study based on digital maps made by the Department of Informatics, City Hall of Szczecin.

- tabular data of car crimes with a division into 12 months (Table 7) and three day times (Table 8) according to 5 police stations and 24 police sectors,
- point feature layers of the car crimes according to point location.

## Methods

### *Identifying procedures of spatial hot spots according to boroughs*

The available data on the total number of the three car crime types was classified by the Szczecin Police Department into original one crime group, called "car crime". From the legal point of view they are crimes against safety of vehicle (car) including equipment and other objects in the car.

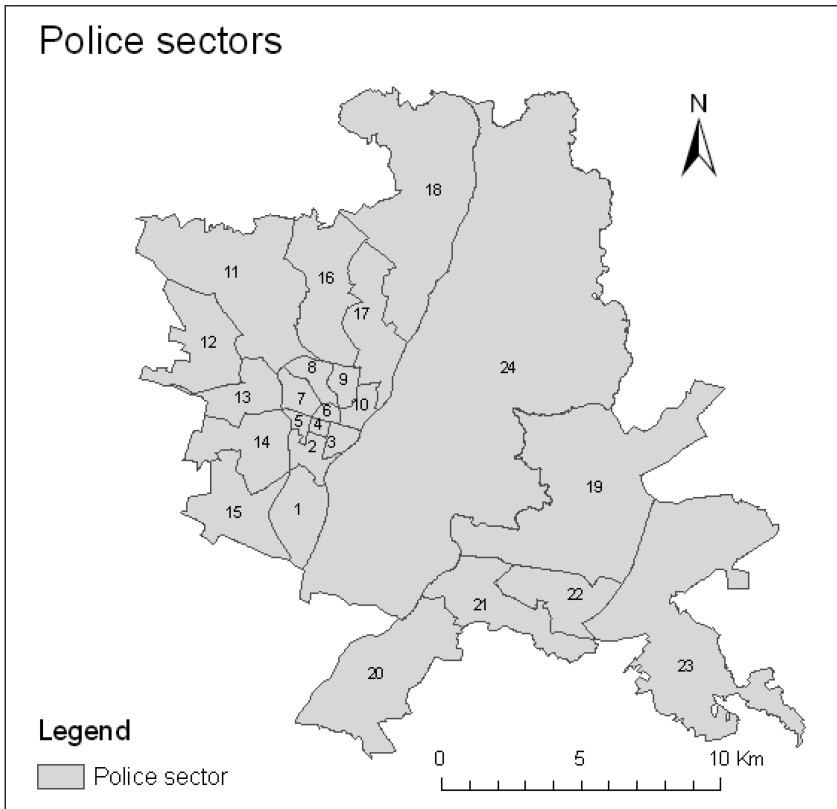


Figure 5. The areas and numbers of 24 sectors of the Szczecin Police Department

Source: Own study based on digital maps made by the Department of Informatics, City Hall of Szczecin.

Most of these crime types are alike in the subject-matter (when we take into consideration the subject of the crime) and have similar effect seen from a victim's point of view (Table 3).

Table 3. Rules of classifying crimes types into car crime group in spatial analysis by boroughs

No	Crime types	Crime group
1.	Theft of vehicle (car)	Car Crime
2.	Theft from the vehicle (car)	
3.	Theft from the vehicle with burglary	

Source: Own study based on data of the Szczecin Police Department.

The scheme of the process of identifying of spatial hot spots applied in this paper has been presented in Figure 6.

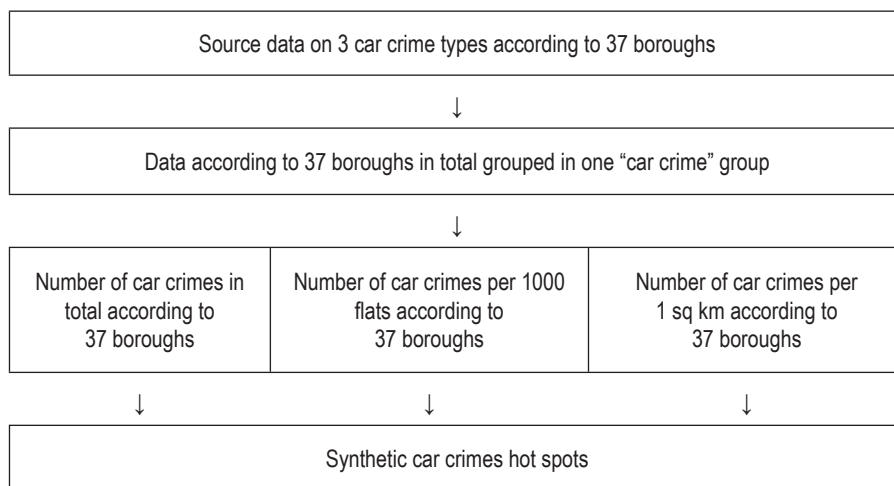


Figure 6. The identifying procedure of spatial crime hot spots according to boroughs

Source: Own study.

Since boroughs as auxiliary units of a commune do not serve police, but self-governmental purposes, the analysis was carried out from the dwellers' point of view. Every borough has its own representation embodied by the Borough Council, which might be interested in such information and is a target group of the following research. The level of threat results from a total number of committed car crimes and their categories recognized in a given borough, their intensity relative to the area and threatened cars.

The analytical coefficients of car crime intensity per 1 sq km reflect the probability of a crime encounter as a victim, participant, witness or a property temporarily or even momentarily present in a given district. It refers to passer-bys, customers of shops, those that park their cars temporarily, etc. A coefficient of a number of car crimes relative to a number of dwellers or a number of flats/houses reflects the probability of a crime encounter for a person, household, object permanently or for a long-term present in a district. It refers to permanent dwellers and their movable property, like cars. Due to the sole availability of data on the number of dwellers, flats and the area of boroughs, it has been assumed that the number of flats corresponds with the number of households, and that one is, in turn, proportional to a number of cars in a borough. These are simplifying assumptions, but the only possible ones because of the lack of data. The analytical indicators of threat posed to boroughs by car crimes

are following: total number of the car crimes, number of the car crimes per 1000 flats, number of the car crimes per 1 sq km.

The general aim of this paper was to identify hot spots for car crimes in total. The criterion for determining a hot spot was exceeding by an analytical coefficient a double average value for boroughs in total. The identification criterion was at least a two-time rating of the given borough as a hot spot based on the analytical coefficient. Based on that, boroughs mostly endangered by car crimes were mapped out.

### *Identifying procedures of temporal hot spots according to police sectors*

Temporal analysis is the analysis of data in relation to units of time. The strategic crime analysis examines larger numbers of cases over short time periods as well as over longer periods, such as weeks, months, seasons, and years. Temporal analysis is important for understanding problems because it establishes baselines of activity and can reveal new trends, such as increases and decreases in problem activity (R. Boba 2005, 189).

The data with time allocation obtained from the Szczecin Police Department concern five police stations and twenty four police sectors, not thirty seven boroughs, as it was the case of the spatial analysis and identification of the spatial hot spots. In order to carry out a temporal analysis and determine temporal hot spots, the available source data on car crimes according to the four car crime types were classified in this paper into one car crime group (Table 4). Additionally, the "willful short-term theft of vehicle" were registered as well.

Table 4. Rules of classifying crimes types into crime groups in temporal analysis by months and day time and spatial analysis by police sectors

No	Crime types	Crime group
1.	Theft of vehicle (car)	<b>Car Crime</b>
2.	Theft from the vehicle (car)	
3.	Theft from the vehicle with burglary	
4.	Willful short-term theft of vehicle	

Source: Own study based on data of the Szczecin Police Department.

The scheme of the process of identifying of temporal hot spots applied in this paper has been presented in Figure 7.

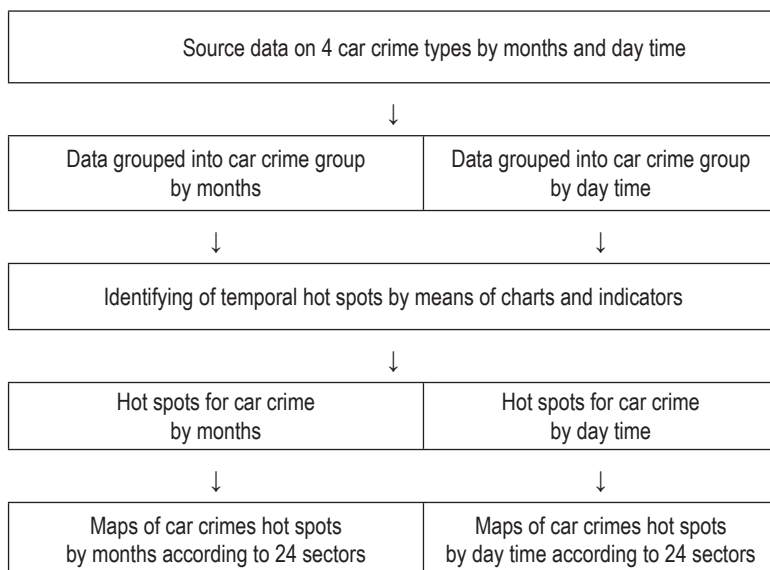


Figure 7. The identifying procedure of temporal crime hot spots and their spatial pattern

Source: Own study.

Analytical questions to answer in the temporal analysis were: How do the most important car crime in Szczecin vary over one year and over the day? Which months and day time constitute temporal hot spots?

### *Continuous surface smoothing method in identifying hot spots*

An increasingly popular method for visualizing the distribution of crime and identifying hot spots is one that creates a smooth continuous surface to represent the density or volume of crimes distributed across the study area. These types of methods are commonly referred to as interpolation techniques and include inverse distance weighting and kriging. These types of techniques use an intensity or population value taken from sample locations to estimate values for all locations between sample sites.

With crime data one does not necessarily have sample sites where there is an intensity value, and neither is one trying to estimate the number of crimes that may occurred between these crime point locations. One should therefore avoid methods that aim to create estimated intensity values in the gaps between these points. Instead, surfaces that one wish to create to represent the distribution of crime should tell one something about the density or clustering of crime points at all locations in ones study area (S. Chainey, J. H. Ratcliffe 2005, 155).

This method makes use of digital data in the form of point feature layers. The results on Szczecin car crime density mapping and hot spots identifying were obtained through an analysis carried out according to the procedure presented in Figure 8.

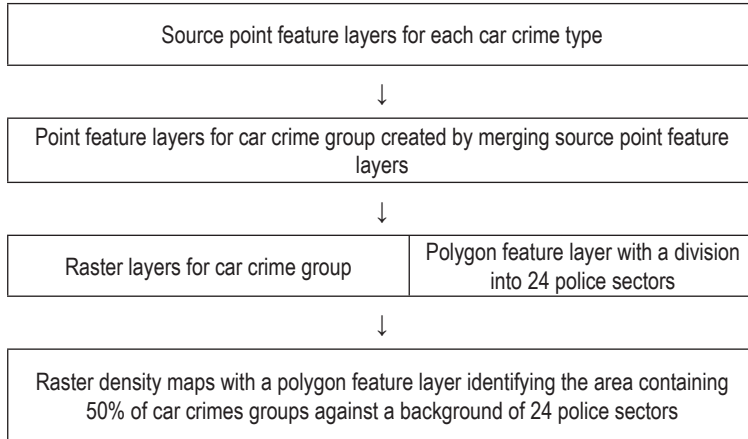


Figure 8. The identifying procedure of spatial crime hot spots using density mapping  
Source: Own study.

The obtained results make crime visualization possible. The intensity of the color indicates an increase in the probability of a specific crime type occurrence in a given place. The police sectors, which are in the background map, may be therefore evaluated from that point of view. Furthermore, black line on the map indicate areas where 50% of crimes of the car crime were committed. Those areas may be treated as multi-areas hot spots. Their range allows for an estimation of concentration or dispersion of a specific crime type. That, in turn, makes a synthetic comparison of various spatial patterns of crime types possible.

## Results – car crimes hot spots in Szczecin

### *Car crimes among common crimes*

The part of this paper presents the results of the spatial analysis of car crime events in Szczecin in 2006 according to 37 boroughs. As evidenced by various research (e.g. B. J. Doran, B. G. Lees, 2005; M. Dolata, J. Kotus, 2006; Raport o stanie miasta Szczecina, 2006), these acts, even though not as dangerous as murders or rapes, are the main reason for the social sense of insecurity caused by delinquency in cities. As can be seen on Table 5, 2741 car crimes account for 34% of 8068 committed common crimes. The half of car crimes are thefts from the vehicle with burglary.



Table 5. Number of common and car crimes in Szczecin (2006)

No.	Types and original groups of crimes	Number of crimes
<b>Common crimes in total</b>		<b>8068</b>
<b>Car crimes in total</b>		<b>2741</b>
1.	Theft of vehicle (car)	647
2.	Theft from the vehicle (car)	695
3.	Theft from the vehicle with burglary	1399

Source: Own calculations based on data of the Szczecin Police Department.

### *Spatial car crimes hot spots according to boroughs*

Car crimes comprise all the crimes related to a car burglary and theft (including the equipment and other objects in the car). These offences constitute the second numerous and significant group of common crimes in Szczecin. They are concentrated on the left bank of Odra river, in the district Śródmieście and the neighbouring boroughs of the district Zachód (Figure 5). Taking into consideration the number of committed car crimes, four boroughs of the district Śródmieście are considered as car crimes hot spots. These are: Centrum (264 crimes), Drzetowo-Grabowo (206 crimes), Turzyn (183 crimes) and Śródmieście Północ (156 crimes).

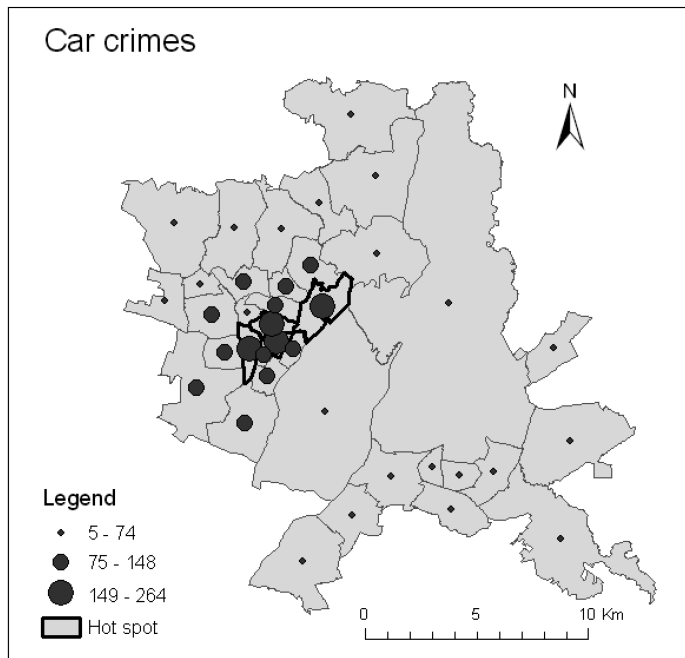


Figure 5. Number of car crimes and their hot spots according to boroughs in Szczecin (2006)

Source: Own study.

The analytical coefficient of intensity of crimes related to cars per 1000 flats (which approximately equals the number of households) indicates a significant diversity of that phenomenon and a slightly different situation than that of total (Figure 6). Apart from Śródmieście, the outskirts (peripheral boroughs) both in the western part of the city and on the right river bank are endangered. Consequently, two hot spots have been determined, i.e. Stare Miasto in the district Śródmieście (63 crimes per 1000 flats) and Głębokie-Pilchowo (42 crimes per 1000 flats) in the district Zachód.

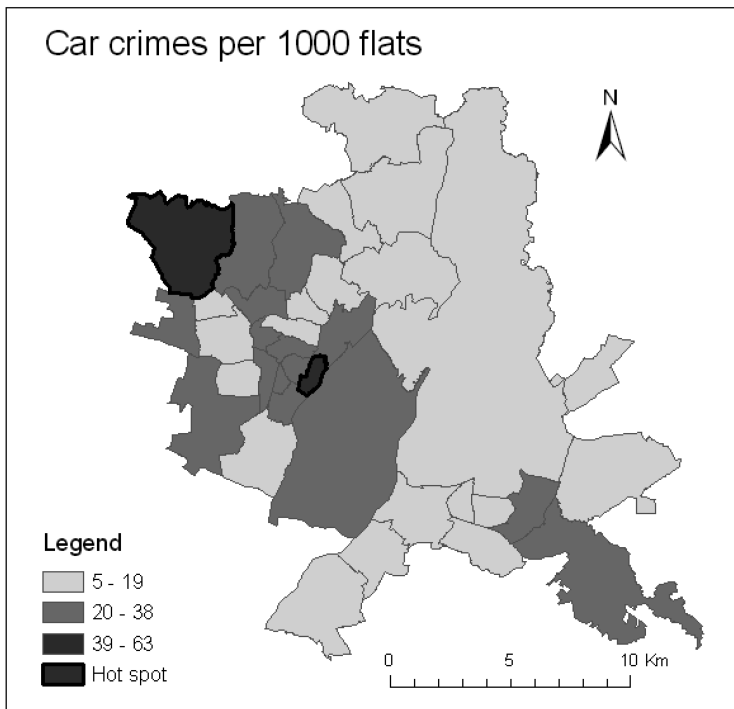


Figure 6. Car crimes per 1000 flats and their hot spots according to boroughs in Szczecin (2006)

Source: Own study.

The analytical coefficient of the intensity of car crimes per an area unit, indicates a high concentration in the district Śródmieście; lower values are

only indicated in the boroughs Łękno and Międzyodrze-Wyspa Pucka (Figure 7). Five boroughs, which constitute the densely populated downtown, have been outlined as hot spots: Centrum (256 crimes per 1 sq km), Śródmieście Zachód (235 crimes per 1 sq km), Stare Miasto (130 crimes per 1 sq km), Turzyn (116 crimes per 1 sq km) and Śródmieście Północ (110 crimes per 1 sq km).

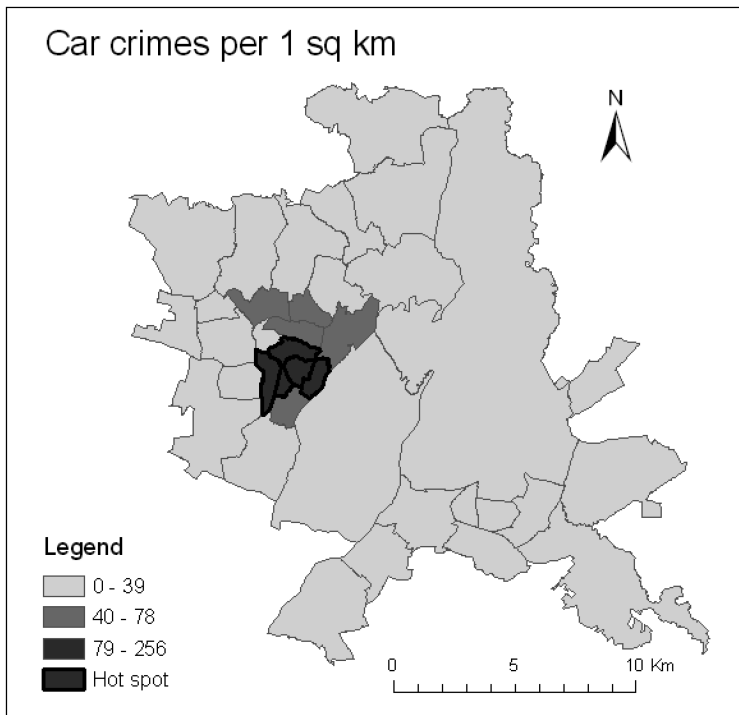


Figure 7. Car crimes per 1 sq km and their hot spots according to boroughs in Szczecin (2006)

Source: Own study.

As a result of the common analysis of the three aforementioned analytical coefficients four boroughs of the district Śródmieście have been determined as a synthetic car crimes hot spots in 2006. The hot spot boroughs are: Centrum, Stare Miasto, Śródmieście Północ and Turzyn (Figure 8).

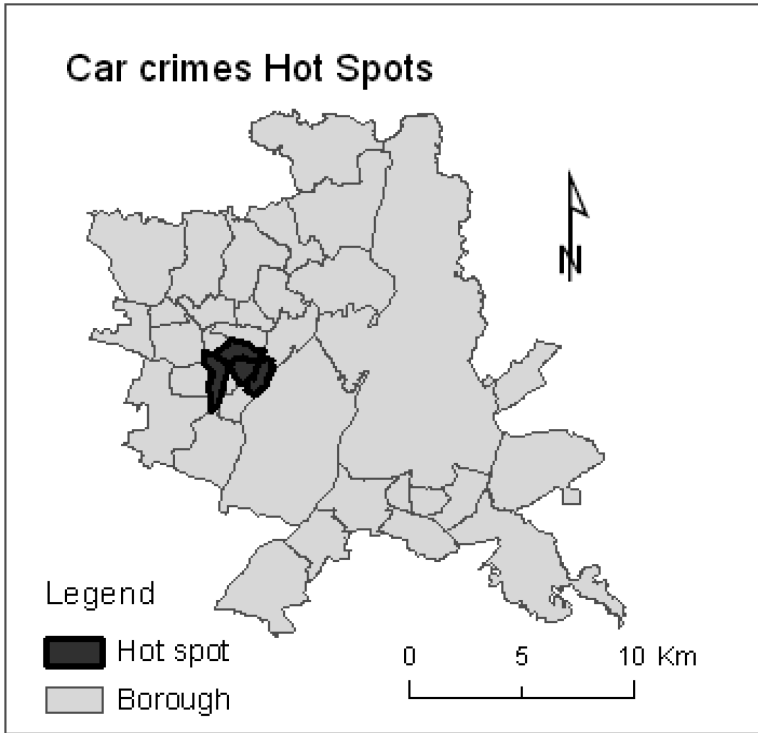


Figure 8. Synthetic car crimes hot spots according to boroughs in Szczecin (2006)

Source: Own study.

### *Temporal car crimes hot spots by months*

The temporal analysis of crime in Szczecin in 2006 was started with the examination of variation of crimes by months. A list of raw data and applied indicators is presented in Table 6. Car crimes are characterized by an average time variation (coefficients of variation equal adequately 13.4). Table 6 contains also boundary values needed to calculate hot spots by using a criterion of an average plus half of the standard deviation.

Table 6. Monthly number of car crimes in Szczecin (2006)

Month	Car Crimes
January	303
February	245
March	<b>312</b>
April	270
May	292
June	218
July	220
August	242
September	226
October	290
November	260
December	214
Total year	3092
<i>Minimum</i>	214
<b>Maximum</b>	<b>312</b>
Mean	263.0
Standard deviation	35.3
Coefficient of variation	13.4
Temporal variation	medium
Boundary value of hot spot	<b>281</b>

Source: Own calculations based on data of the Szczecin Police Department.

Coefficients characterizing spatial distribution according to 24 sectors have been calculated for all the months. Spatial hot spots have been determined based on a doubled average value. Every month (except for December) one or two spatial hot spots have been determined in that way. Table 7 contains a list of the specific data, coefficients of variation and boundary values of hot spots in car crimes.

Table 7. Monthly number of car crimes by police stations and sectors in Szczecin (2006) and their statistical characteristics

Police station	Police sector	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Total
Srodmiescie	1	12	8	8	14	10	17	13	13	19	21	15	10	161
Srodmiescie	2	17	12	7	8	15	10	9	12	13	10	12	9	136
Srodmiescie	3	17	23	23	11	14	15	27	24	21	29	20	17	244
Srodmiescie	4	10	9	18	14	17	12	7	16	4	6	6	8	131
Srodmiescie	5	14	19	11	3	6	7	4	6	1	8	6	1	91
Niebuszewo	6	14	9	24	17	21	5	9	12	9	14	9	16	165
Niebuszewo	7	40	20	26	17	17	14	20	8	3	9	20	3	204
Niebuszewo	8	10	15	19	10	12	9	15	14	6	12	15	8	153
Niebuszewo	9	21	10	19	23	9	11	11	16	13	12	10	11	175
Niebuszewo	10	29	16	29	19	29	12	16	16	10	19	16	12	233
Pogodno	11	10	7	10	15	8	7	8	12	14	14	16	10	142
Pogodno	12	9	5	13	11	5	7	7	6	9	10	10	8	112
Pogodno	13	19	13	8	19	14	10	7	13	11	18	7	14	166
Pogodno	14	15	8	15	13	14	14	12	12	14	19	15	10	175
Pogodno	15	5	8	3	9	7	6	6	6	5	13	13	4	100
Nad Odra	16	17	23	35	20	22	18	8	16	18	33	27	13	266
Nad Odra	17	17	17	18	18	22	12	11	4	11	9	10	15	181
Nad Odra	18	10	3	3	7	9	6	1	4	6	3	4	4	78
Dabie	19	5	6	3	4	6	2	4	6	4	2	1	4	66
Dabie	20	2	4	3	4	8	3	3	4	9	7	9	6	82
Dabie	21	2	3	10	11	10	7	8	12	8	8	7	13	119
Dabie	22	5	5	4	0	12	12	9	13	10	11	10	17	130
Dabie	23	2	2	2	2	2	2	1	3	1	4	1	1	45
Dabie	24	1	0	1	1	3	1	3	0	0	2	1	0	37
Total		303	245	312	270	292	218	220	242	226	290	260	214	3092
Minimum		1	0	1	0	2	1	1	0	0	1	1	0	37
Maximum		40	23	35	23	29	18	27	24	21	33	27	17	266
Mean		12.6	10.2	13.0	11.3	12.2	9.1	9.2	10.1	9.4	12.1	10.8	8.9	141.3
Standard deviation		9.1	6.7	9.6	6.6	6.7	4.8	5.9	5.7	5.6	8.0	6.5	5.2	60.1
Coefficient of variation		72.1	65.5	73.7	58.7	54.9	53.1	64.8	57.0	59.1	66.3	59.7	58.1	42.6
Spatial variation		high	med-ium	high	low	low	low	med-ium	low	low	med-ium	low	low	low
Boundary value of hot spot		25	20	26	23	24	18	18	20	19	24	22	18	258

Source: Own calculations based on data of the Szczecin Police Department.



Out of the total number of 3092 car crimes, most were committed in March (312), and fewest in December (214). More than 263 car crimes were committed on average per month. The identified time hot spots for that type of crime are: January, March, May and October. A longer period of lowered car crime is observed in summer, from June until September. Moreover, a decline in car thefts is evident at the end of the year (Figure 9).

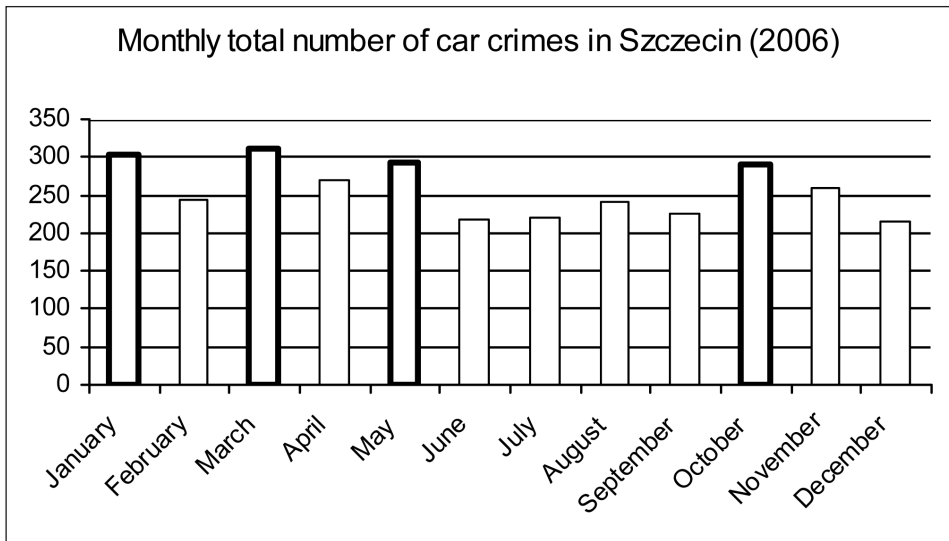


Figure 9. Monthly total number of car crimes in Szczecin (2006)

Source: Own study.

Car crimes have been also spatially analyzed according to police sectors and by the months. Spatial hot spots have been established for every month by using the method of a doubled average. Patterns of distribution of car crimes according to police sectors and adequate hot spots are presented in maps.

#### *Temporal car crimes hot spots by day time*

Another way of examining temporal crime variation, applied in this paper, is time analysis of the committed car crime with reference to the day time. The statistics of crime kept by the Szczecin Police Department registers crimes according to 8-hour periods. The first one is from 06.01 till 14.00, the second one from 14.01 till 22.00 and the third one from 22.01 till 06.00. In case of some crimes it is not possible to record the time of occurrence (Table 8).

Table 8. Car crimes by day time according to police sectors in Szczecin (2006)

Sector	Day time	No of crimes	Sector	Day time	No of crimes	Sector	Day time	No of crimes
1	6 am - 2 pm	13	9	6 am - 2 pm	25	17	6 am - 2 pm	2
	2 pm - 10 pm	15		2 pm - 10 pm	45		2 pm - 10 pm	10
	10 pm - 6 am	118		10 pm - 6 am	90		10 pm - 6 am	17
	unknown	14		unknown	6		unknown	18
2	6 am - 2 pm	24	10	6 am - 2 pm	29	18	6 am - 2 pm	1
	2 pm - 10 pm	41		2 pm - 10 pm	101		2 pm - 10 pm	1
	10 pm - 6 am	59		10 pm - 6 am	91		10 pm - 6 am	24
	unknown	10		unknown	2		unknown	36
3	6 am - 2 pm	55	11	6 am - 2 pm	9	19	6 am - 2 pm	3
	2 pm - 10 pm	83		2 pm - 10 pm	30		2 pm - 10 pm	2
	10 pm - 6 am	96		10 pm - 6 am	87		10 pm - 6 am	35
	unknown	7		unknown	5		unknown	58
4	6 am - 2 pm	39	12	6 am - 2 pm	10	20	6 am - 2 pm	5
	2 pm - 10 pm	41		2 pm - 10 pm	9		2 pm - 10 pm	11
	10 pm - 6 am	40		10 pm - 6 am	75		10 pm - 6 am	34
	unknown	7		unknown	6		unknown	58
5	6 am - 2 pm	26	13	6 am - 2 pm	13	21	6 am - 2 pm	6
	2 pm - 10 pm	26		2 pm - 10 pm	14		2 pm - 10 pm	1
	10 pm - 6 am	28		10 pm - 6 am	119		10 pm - 6 am	7
	unknown	6		unknown	7		unknown	8
6	6 am - 2 pm	45	14	6 am - 2 pm	10	22	6 am - 2 pm	4
	2 pm - 10 pm	63		2 pm - 10 pm	20		2 pm - 10 pm	2
	10 pm - 6 am	50		10 pm - 6 am	179		10 pm - 6 am	2
	unknown	1		unknown	41		unknown	5
7	6 am - 2 pm	48	15	6 am - 2 pm	27	23	6 am - 2 pm	6
	2 pm - 10 pm	71		2 pm - 10 pm	12		2 pm - 10 pm	1
	10 pm - 6 am	70		10 pm - 6 am	108		10 pm - 6 am	7
	unknown	8		unknown	17		unknown	8
8	6 am - 2 pm	14	16	6 am - 2 pm	5	24	6 am - 2 pm	4
	2 pm - 10 pm	36		2 pm - 10 pm	10		2 pm - 10 pm	2
	10 pm - 6 am	93		10 pm - 6 am	40		10 pm - 6 am	2
	unknown	2		unknown	5		unknown	5

Source: Own calculations based on data of Szczecin Police Department.

On account of a small number of day time periods for which car crimes are recorded/registered<sup>2</sup>, another method of hot spots identification has

<sup>2</sup> Most probably police reports contain more detailed data on the certain or estimated time of crime occurrence, which means that there is a possibility for a more detailed temporal analysis.

been applied. It has been made based on the coefficient, which is a quotient of a share in a number of crimes committed in the day time of a maximum share and a number of crimes committed in the day time of a minimum share (Table 9).

Table 9. The criteria of spatial hot spots identification according to police sectors for particular day time

Day time	Car crimes	Boundary value of hot spot	Number of hot spots
6 am - 2 pm	423	35	4
2 pm - 10 pm	647	54	4
10 pm - 6 am	1471	123	1
unknown	340	28	4
<b>Total</b>	<b>2881</b>		

Source: Own calculations based on data of Szczecin Police Department.

Table 10 presents the data on crime in Szczecin in 2006 in time aspect during 24 hours, according to four groups and in total together with their characteristic coefficients. Car crimes of an unknown time of occurrence cause a characteristic significant variation among groups. As a result, crimes of an unknown time of occurrence constitute a little bit more than 1/5 of all the crimes.

Table 10. Description of car crime by day time in Szczecin (2006)

Day time	Car Crimes
6 am - 2 pm	381
2 pm - 10 pm	547
10 pm - 6 am	1117
unknown	239
<b>Total</b>	<b>3092</b>
Share of unknown day time in total	7.7
Share of max in total	36.1
Share of min in total	12.3
Share of max / share of min	2.9
<b>Temporal variation</b>	high

Source: Own calculations based on data of Szczecin Police Department.

Car crimes are characterized by the big diurnal variation. In the period between 22.01 do 06.00 o'clock a.m., i.e. at night, three times more car crimes

are committed than in the period between 06.01 a.m. and 2 o'clock p.m. (Figure 10).

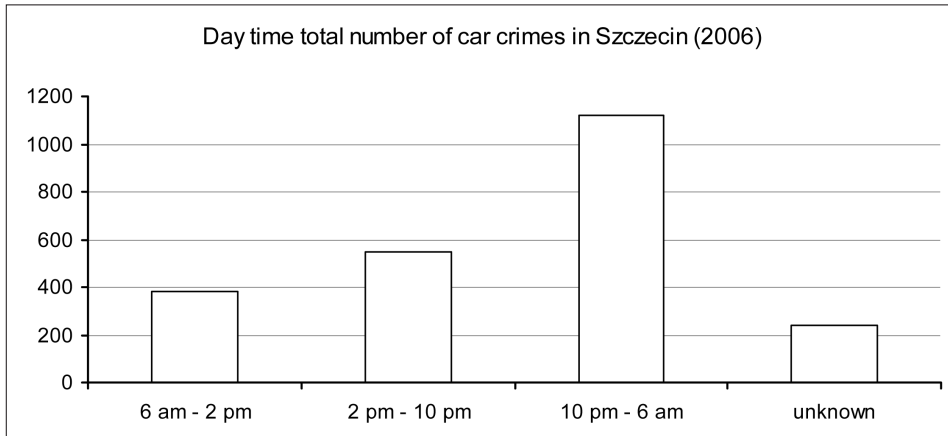


Figure 10. Day time total number of car crimes in Szczecin (2006)

Source: Own calculations based on data of Szczecin Police Department.

Temporal variation of car crime in total is moderate, which results from the above mentioned phenomena. A number of committed crimes increases during the day. Between 6.01 till 14.00 (2 o'clock) more than 1600 of crimes are committed, in the second part of the day almost 2300, while at night as many as 3500. A number of crimes with an unknown time of occurrence is equal to about 2000. However, it can be deduced that car crime is dominated by the crimes committed at night. It means that in Szczecin night is undoubtedly most car crime-endangered time in a day (Figure 10).

Car crimes have been also spatially analyzed according to police sectors and by the day time. Spatial hot spots have been established for an every part of a day by using the method of a doubled average. Patterns of distribution of car crimes according to police sectors and adequate hot spots are presented in maps.

### *Spatial analysis of car crimes hot spots by months*

One spatial hot spot for car crimes in total, according to temporal analysis by months, has been identified – sector 16 in the police station Nad Odrą. Out of 24 sectors two sectors have been most often (five times) identified as spatial hot spots: 3 of them belong to the police station Śródmieście and 16 to the station Nad Odrą. Sector 3 covers the area of the commercial and business centre of Szczecin, which stretches between Trasa Zamkowa Street

and Niepodległości Street as well as 3-go Maja Street and the Odra River. Sector 16 covers the area of the boroughs Niebuszewo and Warszewo. Sectors 7 and 10, which belong to the police station Niebuszewo, constituted spatial hot spots for three months. It is a downtown area situated to the north of Trasa Zamkowa Street as well as the area on both sides of Wojska Polskiego Avenue and Mickiewicza Street.

Months, which have been considered as temporal hot spots (January, March, May and October), are characterized by a diversified spatial variation for car crimes shown in Figures 11–14.

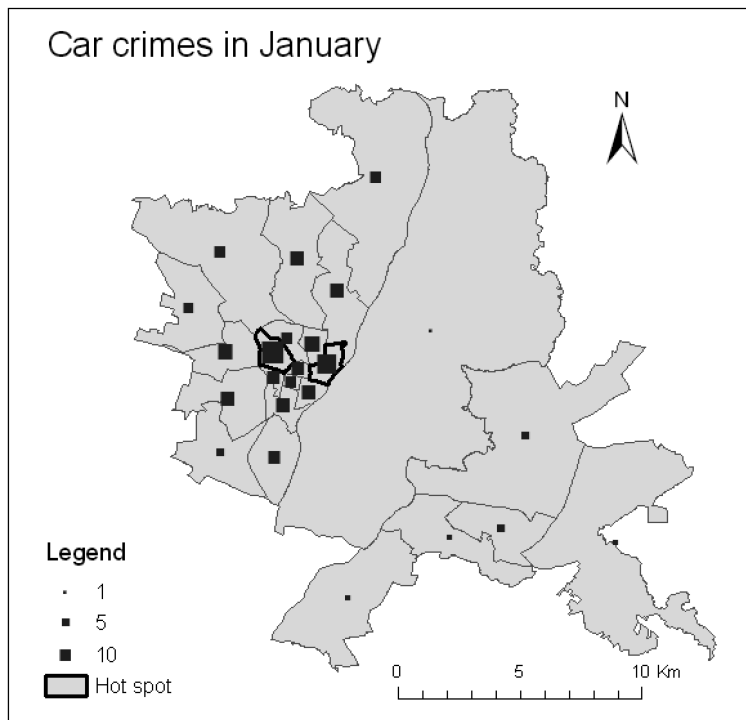


Figure 11. Car crimes in January according to police sectors in Szczecin (2006)

Source: Own calculations based on data of Szczecin Police Department.

Spatial distribution of car crimes in January is characterized by a significant variation. Out of 303 crimes, majority is concentrated in the sectors supervised by police stations Śródmieście and Niebuszewo. Sectors 7 and 11, which belong to the police station Niebuszewo, have been identified as spatial hot spots in January. More than 1/5 of all the crimes committed in January occurred there (Figure 11).

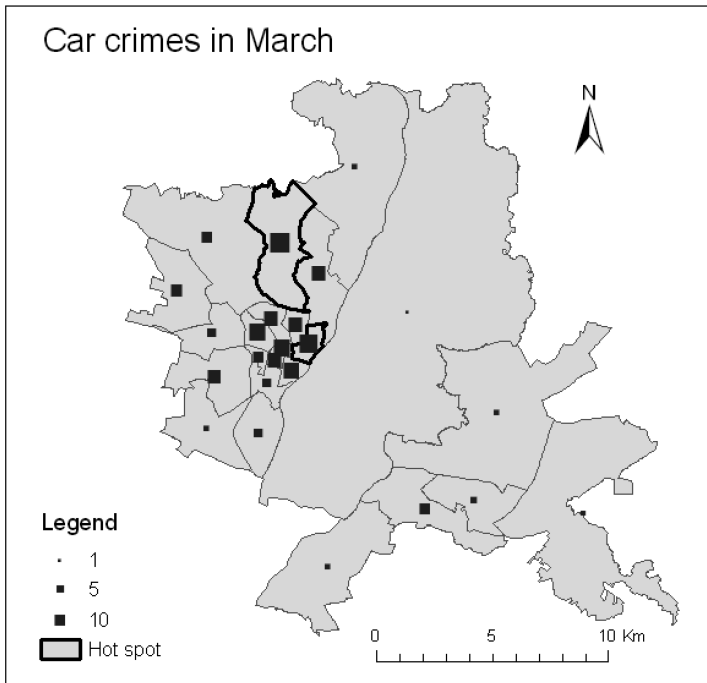


Figure 12. Car crimes in March according to police sectors in Szczecin (2006)

Source: Own calculations based on data of Szczecin Police Department.

Most of the car crimes were committed in March – 312. Their distribution is also very diversified. Sector 10 from the police station Niebuszewo and sector 16 from the police station Nad Odrą have been again identified as spatial hot spots. Both sectors, similarly as in January, are the centre for about 1/5 of all the crimes committed in March (Figure 12).

May is another month of intensified car crime (altogether 292 crimes). However, it is characterized by a lower spatial diversification/variation than other months. It can be observed that car crimes are widespread in the housing areas around Śródmieście. So clearly visible in the previous months concentration in the sectors supervised by police stations in Śródmieście and Niebuszewo, is slightly lowered. Applying the assumed criterion, only hot spot has been identified – sector 10 in the area supervised by the police station in Niebuszewo. The car crimes committed there constitute barely 10% of that type of crimes committed in May (Figure 13).

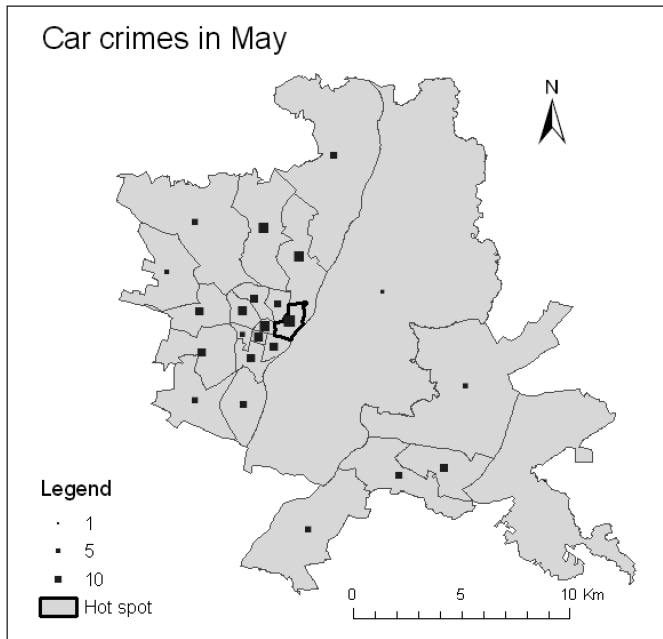


Figure 13. Car crimes in May according to police sectors in Szczecin (2006)

Source: Own calculations based on data of Szczecin Police Department.

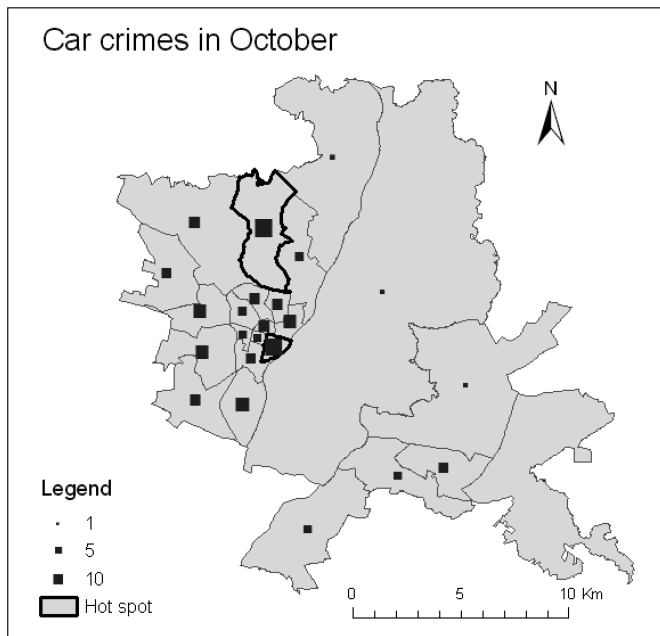


Figure 14. Car crimes in October according to police sectors in Szczecin (2006)

Source: Own calculations based on data of Szczecin Police Department.



The pattern of distribution of car crimes in October, when 290 crimes of that type were committed, is characterized by moderate variation. Two (2) hot spots have been identified – sector 3 by the police station Śródmieście and sector 16 by the police station Nad Odrą/By the Odra River. More than 1/5 of all the crimes committed in October happened in those sectors (Figure 14.).

### *Spatial analysis of car crimes hot spots by day time*

Car crimes have been spatially analyzed according to police sectors and by the day time as well. Patterns of distribution of car crimes according to police sectors and adequate hot spots are presented in maps (Figure 15–18).

Car crimes committed in the period between 6.01 until 14.00 are relatively rare (about 15% of the total number). They happen mostly in the city centre and the neighbouring residential boroughs. Neighbouring sectors 3 and 4 by the police station Śródmieście and sectors 6 and 7 by the police station Niebuszewo have been identified as hot spots (Figure 15). Together they constitute 44% of car crimes committed at that time of the day in Szczecin.

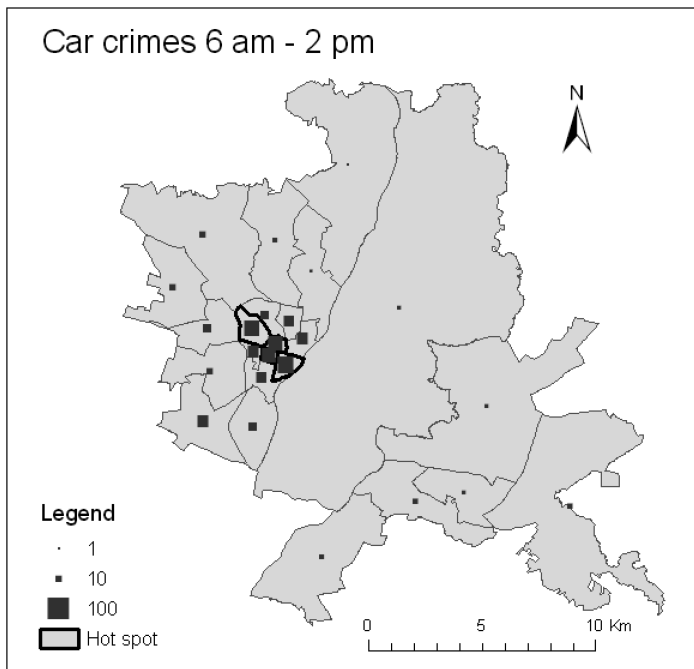


Figure 15. Car crimes between 6 am and 2 pm according to police sectors in Szczecin (2006)

Source: Own calculations based on data of Szczecin Police Department.

Between 14.01 and 22.00 (10 o'clock p.m.) the number of car crimes increases. At that time 22% of all the car crimes are committed in Szczecin. The pattern of their distribution does not change considerably, there is still town centre domination and the neighbouring sector 3 by the police station Śródmieście and Niebuszewo sector's 6, 7 and 10 have been identified as hot spots (Figure 16). Almost 50% of car crimes committed at that time of the day in Szczecin have been recorded in those sectors.

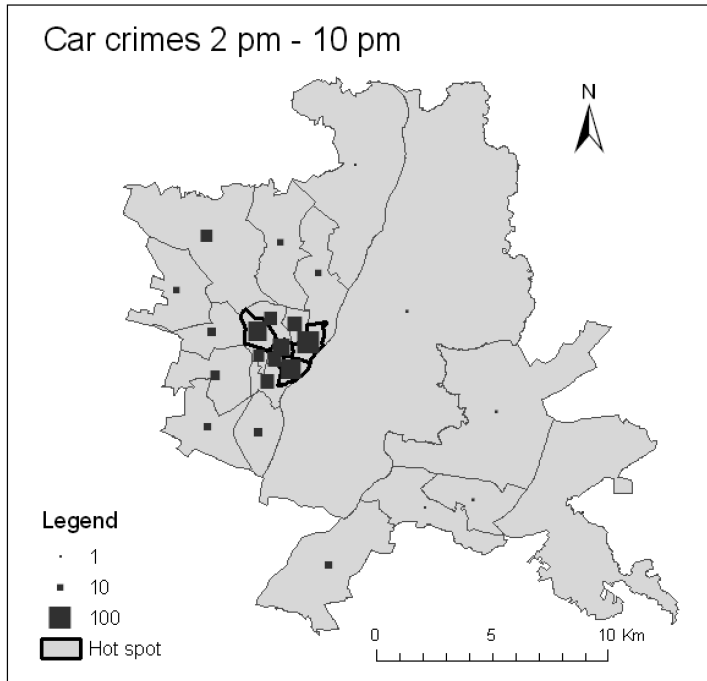


Figure 16. Car crimes between 6 am and 2 pm according to police sectors in Szczecin (2006)

Source: Own calculations based on data of Szczecin Police Department.

The apex of car crimes in Szczecin is associated with the night time. At that time, more than half of the forbidden acts happen. The pattern their spatial distribution is generally different from that one observed in the morning, in the afternoon or in the evening. While it is evident that still many of the cars are stolen downtown, it is also true most of those car crimes occur in big residential boroughs situated to the south and to the west of downtown. Only one spot has been identified – sector 14 by the police station of Pogodno (Figure 17). This is where 12% of crimes of that type are committed at night in Szczecin. Shall we add the neighbouring sectors 13 and 15 by the same police station, together covering the boroughs of Pogodno and Gumieńce, that share would increase up to 28%.

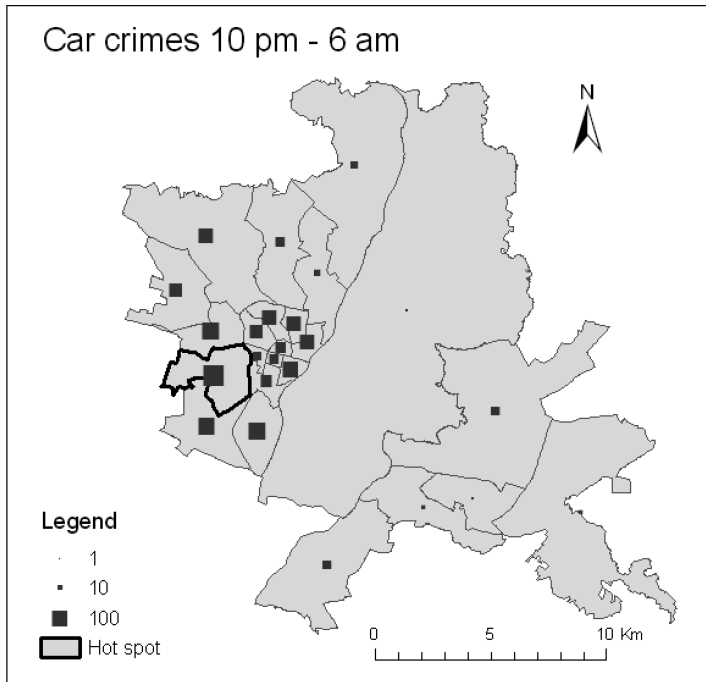


Figure 17. Car crimes between 10 pm and 6 am according to police sectors in Szczecin (2006)

Source: Own calculations based on data of Szczecin Police Department.

The analysis of the pattern of distribution of car crimes committed at the unknown time, demonstrates a strong diversification (Figure 18). There are four hot spots: sector 14 with the highest number of thefts happens at night, sector 18 by the police station Nad Odrą as well as sectors 19 and 20 by the police station Dąbie. Those are peripheral boroughs of Szczecin: Skolwin, Stołczyn, Gołęcino i Goclaw and on the right bank – Prawobrzeże: Żydowce-Klucz, Podjuchy, Dąbie, and Załom. In sectors 18, 19 and 20 car crimes committed at the unknown time of the day altogether constitute as many as 57% of the recorded crimes of that type in total. For the city that share equals 21%.

#### *The car crimes density map – another hot spot*

The map of car crimes density showing the area, where 50% of these crimes were committed, clearly demonstrates that downtown and the residential areas, situated to the north of the city centre, are particularly exposed to that type of crime (Figure 19).

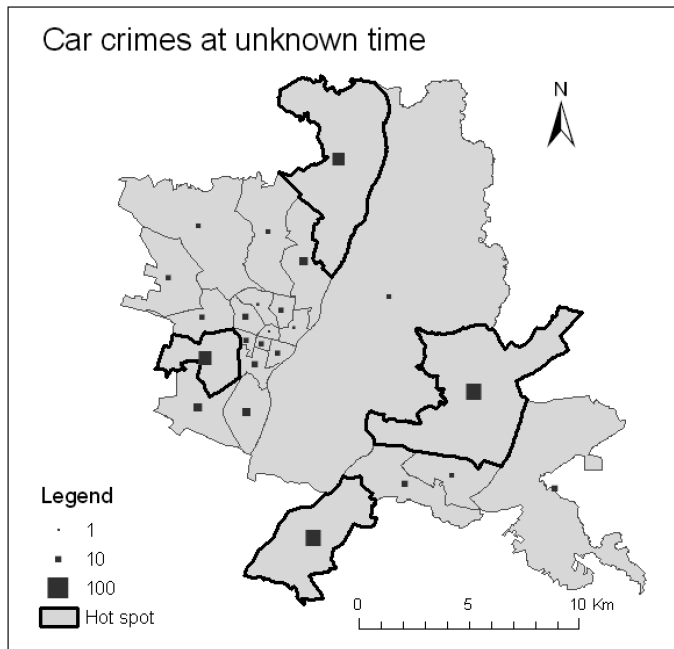


Figure 18. Car crimes at unknown time according to police sectors in Szczecin (2006)

Source: Own calculations based on data of Szczecin Police Department.

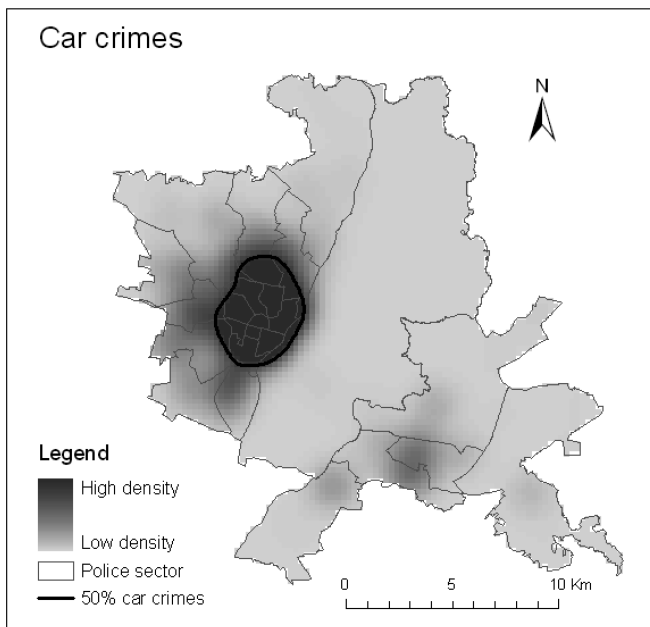


Figure 19. Car crimes density in Szczecin (2006)

Source: Own study.

## Discussion of results and conclusions

### *Cognitive aspects*

As a result of the carried out research, all the intended objectives of this paper have been met. Identification of spatial hot spots for car crime allowed the most crime-threatened boroughs to be determined. Furthermore, months and day time of highest threat by the car crime, according to the police sectors, have been identified.

The analysis of a spatial structure of car crime in Szczecin in 2006 according to 37 boroughs has allowed to determine hot spots. However, its results are not unambiguous. Undoubtedly, the downtown boroughs are characterized by the biggest car crime risk due to their number and spatial concentration: Centrum, Drzetowo-Grabowo, Turzyn, Śródmieście-Północ. Using the data on a number of flats/houses in the boroughs and the area of the boroughs, coefficients of car crime threat have been calculated. They, in turn, made an identification of hot spots possible. Also outside the downtown area, e.g. Głębokie-Pilchowo. However, there is no doubt that car crime in Szczecin concentrates in the downtown of Szczecin comprising 4 boroughs: Centrum, Stare Miasto, Śródmieście Północ, and Turzyn.

Car crime in Szczecin is characterized by a significant variation according to the time of the day. In that respect, car crimes are varied. Most crimes are committed at night.

Car crimes vary in terms of spatial pattern of distribution during different periods of day time. Between 6.01 and 22.00 (10 o'clock p.m.) they are mainly committed downtown in the borough Śródmieście, where there is a high concentration of public institutions, offices, services, and retail places. It is also an area of paid parking places, which decreases a number of cars there. At night car crime declines downtown and moves towards residential areas situated to the south-west of downtown (sector 14). Generally, it may be concluded that car crime events in a big city are spatially and temporarily differentiated and this differentiation has its patterns.

### *Methodological aspects*

A type and character of the data on car crime, which are at disposal of the Szczecin Police Department and which are partly also entered into the Szczecin System of Geographic Information by the Department of Informatics of the City Hall of Szczecin, have been successfully recognized. The analysis of the latest literature on the subject allowed adopting proper methods and ways of their interpretation used in the professional strategic crime analysis. Usefulness of GIS for the identification of hot spots has also been assessed.

Most of the methodological problems which occurred in this paper were caused by drawbacks of the system of crime data gathering and geocoding in Szczecin. The Police Department do not use any kind of GIS for the purposes of crime mapping and spatial analysis. The data are registered according to police stations, sectors, and beats. Some of them were made accessible for the purposes of this paper. In the same time the Police registers every crime event according to address. These addressed data are used by the Department of Informatics of the City Hall of Szczecin as a part of the Szczecin System of Geographic Information. The system enables the printing of maps and some general statistical analysis. The map is every year handed over to the Szczecin Police Department. The availability of the data contained in the Szczecin System of Geographic Information is very limited. Not all layers are publicly accessible, and the rules of the accessibility are not clear. The format MapInfo preferred in the Szczecin System of Geographic Information was not in every case compatible with the ArcGIS used as the main analytical tool in this paper. The best solution for spatio-temporal strategic crime analysis would be the full availability of registers of crime events including the address (in form of parcel number or geocoded by GPS) and the time. The borders of different relevant territories of the city (boroughs, police stations, police sectors, beats, school districts, emergency service districts etc.) should be also available in the vector format.

### *Application-oriented aspects*

Unfortunately, the division into police stations is not in accordance with the division into boroughs and the most crime-threatened area lies within the competence of three police stations: in total police station Niebuszewo, northern part – police station Śródmieście and a small area – police station Nad Odrą. The division of the downtown of Szczecin along Małopolska Street between two police stations is not justified by the spatial pattern of car crimes. The results of this paper suggest adjusting the territorial range of the individual police stations to the districts, especially through a liquidation of one of them and establishment of the biggest and best equipped against car crime police station Śródmieście.

### **References:**

- Boba R., 2001, Introductory Guide to Crime Analysis and Mapping. Report to the Office of Community Oriented Policing Services, US Department of Justice, Washington DC.
- Boba R., 2005, Crime Analysis and Crime Mapping, Sage Publications, Thousand Oaks-London-New Delhi.
- Bogacka E., 2009, Przystępczość w Poznaniu [w:] J. J. Parysek (red.), Wybrane problemy miast i aglomeracji miejskich na początku XXI

- Dolata M., Kotus J., 2006, Social Production of Urban Space, *Geographia Polonica*, 79/2, p. 5-22.
- Doran B. J., Lees B. G., 2005, Investigating the Spatiotemporal Links between Disorder, Crime, and the Fear of Crime, *The Professional Geographer*, 57, p. 1-12.
- Eck J. E., 2002, Crossing the Borders of Crime: Factors Influencing the Utility and Practicality of Interjurisdictional Crime Mapping. Overcoming the Barriers: Crime Mapping in the 21<sup>st</sup> Century 1, Police Foundation, Washington DC.
- Evans D. J., Herbert D. (eds.), 1989, *The geography of crime*. Routledge, New York.
- Gottlieb S., Arenberg S., Singh R., 1994, *Crime analysis: From first report to final arrest*, Alpha, Montclair.
- Harries K., 1999, *Mapping Crime: Principle and Practice*, <http://www.ncjrs.org/html/nij/mapping/pdf.html> (accessed: August 2007).
- Hawth's Analysis Tools for ArcGIS 9.x <http://www.spatial ecology.com/htools> (accessed: August 2007).
- Herbert D., 1982, *The geography of urban crime*, Longman, Harlow.
- Herbert D., 2002 *Geography of crime* [in:] *International encyclopedia of the social & behavioral sciences*, <http://www.sciencedirect.com/science/referenceworks/9780080430768> (accessed: August 2007).
- *Mapping and Analysis for Public Safety*, 2004, <http://www.pjp.usdoj.gov/nji/maps> (accessed: August 2007).
- *Mapping the War of Crime*, 2000 [in:] R. W. Greene (ed.) *GIS In Public Policy. Using Geographic Information for More Effective Government*, ESRI Press Redlands, p. 22-27.
- Osborne D. A., Wernicke S. C., 2003, *Introduction to Crime Analysis. Basic Resources for Criminal Justice Practice*, The Haworth Press, New York-London-Oxford.
- *Raport o stanie miasta Szczecina*, 2006, [http://www.szczecin.pl/raport06/html/10\\_0.htm](http://www.szczecin.pl/raport06/html/10_0.htm) (accessed: August 2007).
- Ratcliffe J. H., 2004, The hotspot matrix: A framework for the spatio-temporal targeting of crime reduction, *Police Practice and Research*, 5(1), p. 5-23.
- Ratcliffe J. H., 2007, *Integrated Intelligence and Crime Analysis: Enhanced Information for Law Enforcement Leaders*, Police Foundation, Washington DC.
- Ratcliffe, J. H., McCullagh, M. J., 1999, Hotbeds of crime and the search for spatial accuracy, *Geographical Systems* 1(4), p. 385-398.
- Travis III L. F., Hughes K. D., 2002, *Mapping in Police Agencies: Beyond this Point there Be Monsters. Overcoming the Barriers: Crime Mapping in the 21<sup>st</sup> Century 2*, Police Foundation, Washington DC.



- 
- Velasco M., Boba R., 2000, Manual of Crime Analysis Map Production. Report to the Office of Community Oriented Policing Services, US Department of Justice, Washington DC.
  - Wang F., Minor W. W., 2002, Where the Jobs Are: Employment access and Crime Patterns in Cleveland, *Annals of the Association of American Geographers*, 92, p. 435–450.
  - Weisburd D., Mastrofski S. D., Greenspan R., Willis J. J., 2004 *The Growth of Compstat in American Policing*, Police Foundation Reports, Washington DC.
  - Willis J. J., Mastrofski S.D., Weisburd D., Greenspan R., 2003, *Compstat and Organizational Change in the Lowell Police Department. Challenges and Opportunities*, Police Foundation, Washington DC.
  - Young G., 2003, *Mapping Mayhem. The geography of crime*. COMPUTEREDGE August.

Uladzimir Valetka

## **The evolution of the cities' size distribution in Belarus and Poland in 1970-2009: a rank-size rule and Markov chains analysis**

### **Introduction**

The demise of the socialist economic system and its subsequent restructuring has led to profound changes in the spatial patterns of urban economies in cities of CEE and CIS. The most important and visible trend of urban development during the transition period has been the decentralization of economic activities, a process which has played a major part in the transformation of the post-socialist city. The privatization of assets and the introduction of land rent have been the two determinant factors governing the process of urban spatial readjustments within the reality of a new market-oriented social environment (K. Stanilov, 2007 p. 73). The significant territorial adaptation and relocation of production factors among cities became a pressing task causing changes in the structure of urban system.

In present article we consider the evolution of a size distribution of Belarusian and Polish cities in 1970–2009. The aim of the paper is to improve the knowledge on the countries' urban system transformation and answer the following questions. How has the size distribution of the cities evolved over the last 20 years? Has it become more even or more unequal after the command system collapse? Are there any differences in urban system development of Belarus and Poland?

In the study we consider the set of all cities in Belarus and Poland and, using econometric analysis, we estimate the Pareto exponent of the so called Zipf's law. The Pareto exponent can be interpreted as a convergence indicator: its increasing values represent greater dispersion of the population outside the large cities and a more balanced population distribution between urban centers of different sizes. But, not only we estimate and compare the changes in cities' distribution, but also analyze their relative positions within this distribution for two countries. We use Markov chains analysis to determine cities' inter-class transition probabilities and perform a more complete analysis of movement speed and form of convergence in the city

size distribution for Poland and Belarus. This is the first such comparative study for the post-communist countries.

### **Evolution of the cities' size distribution: review of the literature**

By comparing case studies from different countries J. R. Logan and T. Swanstrom (2005) show that cities are affected by three factors: market forces, the socio-political context of the nation and region, and government policy (at both the national and local levels). Market forces drive the movement of population from the countryside to cities. As a country develops, population moves from labor-intensive agricultural production to labor being increasingly employed in industry and services. The latter are located in cities because of agglomeration economies. Peoples and firms take private decisions in an atmosphere of spatial competition. Although cities can be shaped by policymakers as well it is sound to keep in mind that urban development under the influence of public authorities' attempts to slow down urban decline or compensate cities for the costs of economic restructuring may be compassionate in the short run, but inevitably they slow down economic growth, harming everyone in the long run. So efforts to revitalize urban areas through a national urban policy concerned principally with the health of specific places will inevitably conflict with efforts to revitalize the larger economy (see N. Kleniewski (ed.), 2005 for discussion). This observation raises the question of how cities of different sizes grow and develop influenced by the national urban policy. The size distribution of cities may become more even over time if smaller cities catch up with larger ones. At the other extreme, urbanization and restructuring processes may take the form of the expansion of the largest cities. In this case, the size distribution would become more unequal.

Different models of the urbanization process were developed in the literature to answer corresponding questions and elicit any safe-organizing features in the cities' development. There is a new generation of two-sector models, namely, the core-periphery models (P. Krugman, 1991; D. Puga, 1999). However such models are unidimensional in focus, asking what happens to core-periphery development as transport costs between regions decline; they are really regional models, with limited urban implications. Urban models are focused on the city formation process, where the urban sector is composed of numerous cities, endogenous in number and size. J. Henderson and H. G. Wang (2005) develop an endogenous growth model with accumulation of human capital, where there is a shift out of the rural sector into an urban sector as per capita human capital and income grow. As the urban sector grows, new cities form in national land markets. Efficient city sizes are limited, reflecting a trade-off between marginal

agglomeration economies as a city grows and steadily rising urban diseconomies in the form of commuting, congestion and other urban disamenities. With urbanization and population growth, if existing cities are to stay near efficient sizes, new cities need to form or grow in a time. That timely formation requires local governments to have the autonomy to tax land rents, exclude entrants through zoning provisions and undertake urban infrastructure investments so as to form new large-scale settlements. Such institutions and market environments may not be in place or may be slow to develop, and national politics may delay their evolution, especially in transition countries. These factors retard the timely formation of cities, forcing people into existing oversized cities.

The issue of convergence across spatial units was initially posed at the regional level (J. Williamson, 1965). There is a related urban model of this divergence–convergence phenomenon, which looks at urban primacy and the quantity allocation of resources across cities. Conceptually the urban world is collapsed into two regions: the primate city versus the rest of the country, or at least the urban portion thereof (A. Ades, E. Glaeser, 1995). The question is: to what extent is urbanization concentrated in, or confined to, one (or a few) major urban areas, as opposed to being spread more evenly across a variety of cities? Primacy is commonly measured by the ratio of the population of the largest metro area to the entire urban population in the country. A. Ades and E. Glaeser (1995) and J. Davis and J. V. Henderson (2003) find that primacy first increases, peaks, and then declines with economic development, indicating a later spread of urban resources from the primate city to other cities over time.

As part of this spatial convergence process, J. Kolko (1999) explores the relationship between changes in urban concentration and industrial restructuring for USA. The idea is that manufacturing is first concentrated in primate cities at early stages of development, and then decentralizes to be relatively more concentrated in rural areas. Initial concentration fosters “incubation” and adaptation of technologies from abroad in a concentrated urban environment. But once manufacturing has modernized with fairly standardized technologies, firms decentralize to hinterland locations where rent and wage costs are cheaper. The largest metro areas became business service-intensive. This spatial separation, with headquarters’ activities of firms in large cities and production facilities in smaller specialized cities, is called ‘functional specialization’ (G. Duranton, D. Puga 2005).

There is econometric evidence indicating that politics plays a role in increasing sizes of primate cities. Based on cross-section analyses, A. Ades and E. Glaeser (1995) find that, if the primate city in a country is the national capital, it is 45% larger. If the country is a dictatorship, or at the extreme of non-democracy, the primate city is 40–45% larger. The idea is that

representative democracy gives a political voice to hinterland regions, so limiting the ability of the capital city to favour itself; and fiscal decentralization helps level the playing field across cities, giving hinterland cities political autonomy to compete with the primate city (see J. Davis and J. R. Henderson 2003 for a panel data analysis).

Given the urban primacy relationships, it is natural to ask whether urban concentration is important to growth. J. Henderson (2003) examines this question with panel data methods and finds that there is an optimal degree of primacy at each level of development which maximizes national productivity growth. That optimal degree rises as country income declines: high relative agglomeration is important when countries have low knowledge accumulation, import technologies, and have limited capital to invest in widespread hinterland development.

The popular device to analyze cities' size distribution is the rank-size rule. This rule (or Zipf's law), which emerged from regularly observed features of the data lacking any theoretic foundation, has recently been analyzed, among others, by P. Krugman (1996), H. G. Overman and Y. M. Ioannides (2001), X. Gabaix and Y. M. Ioannides (2004), K. T. Soo (2005). X. Gabaix (1999) has derived a statistical explanation of Zipf's law for cities. He shows that if different cities grow randomly with the same expected growth rate and the same variance, the limit distribution of city size will converge so as to obey Zipf's law.

Zipf's law allow the characterization of the evolution of the global distribution, but it does not provide any information about the movements of the cities within this distribution. For example, they city size distribution does not say whether the right tail of the initial distribution (year 1989) contains the same cities as the right tail in the final distribution (year 2009). A possible way to answer these questions is to track the evolution of each city's relative size over time by estimating transition probability matrices associated with discrete Markov chains. This line of analysis has first been pursued by J. Eaton and Z. Eckstein (1997) and then by D. Black and J. V. Henderson (2003).

## Methodology

We propose to base our exploration of the evolution of the cities' size distribution in post-communist Belarus and Poland on the Zipf's law. Zipf in 1949 claimed that the size distribution of cities follows a Pareto law:

$$R = a \cdot S^{-b} \quad (1)$$

where  $R$  is the city rank order of the population distribution;  $S$  is the population of the cities; and  $a$  and  $b$  are parameters, with the latter being the Pareto exponent, always positive by construction.

According to this rule, city populations among any group of cities at any time are proportional to the inverse of the ranking of their populations in that group. The Pareto exponent can therefore be interpreted as a convergence indicator. Indeed, values that fall over time indicate relatively more important roles (increasing weights) for the largest cities. More precisely, as  $b$  decreases, a 1% increase in city size produces a smaller fall (in %) in rank and the city size distribution becomes more spread out. Therefore, this will cause a divergence trend inside the group of cities or greater metropolitan concentration. Likewise, a 1% increase in city size produces a larger fall (in %) in rank as  $b$  increases. Therefore, increasing values of the Pareto exponent represent convergence dynamics, or in other words, greater dispersion of the population outside the large cities and a more balanced population distribution between urban centers of different sizes.

To study a dynamics of the within distribution of cities we assume that the frequency of the distribution follows a first-order stationary Markov process. In this case, the evolution of the city size distribution is represented by a transition probability matrix,  $M$ , in which each element  $(i, j)$  indicates the probability that a city that was in class  $i$  at time  $t$  ends up in class  $j$  in the following period. The way of cities' division on classes will be chosen by considering the performance of the test for Markovity of order one. Then each element  $p_{ij}$  of the transition matrix is estimated as a conditional probability  $p_{ij} = P(A_j(t+1) \mid A_i(t))$ , where  $A_i(t)$  is the event that "city is in a state  $i$  at time  $t$ ". In other words we find shares of cities remained in each size class at the end of the period and moved up or down by the end of the period. Denoting by  $F_t = (p_1(t) \quad p_2(t) \quad \dots \quad p_k(t))$  the vector of probabilities that a city is in class  $i$  at time  $t$ , the dynamics of this vector is given by:

$$F_{n+1} = F_n M = F_0 M^{n+1} \quad (2)$$

Next, we determine the ergodic distribution that can be interpreted as *the long-run equilibrium* city-size distribution. Explicitly, given that the transition matrix  $M$  is regular, then  $M^n$  tends to a limiting matrix  $M^*$  when  $n$  tends to infinity (J. J. Kemeny, J. L. Snell, 1960). Therefore, with the passage of time, the distribution of cities will not change any more and will converge to the ergodic or limit distribution. Concentration of the frequencies in a certain class would imply convergence (if it is the middle class, it would be convergence to the mean), while concentration of the frequencies in some of the classes, that is, a multimodal limit distribution, may be interpreted as a tendency towards stratification into different convergence clubs. Finally, a dispersion of this distribution amongst all classes is interpreted as divergence.

We also determine the *speed of the movement of a city within the distribution*, using the mean first passage time matrix  $M_p$ , that can be easily constructed for the transition matrix  $M$  (Kemeny and Snell, 1976). The  $(i,j)$  element of the matrix  $M_p$  indicates the expected time for a city to move from class  $i$  to class  $j$  for the first time. Thus, using Markov chains we can perform a more complete analysis of movement speed and form of convergence within the city size distribution.

In order to carry out the methodology described, we should choose a discretization of the cities' sizes. As pointed out by S. Magrini (1999), an improper discretization may have the effect of removing the Markov property and therefore may lead to misleading results, especially as is in our case when computations of ergodic distributions are based on the estimates of the discrete transition probabilities. D. Quah (1993) and J. Le Gallo (2004) choose to discretize the distribution in such a way that the initial classes include a similar number of elements. P. Cheshire and S. Magrini (2000) base their choice between possible classes in terms of the ability of the discrete distribution to approximate the observed continuous distribution.

In our paper following the paper of J. Le Gallo and C. Chasco (2009), we have tried different ways of discretizing the distribution, divided it on 5, 6 and 7 classes. Finally, the discretization has been chosen by considering the best performance of the test for order one for Polish cities. We choose Poland to be a benchmark providing we have the biggest dataset for this country (890 cities) and this country is one of the most successful among transition economies.

The assumption of a first-order stationary Markov process requires the transition probabilities,  $p_{ij}$ , to be of order 1, that is, to be independent of classes at the beginning of previous periods (at time  $t - 2$ ,  $t - 3$ , ...). If the chain is of a higher order, the first-order transition matrix will be misspecified. Indeed, it will contain only part of the information necessary to describe the true evolution of population distribution. Moreover, the Markov property implicitly assumes that the transition probabilities,  $p_{ij}$ , depend on  $i$  (i.e., that the process is not of order 0).

In order to test this property, F. Bickenbach and E. Bode (2003) emphasize the role of the test of time independence. In determining the order of a Markov chain, B. Tan and K. Yilmaz (2002) suggest, firstly, to test order 0 versus order 1; secondly, to test order 1 versus order 2; and so on. If the test of order 0 against order 1 is rejected, and the test of order 1 against order 2 is not rejected, the process may be assumed to be of order 1.



## Empirical study

Data on population in Belarusian and Polish cities are extracted from the national statistics prepared by the National Committee of Statistics of the Republic of Belarus and Central Statistical Office (GUS) of the Republic of Poland.

Some descriptive statistics for Belarusian and Polish urban system are presented in the table 1 and 2. Groups of cities are based on Belarusian national definition.

Table 1. Belarusian urban system in 1989–2009

Group of cities	Population	Number of cities			Population, th. (January 1)		
		1989	1999	2009	1989	1999	2009
Big	>50	22	22	22	4 949.1	5 163.9	5 406.0
	>1000	1	1	1	1 607.1	1 680.5	1 829.1
	300-500	3	4	5	1 201.8	1 474.3	1 863.8
	200-300	3	2	1	746.7	507.1	219.0
	100-200	5	8	7	641.5	988.9	886.9
	50-100	10	7	8	752.0	513.1	607.2
Medium	20-50	16	18	16	503.8	583.4	537.3
Small	10-20	45	47	46	620.3	645.3	633.3
	<10	119	118	122	561.1	561.9	571.9
Total urban system		202	205	206	6 634.3	6 954.5	7 148.5

Source: Own calculations based on National Committee of Statistics of the Republic of Belarus data.

Table 2. Polish urban system in 1989–2009

Group of cities	Population	Number of cities			Population, th. (January 1)		
		1990	1999	2009	1990	1999	2009
Big	>50	90	92	86	14 959.9	14 873.0	14 178.5
	>1000	1	1	1	1 651.2	1 618.5	1 709.8
	500-850	4	4	4	2 822.2	2 763.5	2 691.2
	300-500	5	5	5	1 968.7	1 965.0	1 881.5
	200-300	10	10	7	2 320.1	2 308.1	1 640.6
	100-200	24	22	22	3 109.1	2 855.2	3 044.4
	50-100	46	50	47	3 088.5	3 362.7	3 211.0
Medium	20-50	128	139	134	3 964.6	4 260.0	4 192.3
Small	10-20	170	181	180	2 446.8	2 629.5	2 643.9
	<10	442	463	497	2 084.0	2 160.3	2 273.4
Total urban system		830	875	897	23 455.3	23 922.8	23 288.2

Source: Own calculations based on GUS data.

Urbanization level in Belarus grew from 65.4% in 1989 to 73.9% in 2009. One can see from the table 1 that half of the urban population in Belarus lives in 6 biggest cities. Urban population in Poland is distributed more evenly with urbanization level equal to 61.1% in 2009.

In order to examine urban evolution and answer the preceding questions, we first examine the city size distribution by centering on the question of whether Zipf's law or its deterministic equivalent, the rank-size rule, holds for Belarusian and Polish cities.

Empirically, departing from (1), we take logarithms on both sides and estimate the resulting linear expression for the set of all cities ( $i = 1, \dots, n$ ) for each of the 22 periods ( $t = 1, \dots, 22$ ) under consideration:

$$\ln R_{it} = \ln a_t - b_t \cdot \ln S_{it} + \square_{it} \quad (3)$$

X. Gabaix and Y. M. Ioannides (2004) have shown by Monte-Carlo simulations that OLS estimation of equation (3) presents several pitfalls in small samples. In our study we use the set of all cities.

Results of cross-sectional data econometric analysis for Belarus and Poland in 1970-2009 (see tables A1 and A2 in the APPENDIX) have proved the Zipf's law existence. All coefficients and statistics of presented equations are significant. We skip here several important econometric tests for simplicity. Due to the geographical nature of the empirical data used, we need to test for spatial autocorrelation and spatial heteroskedasticity. To check whether OLS is affected by the omission of spatial autocorrelation we need follow the strategy suggested by L. Anselin (1988, p. 203) for the specification of spatial SUR models. In a first stage, we have to estimate (3) by Ordinary Least Squares (OLS) all equations individually considered (i.e., one equation for each period under consideration). For each model, we need to test for the presence of spatial effects (J. Arbia, 2006).

Figure 1 illustartes the dynamics of the Pareto exponents for Belarus and Poland.

Econometric analysis shows that Pareto parameter for Belarus and Poland has different behavior. It reveals the sustainable growth of the Pareto exponent value for Poland particularly for the last ten years indicating the convergence of cities' sizes. On the contrary one could see a persistent divergence trend in case of Belarusian urban structure development with the exeption of the last two years.

Rather suprising however are the results for pre 1989 years which show that city size distribution before the transition in both countries was more even. But we need to perform a dynamic analysis to make right conclusions.

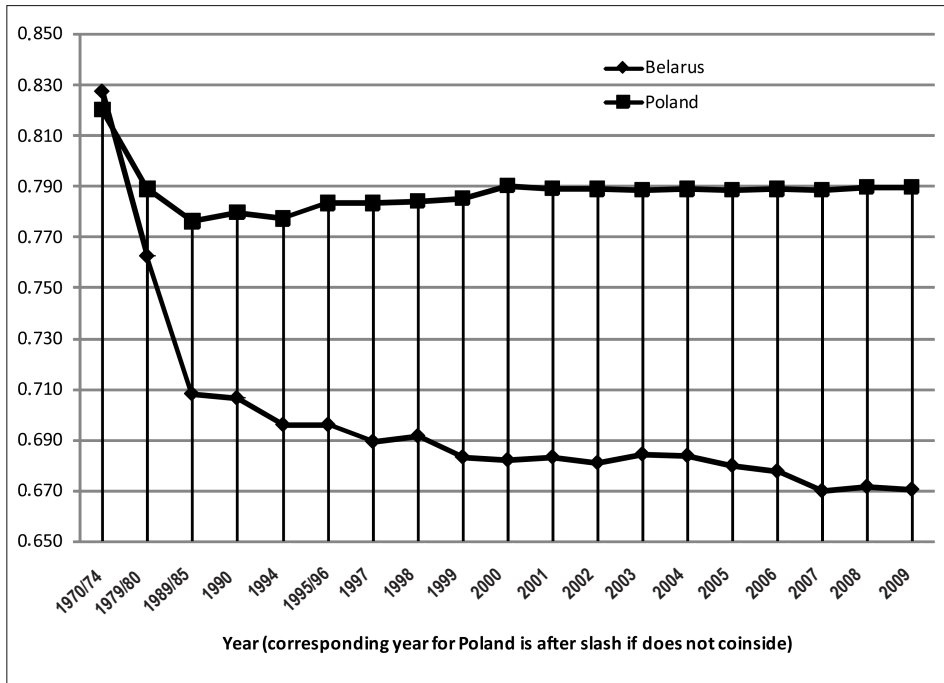


Figure 1. Dynamics of the Pareto exponents for Belarus and Poland

Source: Own calculations based on National Committee of Statistics of the Republic of Belarus and GUS data.

As we stated above, Zipf's and other distribution laws allow the characterization of the evolution of the global distribution, but they do not provide any information about the movements of the towns within this distribution. Thus to augment the conclusions from the Pareto exponent dynamics we apply Markov chains analysis. The last one gives the opportunity to study a movement speed and form of convergence within the city size distribution. We employ the same data on population of all cities for Belarus and Poland.

We divided all cities on seven classes: (1) population less than 10% of the countries' average, (2) population between 10 and 20% of the average (3) population between 20 and 30% of the average, (4) population between 30 and 50% of the average, (5) population between 50 and 100% of the average, (6) population between 100 and 200% of the average, and (7) population more than 200% of the average.

Tables 3 and 4 contain the first-order transition probability matrices with the ML estimates  $p_{ij}$  of the transition probabilities for population in Belarus and Poland. The average populations for those countries in 2009 are 34701 and 26157 respectively.

Table 3. Probability transition matrix for Belarus, 1970–2009

	1	2	3	4	5	6	7	Number of observations
	<10%	<20%	<30%	<50%	<100%	<200%	>200%	
1	0.979	0.019	0.002	0	0	0	0	838
2	0.096	0.86	0.039	0	0	0	0	508
3	0	0.032	0.94	0.023	0	0	0	686
4	0	0.003	0.029	0.95	0.014	0	0	653
5	0	0	0	0.048	0.938	0.012	0	290
6	0	0	0	0	0.036	0.95	0.012	167
7	0	0	0	0	0	0.006	0.99	324

Source: Own calculations based on National Committee of Statistics of the Republic of Belarus data.

Note that all transition probability matrices are regular. Matrices let us draw conclusions on intensity of interclass movements. Using those matrices according to methodology described, we can extract information related to cities' mobility speed and convergence pattern.

Table 4. Probability transition matrix for Poland, 1961–2009

	1	2	3	4	5	6	7	Number of observations
	<10%	<20%	<30%	<50%	<100%	<200%	>200%	
1	0.94	0.045	0.006	0.004	0.005	0.0005	0	2002
2	0.019	0.958	0.02	0.0003	0.0009	0	0	3477
3	0.0015	0.035	0.927	0.037	0	0	0	2055
4	0.0018	0.0004	0.017	0.941	0.038	0.001	0.0004	2236
5	0.001	0.0007	0	0.0078	0.972	0.018	0.001	2953
6	0.0007	0	0	0.0007	0.013	0.967	0.019	1396
7	0	0	0	0	0.0014	0.006	0.992	1466

Source: Own calculations based on GUS data.

For example, in Poland during the half of a century, there were 2,002 instances of a city having a population size lower than 10 percent of the average. The majority of these cities (94.0%) remained in that size class at the end of the year, while 4.5% moved up one class by the end of the year.

The high probabilities on the diagonal in all countries show a low interclass mobility, i.e., a high-persistence of cities to stay in their own class from one observation to another over the whole period. J. Eaton and Z. Eckstein (1997) interpret diagonal elements of the transition approaching 1 as parallel growth. Since these elements are not exactly 1, we can analyze the propensity of cities in each cell to move into other cells. In particular, it appears that the largest and smallest cities (classes 1 and 7, respectively) have higher persistence while medium-sized cities (categories 3, 4 and 5)

have more probability of moving to smaller categories. In classes 2 and 3 a small number of cities if any move up to higher categories more than two steps. Only in case of Poland in classes 2 and 3 the probability of moving up a class exceeds that of moving down. In Belarus the probability of moving down a class exceeds that one in other countries.

This low inter-class mobility of cities is in line with the results found for other cases such as US MSA's (D. Black, J. V. Henderson, 2003) and all Spanish municipalities (J. Le Gallo, C. Chasco, 2009).

Then, in order to determine the speed with which the cities move within the distribution, we consider the matrix of mean first passage time  $MP$ , where every element indicates the expected time for a city to move from class  $i$  to class  $j$  for the first time (Tables 5 and 6).

Table 5. Mean first passage time matrix for Belarus in years

Class	1	2	3	4	5	6	7
	<10%	<20%	<30%	<50%	<100%	<200%	>200%
1	1.9	53	143	344	885	2971	8951
2	36	8.6	109	309	851	2935.7	8916.4
3	99	63	6	197	741	2822.6	8806.7
4	143	106.7	60	8.3	547.8	2622.8	8613
5	187	150.6	104	45	28.6	2056.6	8063.6
6	269	232	185	128.5	81.7	77	6068.6
7	430	393.5	346	293.7	243.5	167	38.5

Source: Own calculations based on National Committee of Statistics of the Republic of Belarus data.

For example, the expected time for Belarusian city to move from class 1 to class 2 is equal to 53 years, while the moving from 2 to 1 will happened in 36 years. In whole the mean number of years to reach any class is relatively high: for example, the shortest time passage for Poland is 67.7 years (move from class 4 to class 5) and the longest is 1661.6 years (move from class 7 to class 1). We should remember that these calculations account for the fact that starting from class 4, a city might visit classes 6, 5, 3, 2 or 1 before going to class 7.

Table 6. Mean first passage time matrix for Poland in years

Class	1	2	3	4	5	6	7
	<10%	<20%	<30%	<50%	<100%	<200%	>200%
1	43.5	271	293.6	210.6	154.7	232.8	340
2	525.5	19.6	179	183.6	161.6	240.6	347.5
3	885	554	33.3	106	128.5	208	314.8
4	1239	1070	704	22.7	67.7	149	254.8
5	1426	1311	1007	480	6	95	203
6	1554	1455	1146	644	209	5.3	123
7	1661.6	1561	1242.6	746	307	151	2

Source: Own calculations based on GUS data.

Belarusian matrix shows the passage from higher class to lower one is more probable than from lower to higher. That is not the truth for Polish cities where the moving to higher class is faster. For example, for Belarusian cities to first visit class 7 from class 1 it takes 8951 years, while for Polish it takes 340 years. On the contrary, to first visit class 1 from class 7 it takes 430 years for cities in Belarus, while for Poland it takes 1661.6 years.

The difference in the models of urban system development and the forms of cities' convergence for Belarus on the one part and Poland on the other part becomes obvious after comparison of initial versus ergodic distribution pattern matching. The ergodic distribution can be interpreted as the long-run equilibrium city-size distribution in the urban system. Given a regular transition matrix, with the passage of many periods, there will be a time where the distribution of cities will not change any more: that is the ergodic or limit distribution. It is used to assess the form of convergence in a distribution. Concentration of the frequencies in a certain class would imply convergence (if it is the middle class, it would be convergence to the mean), while concentration of the frequencies in some of the classes, that is, a multimodal limit distribution, may be interpreted as a tendency towards stratification into different convergence clubs. Finally, a dispersion of this distribution amongst all classes is interpreted as divergence.

The results for Belarus and Poland are reported on the histograms of Figure 2 and demonstrate significant differences among countries.

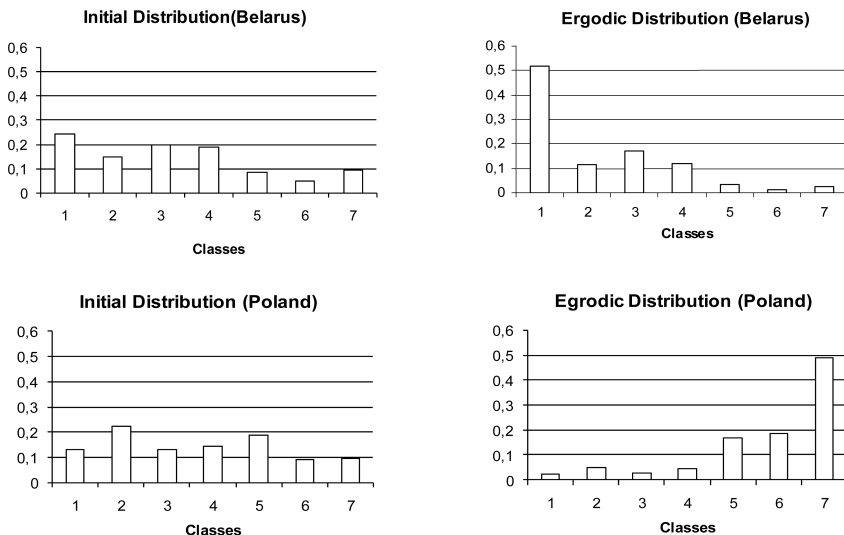


Figure 2. Initial and ergodic distribution of cities' sizes in Belarus and Poland

Source: Own calculations based on National Committee of Statistics of the Republic of Belarus and GUS data.

For Belarus it appears that the ergodic distribution is more concentrated in the small and lower middle-size cities (1<sup>st</sup> to 4<sup>th</sup> classes), a result that reveals the existence of convergence towards smaller size populations. For Poland it appears that the ergodic distribution is more concentrated in the middle and big-size cities (5<sup>th</sup> to 7<sup>th</sup> classes). At the same time a level of stability of ergodic distribution compared to the initial one for Belarus and Poland is low.

As one can see Belarus evolves to the country of small cities, while Poland to the country of big and upper medium sized cities.

## Conclusions

In present paper we extended previous studies of a city size distribution making a comparative analysis for the post-communist experience of Belarusian and Polish urban systems. We estimate and compare the changes in cities' distribution, calculating the Pareto exponent that can be interpreted as a convergence indicator which increasing values represent a more balanced population distribution between urban centers of different sizes. In addition we analyze cities' relative positions within distributions for two countries. We use Markov chains analysis to determine cities' inter-class transition probabilities and perform a more complete analysis of movement speed and form of convergence in the city size distribution.

Surprisingly, the dynamics of the Pareto exponents shows that before the command system collapse city size distribution has been more equal for both counties. Econometric analysis reveals significant differences in the urban system development for Belarus and Poland. One can see a sustainable growth of the Pareto exponent value for Poland particularly for the last ten years indicating the convergence of cities' sizes. On the contrary there is a persistent divergence trend in case of Belarusian urban structure development with the exception of the last two years.

The Markov chains analysis enables to uncover additional differences. A low interclass mobility is obvious. The largest and smallest cities display higher persistence than the medium-sized cities, which have more probability of moving to smaller categories. In general terms, movements up are slower than movements down, especially for high-size classes.

Comparing ergodic distributions and mean first passage time matrices for Belarus and Poland we may conclude that in future 52% of Belarusian cities will concentrate in the smallest class and passage of cities from higher classes to lower is more probable. Future distribution of Polish cities is a bit more uniform and tends to big cities (up to 68% of all Polish cities will be located at two biggest classes) but it happened more slowly than decline of Belarusian cities.



The difference in the models of urban system development and in the forms of cities' convergence for Belarus and Poland is obvious after comparison of initial and ergodic distribution. The latter at the same time can be traced to the differences in the Pareto exponents' behaviour. However it is still not enough explanations that could unmask the nature of those differences. Thereby it is quite natural to uncover the relationship between Pareto exponents' dynamics (or some particular characteristic) and the set of explanatory variables. As we have noticed earlier it is relevant to reveal how cities are affected by the three groups of factors: market forces, the socio-political context of the nation and region, and government policy (at both the national and local levels). So this is a way to build a set of regressors that we are planning to do in our further research. Special attention should be given to an adequate measuring of the institutional differences between countries that can influence the cities' development. For example, there are evidences that local authorities at the district level in Belarus use administrative resources to hinder the restructuring activities of subordinate towns (U. Valetka, 2010).

It is interesting also to disclose the influence of space on urban population dynamism comparing the probability of a city moving down or up in the hierarchy depending whether city is surrounded by towns that contain, on average, less or more population.

### *Acknowledgments*

This research was supported by a grant from the CERGE-EI Foundation under a program of the Global Development Network. All opinions expressed are those of the author and have not been endorsed by CERGE-EI or the GDN. I am grateful for careful help with Markov chains calculations to Aliaksandr Radyna.

### **References:**

- Ades A., Glaeser E., 1995, Trade and circuses: explaining urban giants, *Quarterly Journal of Economics*, 110, p. 195–227.
- Anselin L., 1988, *Spatial econometrics: Methods and models*. Dordrecht: Kluwer.
- Arbia J., 2006, *Spatial Econometrics: Statistical Foundations*. Dordrecht: Springer.
- Bickenbach F., Bode E., 2003, Evaluating the Markov property in studies of economic convergence, *International Regional Science Review*, 26, p. 363–392.
- Black D., Henderson J. V., 2003, Urban Evolution in the USA, *Journal of Economic Geography*, 3, p. 343–372.

- Cheshire P., Magrini S., 2000, Endogenous processes in European regional growth: convergence and policy, *Growth and Change*, 31, p. 455–479.
- Davis J. Henderson J. V., 2003, Evidence on the political economy of the urbanization process, *Journal of Urban Economics*, 53, p. 98–125.
- Duranton G., Puga D., 2005, From sectoral to functional urban specialization, *Journal of Urban Economics*, 57, p. 343–370.
- Duranton G., 2006, Some foundations for Zipf's law: product proliferation and local spillovers. *Regional Science and Urban Economics*, 36, p. 542–563.
- Eaton B., Eckstein O., 1997, Cities and Growth: Theory and Evidence from France and Japan, *Regional Science and Urban Economics*, 27 (4–5), p. 443–474.
- Gabaix X., 1999, Zipf's law for cities: an explanation, *Quarterly Journal Economics*, 114, p. 759–767.
- Gabaix X., Ioannides Y. M., 2004, The evolution of city size distributions [in:] V. Henderson, J. F. Thisse (eds) *Handbook of regional and urban economics*, vol. 4., North Holland, Amsterdam, p. 2341–2378.
- Henderson J., 2003, The urbanization process and economic growth: the so-what question, *Journal of Economic Growth*, 8, p. 47–71.
- Henderson J., Wang H. G., 2005, Urbanization and city growth, *Journal of Economic Geography*, 5, p. 23–42.
- Kemeny J. J., Snell J. L., 1960, *Finite Markov chains*, Princeton, N.J., Van Nostrand.
- Kemeny J. J., Snell J. L., 1976, *Finite Markov chains*, N.Y., Springer.
- Kleniewski N. (ed.), 2005, *Cities and society*, Blackwell Publishing, Oxford.
- Kolko J., 1999, *Can I get some service here? Information technology service industries, and the future of cities*, Harvard University, Mimeo, Cambridge, MA.
- Krugman P., 1991, Increasing returns and economic geography, *Journal of Political Economy*, 99, p. 483–499.
- Krugman P., 1996, *The Self-organizing economy*, Blackwell, Cambridge.
- Le Gallo J., Chasco C., 2009, Spatial analysis of urban growth in Spain, 1990–2001 [in:] B. Baltagi. G. Arbia (eds.) *Spatial Econometrics: Methods and Applications*, Springer, Heidelberg, p. 58–80.
- Le Gallo J., 2004, Space-time analysis of GDP disparities among European regions: a Markov Chains approach, *International Regional Science Review*, 27, p. 138–163.

- Logan J. R., Swanstrom T., 2005, Urban restructuring: a critical view [in:] N. Kleniewski (ed.) *Cities and society*, Blackwell Publishing, Oxford, p. 28–42.
- Magrini S., 1999, The evolution of income disparities among the regions of the European Union, *Regional Science and Urban Economics*, 29, p. 257–281.
- Overman H. G., Ioannides Y. M., 2001, Cross-sectional evolution of the US city size distribution, *Journal of Urban Economics*, 49, p. 543–566.
- Puga D., 1999, The rise and fall of regional inequalities, *European Economic Review*, 43, p. 303–334.
- Quah D., 1993, Empirical cross-section dynamics in economic growth, *European Economic Review*, 37, p. 426–434.
- Soo K. T., 2005, Zipf's law for cities: a cross-country investigation, *Journal of Urban Economics*, 35, p. 239–263.
- Stanilov K., 2007, The restructuring of non-residential uses in the post-socialist metropolis [in:] K. Stanilov (ed.) *The post-socialist city: urban form and space transformations in Central and Eastern Europe after socialism*. Springer, Dordrecht, p. 73–97.
- Tan B., Yilmaz K., 2002, Markov chain test for time dependence and homogeneity: an analytical and empirical evaluation, *European Journal of Operation Research*, 137, p. 524–543.
- Valetka U., 2006, Institutional barriers for industrial restructuring [in:] T. Michalski (ed.) *The Geopolitical Aspects of the Transformation Process in Central and East-Central Europe*, Wydawnictwo Bernardinum. Gdynia-Pelplin, p. 197–209.
- Valetka U., 2010, Geograficzny wymiar postkomunistycznej restrukturyzacji gospodarczej: przypadek Białoruskich miast [in:] R. Gotowski, H. Rabant (eds.) *Problemy zarządzania przestrzenią miasta i jego otoczeniem*, series: *Promotio Geographica Bydgostiensia*. Wydawnictwo Uniwersytetu Kazimierza Wielkiego, Bydgoszcz (forthcoming).
- Williamson J., 1965, Regional inequality and the process of national development, *Economic Development and Cultural Change*, 13 (4), p. 3–45.

## Appendix

Table A1. Results of a rank-size rule econometric analysis for Belarus and Poland

Years	N of cities	Variable	Coefficient	Std. Error	t-statistic	R <sup>2</sup>	F-statistic
1970	198	b	-0.8272	0.0070	-117.5	0.986007	13811.41
		C	11.5562	0.0623	185.6		
1979	200	b	-0.7628	0.0094	-81.0	0.970718	6563.741
		C	11.1417	0.0851	130.9		
1989	202	b	-0.7085	0.0116	-60.9	0.948826	3708.230
		C	10.7778	0.1071	100.6		
1990	202	b	-0.7069	0.0119	-59.6	0.946705	3552.706
		C	10.7814	0.1095	98.5		
1991	202	b	-0.7043	0.0120	-58.9	0.945502	3469.854
		C	10.7631	0.1105	97.4		
1992	202	b	-0.7016	0.0118	-59.4	0.946431	3533.493
		C	10.7429	0.1091	98.4		
1993	202	b	-0.6985	0.0117	-59.5	0.946472	3536.361
		C	10.7190	0.1087	98.6		
1994	202	b	-0.6960	0.0119	-58.6	0.944992	3435.851
		C	10.7009	0.1099	97.3		
1995	202	b	-0.6959	0.0119	-58.4	0.944629	3412.029
		C	10.7033	0.1104	97.0		
1997	203	b	-0.6895	0.0120	-57.5	0.942749	3309.872
		C	10.6468	0.1110	95.9		
1998	205	b	-0.6914	0.0120	-57.7	0.942531	3329.324
		C	10.6653	0.1108	96.2		
1999	205	b	-0.6836	0.0123	-55.5	0.938123	3077.698
		C	10.5690	0.1136	93.1		
2000	205	b	-0.6821	0.0123	-55.6	0.938335	3088.966
		C	10.5552	0.1131	93.3		
2001	207	b	-0.6832	0.0121	-56.2	0.939142	3163.512
		C	10.5690	0.1119	94.5		
2002	207	b	-0.6814	0.0122	-55.8	0.938284	3116.645
		C	10.5491	0.1123	93.9		
2003	206	b	-0.6842	0.0120	-57.0	0.940885	3246.907
		C	10.5742	0.1106	95.6		
2004	206	b	-0.6836	0.0119	-57.3	0.941460	3280.773
		C	10.5646	0.1098	96.2		
2005	206	b	-0.6799	0.0121	-56.4	0.939759	3182.374
		C	10.5248	0.1108	95.0		
2006	206	b	-0.6777	0.0121	-56.0	0.938981	3139.215
		C	10.4985	0.1111	94.5		
2007	207	b	-0.6698	0.0124	-54.1	0.934634	2931.200
		C	10.4201	0.1135	91.8		
2008	206	b	-0.6718	0.0122	-55.2	0.937244	3046.707
		C	10.4401	0.1117	93.4		
2009	206	b	-0.6706	0.0121	-55.5	0.937961	3084.277
		C	10.4282	0.1108	94.1		

Source: Own calculations based on National Committee of Statistics of the Republic of Belarus data.

Table A1. Results of a rank-size rule econometric analysis for Poland

Years	<i>N of cities</i>	Variable	Coefficient	Std. Error	<i>t</i> -statistic	<i>R</i> <sup>2</sup>	<i>F</i> -statistic
1961	800	<i>b</i>	-0.8513	0.0062	-136.3	0.95880	18572.42
		<i>C</i>	13.1942	0.0555	237.7		
1974	802	<i>b</i>	-0.8205	0.0065	-126.3	0.95222	15941.79
		<i>C</i>	13.1154	0.0593	221.2		
1980	803	<i>b</i>	-0.7889	0.0068	-116.0	0.94384	13446.15
		<i>C</i>	12.9049	0.0627	205.7		
1985	809	<i>b</i>	-0.7763	0.0070	-111.2	0.93878	12375.71
		<i>C</i>	12.8406	0.0647	198.3		
1990	828	<i>b</i>	-0.7798	0.0070	-112.2	0.93842	12587.94
		<i>C</i>	12.9367	0.0648	199.5		
1994	843	<i>b</i>	-0.7774	0.0074	-105.2	0.92937	11065.55
		<i>C</i>	12.9415	0.0690	187.5		
1996	859	<i>b</i>	-0.7836	0.0071	-111.1	0.93503	12332.67
		<i>C</i>	13.0087	0.0658	197.6		
1997	863	<i>b</i>	-0.7835	0.0070	-111.5	0.93523	12432.23
		<i>C</i>	13.0097	0.0655	198.5		
1998	869	<i>b</i>	-0.7844	0.0070	-112.0	0.93534	12541.90
		<i>C</i>	13.0215	0.0653	199.5		
1999	874	<i>b</i>	-0.7854	0.0070	-112.4	0.93540	12627.81
		<i>C</i>	13.0337	0.0651	200.1		
2000	874	<i>b</i>	-0.7903	0.0069	-115.2	0.93837	13277.62
		<i>C</i>	13.0670	0.0638	204.8		
2001	879	<i>b</i>	-0.7891	0.0068	-115.5	0.93828	13332.41
		<i>C</i>	13.0550	0.0635	205.6		
2002	883	<i>b</i>	-0.7891	0.0068	-116.1	0.93861	13468.86
		<i>C</i>	13.0536	0.0631	206.7		
2003	883	<i>b</i>	-0.7889	0.0068	-115.8	0.93837	13414.41
		<i>C</i>	13.0507	0.0632	206.4		
2004	884	<i>b</i>	-0.7890	0.0068	-115.8	0.93832	13416.98
		<i>C</i>	13.0496	0.0632	206.4		
2005	886	<i>b</i>	-0.7887	0.0068	-115.9	0.93829	13439.88
		<i>C</i>	13.0461	0.0631	206.7		
2006	886	<i>b</i>	-0.7890	0.0068	-116.0	0.93827	13451.35
		<i>C</i>	13.0483	0.0631	206.8		
2007	889	<i>b</i>	-0.7888	0.0068	-116.1	0.93826	13479.04
		<i>C</i>	13.0442	0.0630	207.1		
2008	890	<i>b</i>	-0.7897	0.0068	-116.3	0.93840	13527.03
		<i>C</i>	13.0521	0.0629	207.4		
2009	890	<i>b</i>	-0.7898	0.0068	-116.2	0.93830	13504.11
		<i>C</i>	13.0523	0.0630	207.3		

Source: Own calculations based on GUS data.

Wojciech Janicki

## **The influence of the Polish-Ukrainian border on the socio-economic situation of selected border communes<sup>1</sup>**

### **Introduction**

Recent years have brought along many social and economic changes both in Poland and in Ukraine, which results from socio-economic transformations. This is also a consequence of Poland's entry into the Western Europe's economic-political structures. The dynamics of spatial changes has accelerated considerably, simultaneously indicating clear regional discrepancies.

From the perspective of contemporary social and economic processes, Lublin region is a very interesting area. It belongs to the poorest regions in Poland and in the European Union. This backwardness undoubtedly arises from the existence of the spatial barrier represented by the state frontier. The eastern border of the province is a fragment of the state border between Poland, Belarus and Ukraine, it is also partly a border of the EU. The borderline location of this region could give rise to socio-economic and cultural development of the areas situated on both sides of the border.

The period of the upcoming few years will be of key importance in terms of choosing the course of spatial development of borderland areas located in the eastern part of Lublin region. This could be facilitated by more intensive activities directed towards the increase in the number of new border checkpoints and the development of the existing ones. Contemporarily, economic growth of border regions is concentrated mainly around the areas situated in the vicinity of border crossings, while peripheral regions located far from the main transportation routes are prone to socio-economic degradation. Therefore, the state border is a specific spatial barrier limiting the general socio-economic progress in border areas, however

---

<sup>1</sup> The paper is based on materials collected during the research project "The influence of the state border on the directions of socio-economic development in the eastern part of Lublin province" No. N306 04632/3180 financed by the Ministry of Science and Higher Education.

stimulating the development of areas around border checkpoints. Their number is still insufficient, and those existing ones need further investments.

The aim of the paper is to verify the above mentioned thesis about the influence of the Polish-Ukrainian border and checkpoints onto the socio-economic situation of Polish border communes. The research is based on the questionnaire survey conducted among the population of selected border communes and interviews with the employees of particular communes' councils.

## Research area

The research area comprises two groups of communes situated in the northern part of the Polish-Ukrainian border region (cf. figure 1). The former group is represented by the communes of Ruda-Huta and Dorohusk, located along an important transportation route, i.e. state road 12 linking Chełm through Dorohusk checkpoint and the main transportation route in northern Ukraine, reaching as far as Kiev. The latter consists of four communes peripheral to the local poles of economic growth and the main transportation routes – the communes of Mircze, Dołhobyczów, Telatyn and Ułhówek.



Figure 1. Research area

Source: own elaboration.



The research area is a typical countryside region, with no settlement of a city status. An average village usually has circa 250 inhabitants. This proves to a great pulverization of farming households and predominance of relatively small villages. It is a typical depopulation area. Over the recent years in all the analysed communes the population growth has had a negative tendency mainly due to the decreasing birth rate. The death rate has remained on the same level. Migration balances have been negative almost since the beginning of the 90s of the 20<sup>th</sup> century in all the studied communes. The average migration balance in the commune of Ułhówek in 1996–2003 was -13.6‰ and it was the lowest value in the whole of Lublin province. The population moves mainly to larger cities of Lublin region, thus compensating for, typical of them, the suburban outflow, migrations to the largest cities in Poland and foreign migrations. Due to the clear selectiveness of migration processes, the whole border region is an area of significantly deformed age and sex structures of the population. According to the data of the National Census 2002, in all the rural communes of Hrubieszów District, where the population's ageing has the highest indices, the share of people aged over 60 was above 20%. In some of the communes, including the commune of Mircze, it reached up to 24%. The feminization coefficient in some border communes of the Hrubieszów District was not even 100 (e.g. in the commune of Ruda-Huta), as compared to 106 for Poland (Statistical Yearbook of Lublin Province...2004; [www.stat.gov.pl](http://www.stat.gov.pl)). The natural decrease and selective outflow of the population lead to distinct economic and social consequences. Emigrating population is dominated by young, better-educated and more entrepreneurial people, which becomes a serious hindrance to the economic growth and development of border areas. As a result, the so far unfavourable economic relations and structures in the region not only remain on the same level but may also intensify.

Agriculture constitutes the most important part of the economy of the research area as well as of the whole Lublin Province. This is reflected in a large percentage of the population employed in the first sector, high crop production and a large share of arable land within land use structure. This is the consequence of not only suitable agro-climatic conditions but also of the peripheral location of the region, which does not facilitate the development of industry and other economic undertakings. Despite a marked increase in the number of people employed in services, still over a half of the employed in the analysed communes obtain their income from farming. This results in a relatively low registered unemployment rate due to high unemployment hidden in agriculture. Registered unemployment affects mainly young people, especially those of a primary, lower-secondary or basic vocational background.

The importance of industry in the economy in the studied communes is only marginal. The only used mineral resources are construction materials like sand, gravel, clay and loam (L. Żelazny, Z. Strycharz 2001). The southern communes are situated in the zone of carbon resources of Lublin Coal Basin spreading from Parczew area up to Ukraine. However, coal is not mined here.

### **The issues of socio-economic development of border areas in bibliography**

Bibliography concerning the socio-economic situation of Polish-Ukrainian border areas is very rich. It includes general works analysing large spatial units (provinces or their groups), in which the border area of Lublin region constitutes only a small part of the whole. Another group comprises detailed works devoted particularly to the regions situated along the border and usually to selected issues. Special attention should be paid to one of them, namely to a very broad elaboration "Strategia rozwoju społeczno-gospodarczego Polski Wschodniej do roku 2020" (*The Strategy of Socio-economic Development of Eastern Poland until 2020*) (2007). The authors of particular chapters diagnose the condition of social and economic development of Eastern Poland and predict changes in the spatial structure of this area until 2020. Another interesting paper is *Pogranicze Polsko-Ukraińskie (Polish-Ukrainian Border Area)* (B. Kawalko, A. Miszczuk 2005), which concentrates on the regions situated on both sides of the Polish-Ukrainian border.

Among works that are more detailed there are subsequent volumes of the series "Bug Euroregion", which undertakes varied research problems (M. Bałtowski, 1994; J. Dębski, 1997; L. Dyczewski, 1997; P. Eberhardt, W. Gorzým-Wilkowski, A. Miszczuk, 1997; J. Kukielka, 1997; A. Miszczuk, 1997; Z. Pastuszek, 1997). Recently the contemporary socio-economic situation in the eastern part of Lublin Province has been depicted in a number of works (G. Babiński, 1997; J. Bański, 2000a, 2000b; B. Górz, 2002).

However, the scale of the analysis regarding socio-economic problems described in the majority of the above-mentioned elaborations does not allow for drawing conclusions concerning small spatial units – this gap is in a sense to be filled by the this paper.

### **The role and importance of the border**

In bibliography there exist many different definitions of the term "border", which reflects adopting various research perspectives. There are artificial, natural, cultural, administrative, political, state, economic, demographic,

historic, ethnic, sea and land borders. Their mutual feature is the fact that, as a rule, they limit areas of a relatively high level of homogeneity, e.g. ethnic or economic ones.

In the spatial grasp, a border is usually associated with a barrier of a natural or artificial character. Natural borders are usually identified with the morphological ones, i.e. those established along natural lines or areas of natural origin, e.g. mountain ranges, rivers, seas, lakes, etc. This approach is not fully appropriate due to the fact that in many cases the border along a river joins rather than separates the areas situated on its both sides. Therefore, it does not fulfil its basic function resulting from the definition of the term "border" (Z. Rykiel, 2006). Consequently, such a border can be considered artificial because it separates the elements of the whole integral area in an artificial way. An example of this can be the Polish western border drawn along the Odra River, which divided a number of cities into two parts. For instance, before 1945, today's Zgorzelec constituted the right-bank part of the city of Görlitz. The notion of "artificial borders" is mostly understood as borders not based on linear elements of the natural environment. However, all borders have been established by man only as a result of the widely understood "social agreement". In the case of morphological borders, nature helps man draw the borderline. It is in a way imposed and does not require detailed demarcation. As for the other types of borders, they are more difficult to establish since this needs more complicated and detailed agreements.

Borders can also be considered an element limiting the spatial range of an area. It can be an administrative unit, a region (natural, historic, economic one, etc.) or a state. According to such an approach, it can be of a linear (the border of a state, province, district, etc.) or zone-like character (e.g. the frontier of cultural regions). The zone-like character of some borders results from the type of phenomena that appear in a given territory. For example, the civilization-cultural frontier between Western and Eastern Europe is a specific zone (strip) situated somewhere along the eastern border of Poland. Also the borders of natural regions can be examples of non-linear borders.

Seen as a spatial barrier<sup>2</sup> to the flow of ideas, goods and population, the border can be divided into three basic categories: open borders, partly permeable and non-permeable ones. Permeable borders are not a real spatial impediment to flows. The best examples of that are the borders of administrative units or of historic-cultural regions in most countries<sup>3</sup>

---

<sup>2</sup> Z. Rykiel (1986) suggests a division of spatial barriers into formal and informal ones. Formal barriers are political ones whereas informal barriers are natural and cultural ones.

<sup>3</sup> In totalitarian countries there are situations when population flow limitations among primary administrative units are introduced; in the past this happened e.g. in the USSR.

(e.g. the borders of provinces). Another example can be the internal borders of the EU countries, which are becoming more and more open year by year (cf. W. Janicki, 2006). Partly permeable borders constitute a greater impediment to flows, which are controlled and often even steered. This also happens at the Polish – Ukrainian border, where all the flows are significantly limited. Non-permeable borders are fully developed spatial barriers hindering all types of flows or limiting them to the minimum. Such borders are, for instance, typical of conflicted countries (North and South Korea).

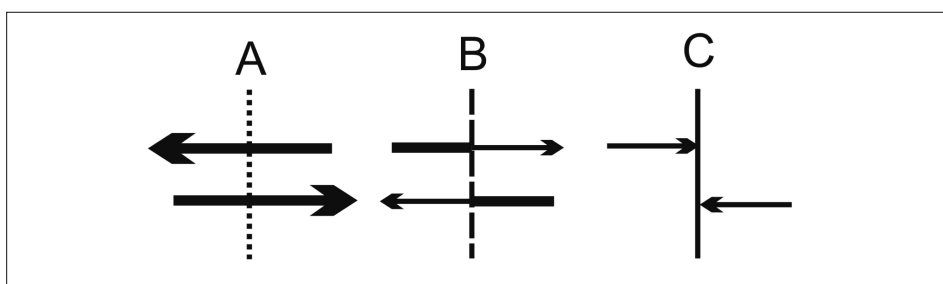


Figure 2. Types of borders by the level of their permeability; A – open, B – partly permeable, C – non-permeable

Source: own elaboration.

The border can be treated as a source of locational advantages stimulating local development. This happens particularly in the vicinity of border checkpoints constituting the so-called “linking points” around which trade, services, cultural life and interpersonal contacts are concentrated. The growth of trade, customs duty fees, cheap services, handling of transit traffic may successfully facilitate the development of border areas, as happens in centres located near Polish-German border checkpoints. On the Polish side, trade, hotel and other services expanded.

Regardless of the level of permeability of the state frontier, it, however, limits the mobility of the workforce and capital (E. M. Hoover, 1948). A. Loesch (1961) claims the border decreases the range of the influence of market centres situated far from the state border. There are a few reasons for that. These comprise high transport costs, high transaction costs (customs duties, permits, etc.) and investors’ reluctance towards developing larger investments (investment risk).

### Specificity of border areas

A characteristic feature of border areas is their geographic location on the edges of a particular unit. Such areas are usually distant from the capital city and the most important metropolitan areas, and thus not so well

accessible. From the economic and social perspectives, areas situated along borders (state, administrative ones) show features of economic peripheries, i.e. the regions of economic stagnation, poor infrastructure provision, low investment levels and population loss. As for the concepts of the core and periphery, they are in contradiction to the areas of a very high progress potential, where the most competitive enterprises of production and services are located.

It is commonly believed that eastern border regions in Poland indicate features typical of geographic and economic peripheries. Their specificity is dominated by negative conditions for economic development, among which the most essential ones comprise: economic mono-functionality (farming economy), insufficient infrastructure provision, lack of larger economic investments, low living standards, unfavourable demographic processes, low professional qualifications of population, limited transportation accessibility. Advantageous factors facilitating development include unpolluted environment, historically conditioned multiculturalism and potential possibilities of the development of border trade and services.

The development of border areas largely depends on their locational competitiveness, thus on the possibility of obtaining new economic investments. Among hard factors of locational competitiveness, technical infrastructure plays the most important role. This refers mainly to the transportation network and communications (K. Falkowski, 2006). As a rule, areas situated along state borders are relatively poorly equipped with these elements, which decreases their competitiveness. Also in terms of soft locational factors, qualitative in character (human potential, innovativeness, activity of leaders), border areas come off badly as compared to other areas.

### **Border crossings and transportation infrastructure**

In the contemporary world, well-developed technical infrastructure is seen as a factor indispensable for economic growth. Thanks to it, economic activity is started, run and dynamised, and living standards of the population in a given area improve. The investment attractiveness of a given area depends largely on the equipment with particular elements of technical infrastructure.

In the analysed area there is only one border checkpoint: Dorohusk (road and railway one) and one pedestrian border crossing Uśmierz-Waręż (simplified pedestrian border movement for the citizens of Poland and Ukraine inhabiting the border areas). Due to the functional character of the pedestrian border crossing, it will be omitted in the further analysis. The study of border checkpoints in whole Lublin Province shows that the average distance between checkpoints along the border with Ukraine is

about 40 km. This value is three times as high as the one of Poland's western border – the average distance between checkpoints there amounts to about 14 km. For this reason the permeability of the Polish-Ukrainian border should be evaluated as low.

The border crossing at Dorohusk is located about 600 metres away from the border river Bug at the state road No. 12 (E373), which is part of Berlin-Warsaw-Kiev road connection. Until 1990 it was used as a road pedestrian border crossing of simplified border movement. By virtue of 31<sup>st</sup> August 1990 agreements, the crossing was given the status of a checkpoint for passenger and goods traffic for the citizens of Poland and the USSR. In 1992 the Dorohusk-Jagodzin border crossing was opened to international passenger and goods traffic. State road No. 12 from Lublin to the border checkpoint in Dorohusk is going to be rebuilt to meet the required parameters of an expressway, which will considerably raise its importance and its influence onto the region's development.

Apart from the road border checkpoint, in Dorohusk there is also a railway border crossing situated at Warsaw-Kiev route 7. The railway is a fully electrified double-track. Until 1989 the railway border checkpoint was used mostly for goods exchange between Poland and the USSR. Currently, passengers and goods trains are checked at customs clearance here. The railway needs thorough modernization of both its tracks and infrastructure, which is due to start after 2014. Such a remote perspective, growing competitiveness of road transport and a rising number of cars and lorries will soon undoubtedly lead to a decline in the significance of railway transport.

### **Transborder cooperation**

Enterprises undertaken together by the population of areas situated on both sides of the border are the essence of any transborder cooperation. The principal aim of such initiatives is to establish and develop friendly relations between the inhabitants of the neighbouring countries. This is realized by various agreements signed by different tiers of government and between administrative units, different organizations and institutions. Another parallel form of cooperation is direct contacts between neighbouring communities and individuals, which may take the form of economic agreements or so-called free cooperation (B. Kawalko, 2006; M. Proniewski, M. Proniewski, 2006).

Border area cooperation takes place at different levels. In the economic sphere it comprises industrial and trade initiatives, economic consulting and mediation as well as area promotion. In the field of infrastructure, cooperation mainly concerns the improvement in the condition of transport network, communal infrastructure, border crossings and small border movement. In terms of the natural environment, joint activities are aimed



at decreasing damage to natural environment and preserving it. As for social aspects, various media enterprises, joint educational, sports and cultural events are held in the borderland. Borderland communes are also involved in children and youth exchange programmes (M. Proniewski, M. Proniewski, 2006).

Transborder cooperation is undertaken in the areas situated along the state border. These regions have similar natural features, common history and cultural heritage. In such areas, thanks to common activities, the negative dividing function of the border weakens, differences between the standards of socio-economic development disappear. Simultaneously, there arise favourable conditions for further homogenous development of areas in the neighbouring countries. In this context, it can be stated that Poland's eastern border regions boast advantageous conditions facilitating transborder cooperation.

More efficient transborder cooperation depends on a number of external factors and factual socio-economic potential in border areas. The former group comprises formal legal conditions resulting from Poland's and Ukraine's current geopolitical situation, their foreign policies, signed international agreements and functioning of internal state and self-government authorities in both countries. An event which has had the greatest influence on the international cooperation on the eastern border areas was Poland's entry into the EU (May 1<sup>st</sup>, 2004), followed by the entry into the Schengen Zone (December 22<sup>nd</sup>, 2007). Polish membership in the EU meant the acceptance of therein-binding activity directions, also in terms of transborder cooperation. The priorities of such activities are depicted in the following EU documents: the Lisbon Strategy, the EU Integration Policy and New Financial Perspective 2007–2013 (*Wspólna polsko-ukraińska...*, 2005).

Poland's eastern border became an external EU border. Therefore, Ukrainian citizens need to obtain visas when entering the EU. The visa obligation imposed certain formal limitations on the so far free transborder exchange and caused periodical decline in the flow of people and goods. However, in the long run, transborder population flows did not decrease substantially. The proportions between the number of Ukrainian and Polish citizens crossing the eastern border equalized. This results from the growth in Poles' share and activity in terms of traveling and undertaking economic transborder initiatives (A. Miszczuk, 2006).

Another group of conditions that should be viewed as barriers to the development of transborder cooperation in the studied area comprises local factors arising from the specificity of the state border. Until 1991 Poland's eastern border did not favour international contacts. It was a very hermetic border of low permeability. This caused a number of consequences for contemporary transborder initiatives. Among those, the most important



ones are the following: substantial weakening or even disappearance of earlier economic bonds and interpersonal contacts, economic poverty, poor transportation accessibility and a small number of border crossings (B. Kawałko, 2006; A. Miszczuk, 2006).

After the disintegration of the Soviet Union in 1991, the eastern border of Poland changed its character and became more open to the population and investment flow. Thanks to the revival of family and neighbour relations, informal contacts are developing on both sides of the border. This creates the foundations for further growth in various forms of transborder cooperation.

Low economic potential in the borderland is a barrier which cannot be eliminated within a short period of time. The peripheral location and underinvestment of these areas of yet the communist times is contemporarily reflected in a small number of economic entities, definitely insufficient number of border crossings and badly developed transportation network. It is worth observing that these problems concern areas situated on both sides of the border as in both neighbouring countries border areas have distinct features typical of peripheral location.

Besides limitations of transborder contacts resulting from the poor accessibility of checkpoints, additional difficulties are connected with the way customs clearance works. Its efficiency is very unsatisfactory, which is reflected by frequent lorry queues waiting for customs clearance. The causes of it lie in low capacity of customs terminals and a lack of any activities leading to the improvement of the situation, especially on the Ukrainian part. Another reason is lack of agreement concerning joint customs control and a high level of corruption among Ukrainian customs officers (A. Miszczuk, 2006). Hence, there arises the necessity of double custom clearance on both sides of the border.

The main institutionalized form of cooperation in the analysed area is the Transborder Association of "Bug" Euroregion. It was established in September 1995 in the Polish-Ukrainian borderland and in 1998 Belarusian borderland became part of it as well. Administratively, the Euroregion consists of three administrative units: Lublin Province in Poland, Brest Oblast in Belarus, Volyn Oblast in Ukraine and two districts from Lviv Oblast. The principal objective of the Euroregion is to run trilateral cooperation in border areas. According to those involved in the Euroregion's activity, this cooperation should focus mostly on "... spatial management, transportation, goods shipment, communications, education, health care, culture, sport and tourism, preservation and improvement of the natural environment, elimination of threats and the effects of natural disasters, development of contacts among the borderland population, cooperation between institutions and economic entities" (Związek..., 2008; transl. by the author).

Apart from the Euroregion, a common form of self-governmental cooperation in border areas is agreements between the authorities of districts, communes and cities neighbouring each other on both sides of the border. This kind of agreement concerns issues being within the competence of units signing them, i.e. culture, education, sport, health care and economic activity.

### **The influence of the border on the development of a commune in the opinion of its inhabitants**

At the turn of 2007/2008 the inhabitants of six analysed communes were surveyed about the contemporary socio-economic situation of the borderline area. In total, there were conducted 608 surveys. The questionnaire was run in cooperation with primary and lower-secondary schools, which resulted from technical reasons – the pace of receiving feedback and credibility of the obtained responses were to be guaranteed by cooperation with the head teachers of the above mentioned schools. As a result, the majority of respondents were parents of the schools' students. Therefore, the most numerous representation was people aged 36–45 (43.9% of the surveyed). Relatively large groups of the surveyed consisted of people aged 26–35 (24.7%) and 46–55 (20.1%), whereas the remaining age groups (up to 25 and above 55) were not represented so numerously. Almost 2/3 of respondents were women (66.1%), which also probably results from the fact that the questionnaire was conducted through schools.

Among the questioned, most respondents were people of a secondary school background (38.3%). There was a relatively large number of people with basic vocational education. However, it must be observed that as many as 20.1% of the surveyed had an academic background, which in relation to the average in rural areas (about 5%) is a very high value. It should be noted that the questionnaire was carried out in the centres of communes with relatively large numbers of well-educated people, which in turn is reflected in the types of jobs they did. Although the largest group was made up of farmers (34.9% of the surveyed) with lowest level of education, the group of hired workers with a relatively good background was almost as numerous (28.9%).

The surveyed are generally satisfied with the fact of living in a borderline commune. When asked *"Are you satisfied with living in this commune?"* 53.8% answered "yes" whereas only 22.4% said "no". The remaining respondents held no opinion about it. There were slightly more dissatisfied men than women.

It was found that there is only a slight difference between analysed areas regarding the level of satisfaction with the place of living, with more positive opinions held by the inhabitants from peripheral areas, surprisingly. In two communes situated near the border crossing in Dorohusk the

percentage of people satisfied with their place of living was 52.7%, whereas among the population inhabiting four peripheral communes it was 54.3%. To a certain extent, this may be explained by the cotemporary bad experiences of commune inhabitants connected with the existence of the checkpoint and transborder movement. As a representative of local commune authorities said, the proximity of the border, besides its advantages, has also a number of drawbacks. These mainly comprise long queues of lorries, which makes transportation along the commune's main road very difficult. This results in numerous car crashes and dangerous accidents. Busy roads and long queues at border crossings increase environmental pollution in the areas situated not only along the checkpoint access road but also in Dorohusk, which is visited by drivers. Moreover, such a situation leads to increased crime rate and pathological incidents like disturbances and rows caused by people under the influence of alcohol, street fights and thefts.

The influence of the borderline location on the economic situation is in both groups of communes evaluated almost identically. In the region of Dorohusk it is estimated as favourable by 37.8% of the surveyed and in the peripheral area by 37.3%. Respectively, 16.9% and 9.6% of the questioned think of it as negative. A large group of inhabitants, 45.1%, believes that the borderline location of a commune has no influence on its economic situation.

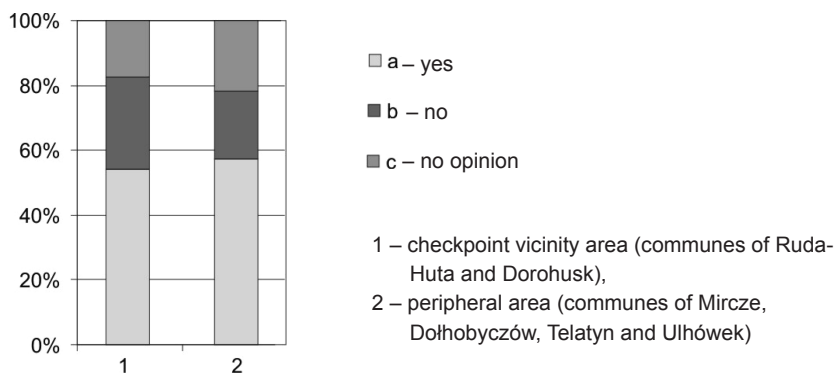


Figure 3. Structure of responses to the question: "Are you satisfied with living in this commune?"

Source: own elaboration.

By providing answers to the second question, respondents evaluated their commune in terms of its technical infrastructure provision, access to transportation, health care, education shops and services. Infrastructure (waterworks system, gas pipeline, sewage system) was assessed least favourably. Almost 30% respondents consider it good or very good and

over one fourth (26%) bad or very bad. It should be noted that the assessment of technical infrastructure in the commune of Dołhobyczów was extremely low (see figure 4). The remaining elements were evaluated much more positively, with the significantly highest estimates of access to education. As many as 66.8% evaluate it as good or very good and only 7.2% as bad or very bad. The clearest differences between both areas were those regarding accessibility of transportation, which is an understandable regularity – as many as 31.8% good or very good estimates in the region of Dorohusk and only 8.6% in the other area (see figure 5).

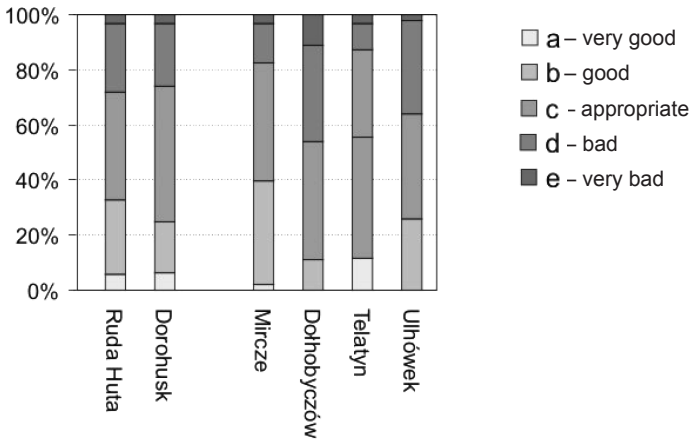


Figure 4. Structure of responses to the question "Evaluate your commune's provision of technical infrastructure"

Source: own elaboration.

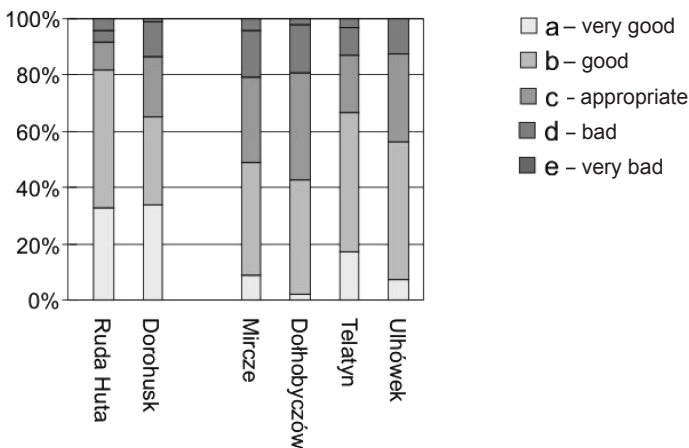
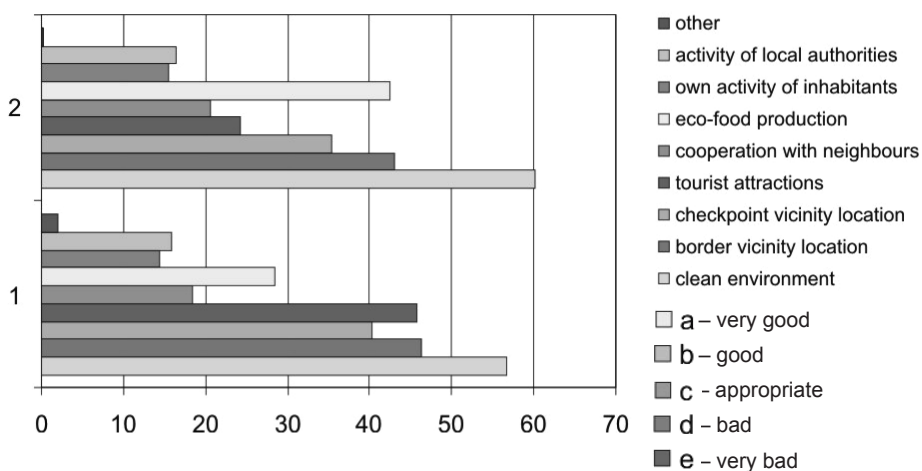


Figure 5. Structure of responses to the question "Evaluate your commune in terms of accessibility of transportation" by communes

Source: own elaboration.

The influence of borderland location onto the economic situation of communes is in both groups evaluated almost identically. In Dorohusk area 37.8% of the interviewees pointed to advantages of such location, while in the other area the share amounted to 37.3%. Disadvantages of such location are noticed by 16.9% and 9.6% of interviewees, respectively. A large share of inhabitants (45.1%) believes there is no influence of borderland location onto the economic situation of communes.

The inhabitants of the whole research area see the chances of development mainly in clean environment attractive for tourists. In the case of both studied regions, they also point to communes' borderline location as another factor facilitating their development. Interestingly enough, the percentage difference between these areas in this respect is quite small – only 3.3% percentage points. Those living in proximity of a border crossing see such chances in the tourist values of their place of living as well as its closeness to the checkpoint. The population of the peripheral area places their hopes on the production of ecological food and closeness to the border checkpoint which is located quite a distance away from where they live. However, at the same time, only every fifth respondent sees development opportunities for their commune in cooperation with their neighbours from over the border. In this respect, the differences between the surveyed areas are very low (2.2 percentage points; see figure 6).



1 – checkpoint vicinity area (communes of Ruda-Huta and Dorohusk), 2 – peripheral area (communes of Mircze, Dołhobyczów, Telatyn and Ulhówek)

Figure 6. Development chances of communes according to their inhabitants

Source: own elaboration.

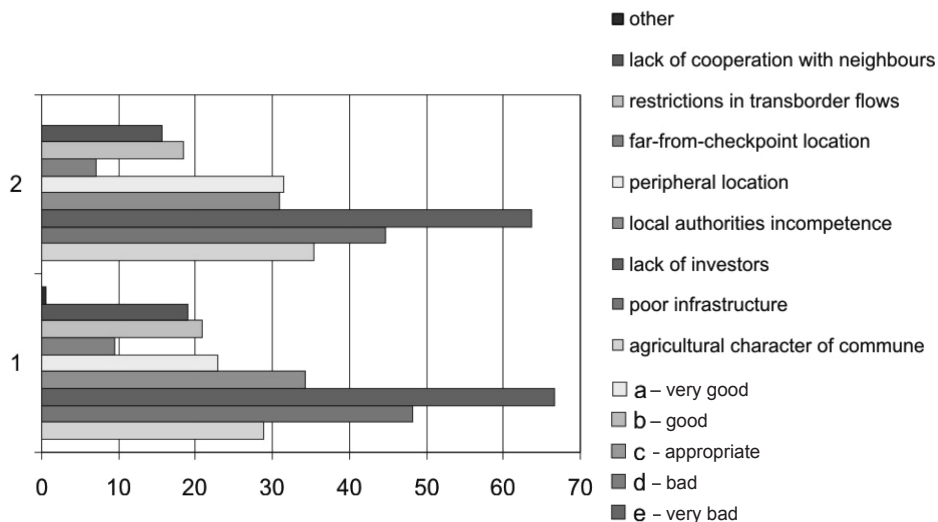
It is noticeable that the importance of the inhabitants' and local authorities' activity is evaluated as insignificant and low. It can be generally concluded that population in borderland communes sees development opportunities for their communes mainly in external factors which are not dependent on them. They treat their own and their leaders' activity as less important. However, there can be observed a certain discrepancy. For example, in the commune of Telatyn over 31% respondents believe that the chances for their commune's prosperity lie in the activity of its inhabitants whereas in the neighbouring commune of Dołhobyczów only 5% of the questioned present a similar point of view. This probably to a large extent results from population's stagnation and the feeling of hopelessness and inability to have an influence on what is happening around them, which has accompanied them since the times of communism. Such views are deeply rooted especially among the inhabitants of post-state farm areas in the southern part of the border area. Very often, such passive attitude is the effect of little activity of local authorities who do not want or cannot encourage their inhabitants to undertake individual initiatives.

According to their inhabitants, among the development barriers of border regions the most important one is a lack of investors (see figure 7). The fact is confirmed by over 70% of the surveyed in the communes of Ruda-Huta, Dołhobyczów and Ulhówek. A slightly smaller percentage of such responses was obtained in the remaining units. Only in the commune of Telatyn it was considerably lower than average (64.6%) and was 42.2%. However, it should be noted that due to very good soils, the economy of this commune was based almost exclusively on agriculture. Such a direction of development is still commonly propagated and no industrial plants are expected to be established there.

The second most important problem of border communes is the low level of social and technical infrastructure provision, which was stressed by 45.9% of the surveyed. However, the percentage discrepancy was quite big: in the commune of Dołhobyczów as many as 58.3% and in the commune of Telatyn only 34.3%.

A lack of new investments results in maintaining the region's mono-functional character and agricultural economy. On average, every third respondent stated that the agricultural character of the region is a factor that hinders its development. A similar percentage of people (32.1% on average) pointed to the incompetence of local authorities. The greatest number of the dissatisfied was in the commune of Dorohusk (55.4%) and the smallest in the communes of Ruda-Huta (13%) and Mircze (14.7%).

The development of border regions is also hampered by their peripheral location, which was noticed by a lower percentage of respondents from the checkpoint area (22.9%) than from peripheral areas (31.4%). This difference confirms that research areas were selected properly. Approximately, every fifth respondent viewed limitations of border movement and every sixth – a lack of



1 – checkpoint vicinity area (communes of Ruda-Huta and Dorohusk)

2 – peripheral area (communes of Mircze, Dołhobyczów, Telatyn and Ulhówek)

Figure 7. Barriers of development of communes according to their inhabitants

Source: own elaboration.

cooperation with the neighbours from over the border – as a progress impediment.

The development of communes in both of the analysed areas over the last 15 years was estimated in a similar way. 29.6% respondents gave very good and good marks, 39.8% – appropriate and 30.8% – bad and very bad (see figure 8). However, the results differ surprisingly depending on a particular commune. The smallest number of the satisfied was observed in the commune of Dołhobyczów, where as many as 53.4% of the surveyed gave negative answers whereas in the neighbouring commune of Mircze there were only 8.8% of such responses. Again, the situation in the commune of Dołhobyczów varies a great deal from the average in the other units. A lack of investments, economic backwardness and the poor level of infrastructure in the commune were also enumerated by the office workers of the therein Commune Council. It was emphasized that the existence of the border without a checkpoint causes a feeling of marginalization and isolation among inhabitants.

Commune development evaluation differed depending on the educational background of respondents, however, the discrepancy was quite small. Generally, those who were worse educated held more favourable opinions of contemporary changes. Among people with primary and basic vocational education, 41% estimated them positively and every fifth respondent saw them as bad or very bad. Among people with a secondary and academic background 37% assessed them as good and 24% as bad.



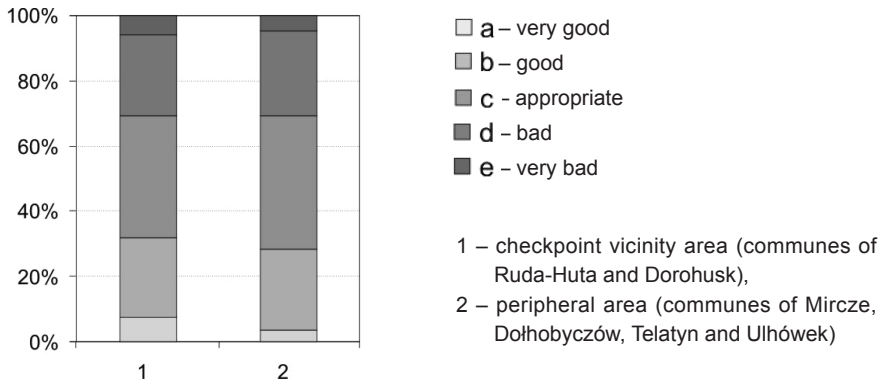


Figure 8. Structure of responses to the question "How do you assess your commune's development over the last 15 years?"

Source: own elaboration.

When asked about the future development of communes, their inhabitants clearly diversify their functional structure and see their progress prospects in various branches of economy (see figure 9). They believe forestry will not be of great significance in this respect due to the low level of afforestation in the studied communes. In the peripheral regions great importance is attached to agriculture (65.1%), which should be considered a proper evaluation of real development perspectives for the region, all the more, farming has a long tradition and great natural conditions for development. Another alternative is the growth of trade and services (44.2%) and the third one - tourism and recreation (37.6%). This clearly contrasts with communes situated near border checkpoints, where farming is of far smaller significance (37.3%). Here future belongs mainly to the development of tourism (55.7%) and industry (47.3%).

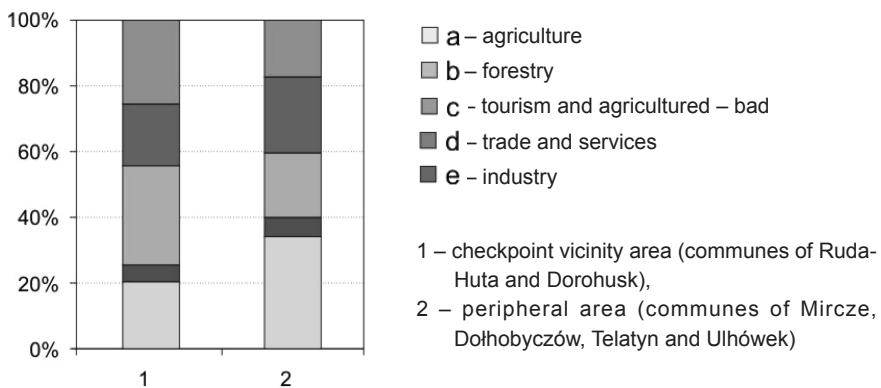


Figure 9. Structure of responses to the question "Which direction should your commune develop in?"

Source: own elaboration.

The suggestions to direct the development of communes towards tourism and recreation do not seem to be appropriate as they appear to be just wishful thinking. It is quite unlikely that in peripheral areas tourism will be of the same importance as farming. It will just play a complementary role to agriculture. Many people from large cities in central and eastern Poland more and more often buy recreational lots in these areas. Therefore, the communes' tourist-recreational function may have good perspectives for future development.

Interestingly enough, the expected importance of services and trade is greater in peripheral areas than in those situated along the important transportation route and near the checkpoint. It seems that the inhabitants of Dorohusk area put too much emphasis on industry which so far has been quite neglected.

The surveyed population of both studied areas estimated the activity of self-governments in a similar way. However, a large group, i.e. as many as 30% held no opinion about it. It is probably the most socially passive group lacking knowledge about the activity of local self-governments. The percentage of positive and negative answers is similar (respectively 27% and 33.6%), however, when seen from the perspective of particular communes there arise clear differences (see figure 10). For example in the commune of Dorohusk only every tenth respondent evaluated the activity of the self-government positively while as many as 47.5% disapproved of it. In the neighbouring commune of Ruda-Huta 52% are satisfied and only 19% evaluate this kind of activity negatively.

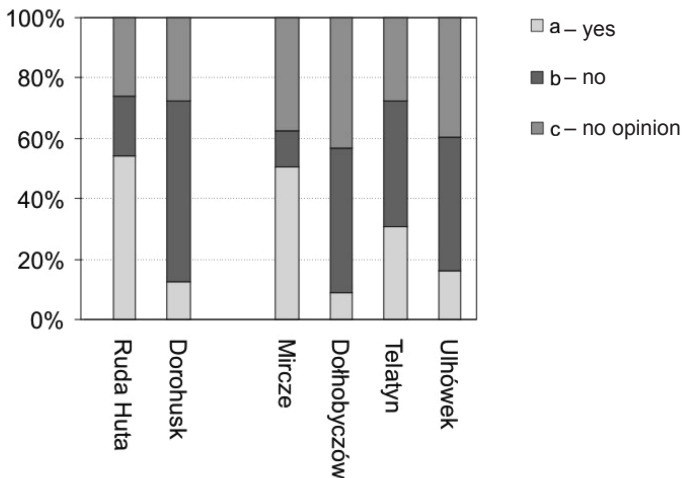


Figure 10. Structure of responses to the question "Are you satisfied with the activity of local authorities?"

Source: own elaboration.

Borderland population remains mostly indifferent to their neighbours living over the border (see figure 11). Generally, such an attitude is represented by over 67% respondents in border communes. Positive attitude is declared by 23.7% of respondents, with only a slight spatial distribution, while a negative attitude is characteristic of only 7.7%. A particularly high percentage of people critical of their eastern neighbours is found in the commune of Dorohusk – as many as 18.8%. This probably results mainly from the above-mentioned negative experiences of the local population connected with the functioning of the border crossing. All the described problematic situations that Ukrainian visitors participate in evoke negative emotions among the inhabitants of the commune and affect their relations with eastern neighbours.

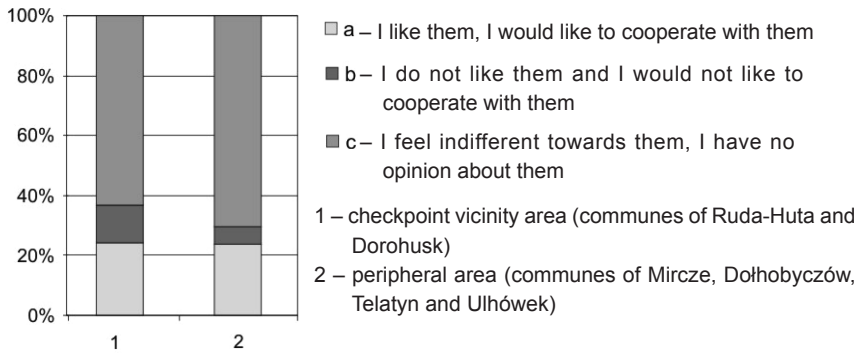


Figure 11. Structure of responses to the question “What is your attitude towards your neighbours living on the other side of the border?”

Source: own elaboration.

A half of respondents give a positive evaluation of the cooperation between local authorities and those from over the border, and the distribution of responses is almost identical in the case of both research areas.

Essential information supplementing the so far analysed relations can be found in responses to another question. It regards the evaluation of changes in the situation of particular job groups and changes of living standards. The largest group of the surveyed (about 48%) believes the situation of farmers did not change. At the same time, a large percentage of respondents pointed to improvement (about 27%) and to worsening in the economic situation of farmers (30%). The distribution of responses concerning hired workers is quite similar. Differences between both research areas were insignificant.

The changes in the economic situation of the owners of private enterprises were assessed much more positively. A similar share of respondents saw

improvement or a lack of changes (41.6% and 44.7% respectively). On the other hand, significantly fewer people evaluated the changes in the entrepreneurs' economic situation negatively. However, the share of such answers among entrepreneurs themselves was noticeably larger (over 20%).

23.4% of the surveyed claim the average living standard of the population from border areas improved. 27.3% respondents claim that it declined. Differences between both research areas were quite small, however, at the level of communes they were clearly visible. Again, the commune of Dołhobyczów has an exceptionally high percentage of negative estimates (42.7%), with only 16.5% of positive opinions, whereas in the communes of Ruda-Huta, Mircze and Telatyn the percentage of positive responses was between 29–32% and negative ones between 16–17%. The differentiation of responses by gender and level of education was insignificant.

The surveyed confirmed the phenomenon of progressive social stratification and growing differences between living standards. About 38% respondents in both research areas claim that differences between living standards rose and 15.6% observed their decline. What seems interesting, response differentiation is again considerably greater within both analysed areas (at the level of communes) than between them.

In the case of both research areas, about 43% respondents confirmed that investments co-financed by the EU can be seen in their communes. The percentage of negative responses was 23.9% near the border checkpoint and as many as 34.6% in the peripheral area (see figure 12). To a certain extent, this may be caused by a lack of proper information or social interest, nevertheless, to an extent it reflects communes' status quo. Interviews with the representatives of local authorities indicate that recent years have shown more intensive and effective attempts to obtain EU funds for investments. The few attempts made before as a rule ended in failure.

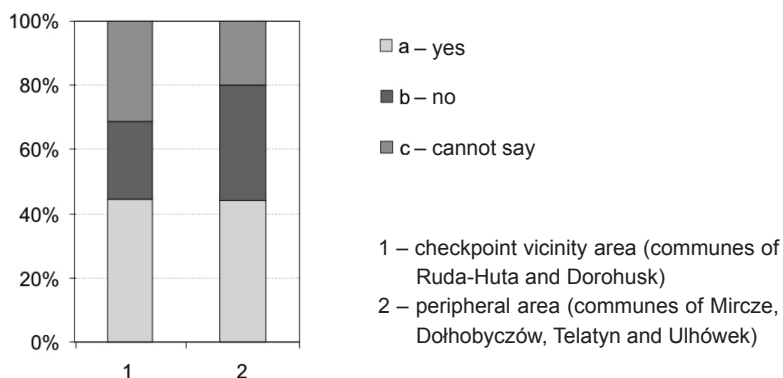


Figure 12. Structure of responses to the question: "Can you see investments subsidized by the EU in your commune?"

## **The influence of the border on the development of a commune according to local authorities**

Apart from the questionnaire conducted among the inhabitants of selected communes, the research comprised interviews with representatives of local administration and self-government. The aim of the interviews was mainly to obtain information about how local authorities perceive the influence of borderland location on the development of communes and about how they assess cooperation with neighbours from Ukraine.

According to self-government representatives, the studied communes are mainly of an agricultural character. Therefore, it is difficult to expect any significant changes in this respect. Nevertheless, it is hoped that communes' tourist function will gradually increase. It is going to be based on agro-tourist and other services as well as commercial economic activity in the areas where agriculture faces difficulties connected with less favourable natural conditions. Some communes intend to develop their dwelling functions of two kinds. The so called second houses belonging to the inhabitants from Warsaw, but also from Lublin and Chełm are springing up in attractive tourist areas such as the valley of the Bug River. Their number will certainly rise due to a large interest of people from outside the region in these areas. In other communes the authorities see the chances for development in the growth of the so called "bedroom function" of their communes for nearby larger cities. Those are, however, rather distant plans.

The border location favours the prospective development of a commune only if it is situated near a border checkpoint. In all other cases such closeness to the border is a barrier hindering proper development of nearby communes. On the other hand, the proximity of the border may also be an asset to all the communes as it facilitates project preparation together with a foreign partner within the framework of transborder cooperation. It is often emphasized that a lack of proper regulations and border movement difficulties are perceived as hindrances to transborder cooperation.

In the opinion of the representatives of local authorities, Poland's entry into the Schengen Zone hindered the commercial and services activity in border communes. Although "big business" could face new conditions effectively and functioned quite well, "small business" was seriously affected by this process, the small border movement also declined substantially. Therefore, an important step to make is to simplify the procedures of obtaining visas for neighbours from over the border and to introduce proper regulations concerning economic cooperation. It is the state authorities that are to be blamed for this situation.

Most analysed communes are interested in establishing new border crossings. The local border movement could lead to the economic revival

especially of trade and services. This would create job opportunities at the very checkpoints although, as it appears, in reality they do not generate as many new job positions as expected. Usually, directly at the border crossing there are from just a few to up to twenty employees.

Border communes cooperate with their neighbours from over the border. However, this cooperation is limited to cultural events, sports competitions and visits. This does not bring in any measurable income to communes. All that partly results from the fact that local authorities on the other side of the frontier are not interested in establishing and maintaining cooperation.

All communes observe a very unfavourable demographic situation with constant natural decrease, ageing of the population, the outflow of young people to large cities and abroad. These processes lead to the further peripherization of border communes, they also limit increase possibilities of non-agricultural economic functions.

The activity of Bug Euroregion, or rather its lack, came in for very strong criticism. The local self-government sees no sense in the existence of a Euroregion whose activity is limited to actions existing almost solely on paper. The blame for this is put mainly on provincial authorities. The only noticeable form of Euroregion's activity is the distribution of financial means for minor infrastructural investments.

So far, communes very seldom participated in projects financed from external sources. It is the fault of local authorities which either did not apply for such funds or prepared and justified submitted applications and projects in an improper way. Nevertheless, following Poland's entry into the EU, there has been an increase in the interest of authorities and the very inhabitants in obtaining extra funds for investments. Individuals, especially farmers, want to use these means to expand and modernize their farms. Communes, in turn, try to use the funds mainly to create or modernize road, waterworks and sewage infrastructure or to renovate educational or cultural centres.

The technical and social infrastructure provision varies depending on a particular commune. Most respondents stress that over the recent years there has been observed an improvement in the communes' provision of technical infrastructure. Most households are fitted with waterworks, therefore, new investments concern mainly sewage systems. Respondents pointed also to the bad quality of road surfaces and as a consequence to transportation difficulties. In terms of schools and health care, the situation of social infrastructure provision is much worse. The natural decrease and migratory outflow of the population lead to a decline in the number of schoolchildren. This makes communes close down schools or combine classes. On the other hand, most schools are very well equipped, particularly

with computer hardware. Unfortunately, a large majority of communes have difficult access to basic medical services, which are concentrated in big cities or centres of communes.

## **Conclusions**

The analysis of the questionnaire survey and interviews indicates that the based on bibliography thesis about the border constituting a spatial barrier to the development of peripheral areas finds confirmation in the studied area. The feeling of peripherization among borderland population is quite strong although they place their village or town location as low as fifth among eight development hindrances included in the questionnaire.

The hypothesis that there is a significant difference in the assessment of the socio-economic growth of border areas situated in the direct closeness or within a large distance of border crossings found no unequivocal confirmation in the research. The population from border crossing area assesses transportation accessibility of their communes much more favourably than the inhabitants of peripheral regions, there also appear differences concerning the estimation of availability of education, trade and services. The population of both contrasted areas evaluate technical infrastructure in a similar way, and consider it low. The availability of health care is assessed better in peripheral areas. In most other cases, the differences between both studied areas are surprisingly insignificant. A little over 1/3 of the surveyed in both areas see an advantageous influence of border location onto the economic situation of communes. Yet, in both cases, the most numerous groups are those that believe border location has no impact on communes' situation. Nevertheless, it is in this very location that the inhabitants of both research areas see the possibility for further development. However, they do not expect any cooperation with the neighbours from the other side of the border. They rather look forward to the development based on the use of their region's natural values – unpolluted environment could favour the growth of tourism and ecological farming and industry could develop in the vicinity of border crossing.

However, the most interesting conclusions can be drawn on the basis of a comparative analysis regarding questionnaire results at the level of communes. In many cases the response diversity is much greater within a particular research area than between the two studied areas. The most noticeable differences occur between communes in terms of their assessment of development opportunities resulting from the activity of particular communes' population, competences of local authorities, general economic development of communes, infrastructure level and living standards. Communes with estimates higher than average are usually Ruda-Huta, Mircze and sometimes also Telatyn. In the communes of Ułhówek and



Dorohusk the estimates were, as a rule, a little lower while in the commune of Dołhobyczów definitely the lowest. Therefore, it can be concluded that according to the inhabitants, it is not the distance from a border crossing and an important transportation route that condition the socio-economic growth of their communes, but other factors.

### References:

- Babiński G., 1997, *Pogranicze polsko-ukraińskie: etniczność, zróżnicowanie religijne, tożsamość*, Nomos, Kraków.
- Bałtowski M. (ed.), 1994, *Problemy współpracy przygranicznej Polski, Białorusi i Ukrainy*. Euroregion Bug, 1, Politechnika Lubelska, Norbertinum, Lublin.
- Bański J., 2000a, *Identyfikacja rolniczych obszarów problemowych w polsko-ukraińskiej strefie przygranicznej [in:] Szanse rozwoju rolnictwa i obszarów wiejskich na pograniczu polsko-ukraińskim*, XVI Seminarium Geograficzno-Rolnicze, UMCS, Komisja Geografii Rolnictwa i Gospodarki Żywnościowej PTG, Lublin, p. 17-25.
- Bański J., 2000b, *Poziom rozwoju rolnictwa w powiatach przy granicy polsko-ukraińskiej [in:] Agroturystyka - szansą aktywizacji przygranicznego powiatu lubaczowskiego w aspekcie przystąpienia do Unii Europejskiej*, materiały Międzynarodowej Konferencji Naukowej w Horyńcu Zdrój, PWSZ w Jarosławiu, Starostwo Powiatowe w Lubaczowie, Stowarzyszenie Rozwoju Ziemi Lubaczowskiej, Jarosław, p. 97-105.
- Dębski J., 1997, *Studium kierunkowe zagospodarowania przestrzennego Euroregionu Bug*, Euroregion Bug, 10, Politechnika Lubelska, Norbertinum, Lublin.
- Dyczewski L., 1997, *Spółeczno-kulturowe czynniki rozwoju regionu Środkowo-Wschodniej Polski i Euroregionu Bug*, Euroregion Bug, 14, Norbertinum, Lublin.
- Eberhardt P., Gorzym-Wilkowski W., Mischczuk A. 1997, *Przemiany demograficzno-osadnicze na pograniczu polsko-białorusko-ukraińskim [in:] M. Bałtowski (ed.) Euroregion Bug, 8*, Politechnika Lubelska, Norbertinum, Lublin.
- Falkowski K., 2006, *Czynniki i ograniczenia konkurencyjnego rozwoju regionów przygranicznych. Ujęcie teoretyczne [in:] E. Reichmann (ed.) Wschodnie pogranicze rozszerzonej Unii Europejskiej. Czynniki konkurencyjności*, SGH, Warszawa, p. 15-33.
- Górz B. (ed.), 2002, *Szanse rozwoju rolnictwa i obszarów wiejskich na pograniczu polsko-ukraińskim*, XVI Seminarium Geograficzno-Rolnicze, UMCS, Komisja Geografii Rolnictwa i Gospodarki Żywnościowej PTG, Lublin.

- Hoover E. M., 1948, *The Location of Economic Activity*, McGraw-Hill, New York-Toronto-London.
- Janicki W., 2006, *Analiza migracji wewnętrznych i międzynarodowych na obszarze Unii Europejskiej – razem, czy osobno?* *Studia Demograficzne*, No. 2/150, p. 66–77.
- Kawałko B., Miszczuk A. (eds.), 2005, *Pogranicze Polsko-Ukraińskie. Środowisko. Społeczeństwo. Gospodarka*, Wyższa Szkoła Administracji i Zarządzania, Zamość.
- Kawałko B., 2006, *Granica wschodnia jako czynnik ożywienia i rozwoju społeczno-ekonomicznego regionów przygranicznych. Synteza. Ekspertyza przygotowana na potrzeby Strategii rozwoju społeczno-gospodarczego Polski wschodniej do roku 2020* (Available at [http://www.mrr.gov.pl/polityka\\_regionalna/SRPW\\_2020/Dokumenty%20i%20ekspertyzy/Strony/dokumenty.aspx](http://www.mrr.gov.pl/polityka_regionalna/SRPW_2020/Dokumenty%20i%20ekspertyzy/Strony/dokumenty.aspx)).
- Kukielka J. (ed.), 1997, *Diagnoza stanu sieci drogowej polskiej części Euroregionu Bug na tle ruchu drogowego*, Euroregion Bug, 5, Politechnika Lubelska, Norbertinum, Lublin.
- Loesch A., 1961, *Gospodarka przestrzenna. Teoria i lokalizacja*, PWN, Warszawa.
- Miszczuk A. (ed.), 1997, *Zagadnienia wielokryterialnej delimitacji Euroregionu na pograniczu Polsko-Białorusko-Ukraińskim*, Euroregion Bug, 9, Politechnika Lubelska, Norbertinum, Lublin.
- Miszczuk A. 2006. *Zewnętrzna granica Unii Europejskiej – Ukraina – możliwości wykorzystania dla dynamizacji procesów rozwojowych. Ekspertyza przygotowana na potrzeby Strategii rozwoju społeczno-gospodarczego Polski wschodniej do roku 2020* (Available at [http://www.mrr.gov.pl/polityka\\_regionalna/SRPW\\_2020/Dokumenty%20i%20ekspertyzy/Strony/dokumenty.aspx](http://www.mrr.gov.pl/polityka_regionalna/SRPW_2020/Dokumenty%20i%20ekspertyzy/Strony/dokumenty.aspx)).
- Pastuszek Z., 1997, *Przejścia graniczne i ruch graniczny w obszarze Euroregionu Bug*; Euroregion Bug, 7, Politechnika Lubelska, Norbertinum, Lublin.
- Proniewski M., Proniewski M., 2006, *Zewnętrzna granica Unii Europejskiej – Białoruś – możliwości wykorzystania dla dynamizacji procesów rozwojowych. Współpraca transgraniczna. Ekspertyza przygotowana na potrzeby Strategii rozwoju społeczno-gospodarczego Polski wschodniej do roku 2020* (Available at [http://www.mrr.gov.pl/polityka\\_regionalna/SRPW\\_2020/Dokumenty%20i%20ekspertyzy/Strony/dokumenty.aspx](http://www.mrr.gov.pl/polityka_regionalna/SRPW_2020/Dokumenty%20i%20ekspertyzy/Strony/dokumenty.aspx)).
- Rykiel Z., 1985, *Zagadnienia regionalnych systemów osadniczych*, *Studia KPZK PAN*, 85, Warszawa.
- Rykiel Z., 2006, *Podstawy geografii politycznej*, PWE, Warszawa.

- Strategia rozwoju społeczno-gospodarczego Polski Wschodniej do roku 2020, 2007, Ministerstwo Rozwoju Regionalnego, Warszawa.
- Związek Transgraniczny Euroregion Bug, 2008 ([www.euroregionbug.pl](http://www.euroregionbug.pl)).
- Żelazny L., Strycharz Z. (eds.), 2001, Raport o stanie środowiska województwa lubelskiego w 2000, Biblioteka Monitoringu Środowiska, Lublin.

Małgorzata Flaga

## **Polesie as an area of depopulation in the Polish-Ukrainian borderland**

### **Introduction**

Polesie is a geographical region that extends across a wide stretch of land between the fringe areas of Poland, Belarus, Ukraine and Russia. Its Polish subunit, whose entirety makes up a relatively insignificant portion of the whole, is commonly referred to in geographical publications as Lublin Polesie (A. Chałubińska, T. Wilgat, 1954; T. Wilgat, 1963). Its Ukrainian extension, whose area is notably greater than that of its Polish counterpart, has conversely acquired the name: Ukrainian Polesie. The western reaches of the region, which converge to form the so-called Polesie proper, have in turn been recorded in literature pertaining to the subject as Volhynian Polesie (F. Zastavnyj, W. Kusiński, 2003).

The region at hand has long come under the uncompromising threat of depopulation, which has, at its most severe, brought Lublin Polesie to the brink of complete abandonment (P. Eberhardt, 1989; B. Pięcek, 2007). Beginning in the period immediately following World War II, the outflow of young individuals in search of prosperity severely inhibited its development and, in a more general sense, struck the entire Lublin region (L. Barwińska, 1971). This tendency was exacerbated in the early 1990s due to the ongoing economic transformation of Poland, its transition from a centrally planned economy to the free market and the consequent dramatic worsening of the financial capabilities of the entire Lublin region. As a result of long-term, highly selective migration outflows, the voivodship has witnessed a structural uprooting of its population, particularly with respect to age and sex. The primary effect this process has had and continues to have today, especially in the sparsely populated rural areas, is the large percentage of elderly citizens and a fall in the number of women in the working age (M. Miazga, 1990; A. Miszczuk, 1993; A. Mikulec, 2007). The systematic decrease in natural increase, which in the 1990s finally transformed into negative natural increase, is also to blame for the desertion of the region's inhabitants.

Many related problems in population trends (widespread emigration, depopulation, a shift away from the young and towards the elderly) have been observed on Ukrainian land, where Polesie's economy is dominated by subunits of the primary sector such as agriculture, forestry and silviculture. Conversely, the existing industries are only capable of sustaining their immediate vicinity and rely solely on local resources (O. Sadova, 2000). Scarce industrialization and low economic development figures discourage individuals from settling or remaining in the region, which naturally entails insufficient demographic activity (M. Flaga, 2006).

The following study is an assessment of the most important phenomena and population-related processes that take place in the outlying northern areas on the Polish-Ukrainian border, areas contained entirely within Polesie's frontiers. The main objective was to account for the changes in the population growth and the elements thereof, specifically natural increase and migration, in order to subsequently compare and juxtapose said elements on both sides of the border and ultimately draw up a clear picture of the demographic changes in the Polesie region.

Statistical analysis is based on data collected between the years 2002 and 2007 and refers strictly to administrative units: land counties and county seats in the Lublin voivodship, as well as to the territorially and demographically similar municipal and regional areas that comprise the oblast of Volhynia (see Figure 1) in Ukraine. Only the counties and regions that lie mostly or entirely within the geophysical boundaries of Polesie were

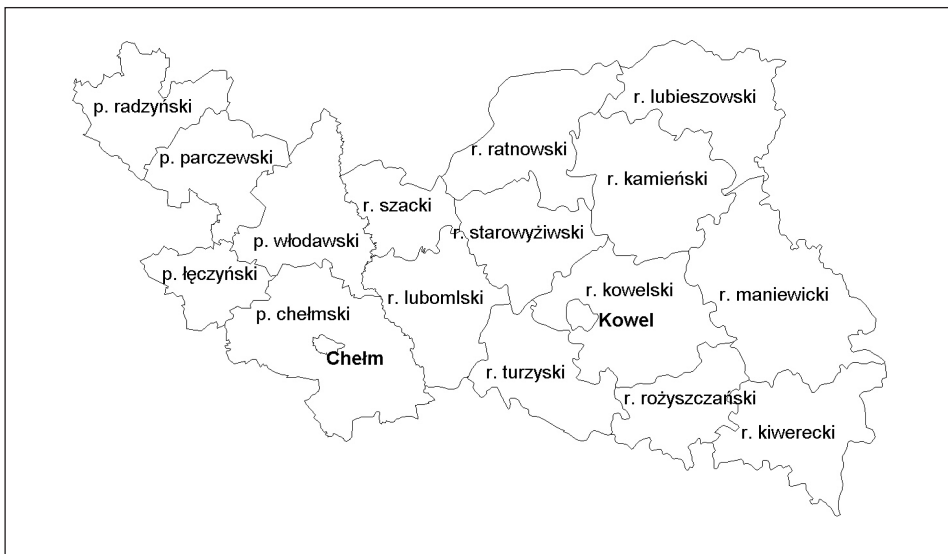


Figure 1. Administration division of the Polesie region

Source: Own studies.

taken into account, regardless of the national jurisdiction under which they fall. On the Polish side, these criteria are fulfilled by 5 land counties and the city of Chełm, whose joint area is 5633.8 km<sup>2</sup>, whereas the larger Ukrainian territories allow for 11 districts and the city of Kovel to be considered for analysis, with a cumulative area of 15577 km<sup>2</sup> (Statystycznyj ščoričnyk. Mista i rajony Volhyniai 2007, 2008; Województwo lubelskie, 2008).

## Population dynamics

Throughout the years specified above, that is between 2002 and 2007, the total population of the cross-border Polesie region decreased by around 13000 people, which signifies a drop of slightly less than 1.5%. This can be attributed to the dwindling population of Ukrainian Polesie, seeing as its Polish equivalent actually saw a slight increase in this respect (see Table 1).

This slump in Ukrainian Polesie population, whose erosive effect has been felt in urban and rural areas alike, was a continuation of previously existing demographic trends. In the country that forms the bulk of the historic region of Volhynia, such unsettling tendencies have been a mainstay of the entire post-war period, while the depopulation of cities has been in effect since the mid-1990s. It is worth noting that the 2000s brought with them ever-greater decreases in the size of rural communities with regard to the previous decade, whereas the same losses were slowed significantly in the cities. In addition, Ukrainian Polesie has traditionally been dependent on rural populations, while the urban minority is and always has been insignificant in comparison. The implications of this are vast: the rural areas of Polesie in Ukraine suffered a 4% drop in their population, while urban centers remained more stable, with a fall of 0.2% (see Table 1).

Table 1. Population in the Polesie region in the years 2002 and 2007 (in thous.)

Specification	Grand total		Urban areas		Rural areas	
	2002	2007	2002	2007	2002	2007
Counties of the Lublin voivodship	272.2	273.7	66.9	65.6	205.2	208.2
The city of Chełm	68.7	67.8	68.7	67.8	-	-
Total: Lublin Polesie	340.9	341.5	135.6	133.4	205.2	208.2
Districts of the Volyn oblast	483.2	468.6	126.7	125.8	356.5	342.8
The city of Kovel	66.5	67.1	66.5	67.1	-	-
Total: Volhynian Polesie	549.7	535.7	193.2	192.9	356.5	342.8
Total: Polesie	890.5	877.3	328.8	326.3	561.7	551.0

Source: Rocznik statystyczny województwa lubelskiego 2003, 2003; Statystycznyj ščoričnyk. Mista i rajony Volyni 2007, 2008; Statystycznyj ščoričnyk Volyns'koji oblasti za 2002 rik, 2003; Województwo lubelskie 2008, 2008.

One curious regularity in population growth should be mentioned in dealing with the number of Polish citizens living in villages in Polish part of Polesie, where censuses have registered a slight increase. As has been mentioned, the major drops in the population of Lublin's rural outposts took place with varying intensity throughout the 1960s and beyond, with heavy emigration at their root. In the specified time period, however, Polish territories of Polesie experienced an unexpected rise in their population by about 1.5%. This is clearly offset by a simultaneous steady fall in the cities of the Lublin voivodship, a fall which in the early 1990s was foreshadowed by an increasingly modest population growth rate, only to lapse into negative growth in 2000. In Polesie, this meant the loss of 1.6% of its total population.

In fact, on a wider scale, the entire geophysical region in question only saw a population boost in three of its administrative units. On the Polish side, it was the county of Chełm, which heralded the general changes in rural population trends in the region, while in Ukraine the two areas in question were the Kamień-Kaszynski district and the city of Kowel (see Figure 2). Further analysis reveals, however, that the surge in the population of Chełm was a one-time occurrence that took place solely in 2006 (the following year brought another fall in statistics), which makes it impossible to surmise that a sustainable tendency for population growth arose. In the Volhynia region, which retains a largely rural population, the progressive demographic trends mentioned above may be the result of age-old traditions and long-term behavioral patterns, including the people's intimate connection with their homeland, a conservative stance on marriage and the traditionally large number of children in the family.

The other 15 territorial units were all subject to depopulation in varying degrees of intensity. Volhynian Polesie was, beyond all doubt, the site of the heaviest population losses in the region, said losses having reached a high of 6% in some districts of the region (see Figure 2). A key factor in the population drainage in effect was the economic backwardness and fragility of the Ukrainian borderlands, in particular uncharacteristically low rates of economic development, which forestalled attempts at settlement and repopulation and had a profound impact on the dire living conditions and general economic stability of Ukrainian Polesie citizens.



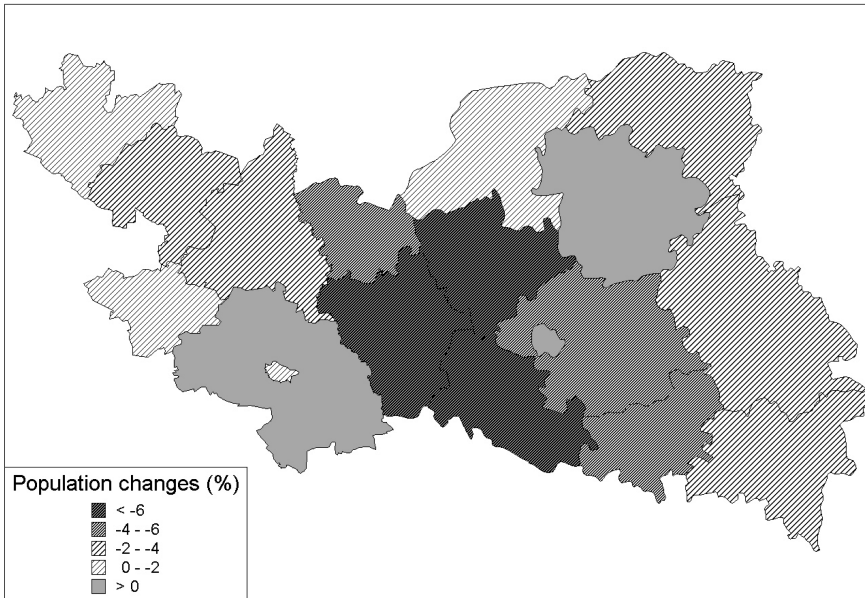


Figure 2. Population changes in the Polesie region in the years 2002–2007

Source: Own calculation based on: Rocznik statystyczny województwa lubelskiego 2003, 2003; Statystycznyj ščoričnyk. Mista i rajony Volyni 2007, 2008; Statystycznyj ščoričnyk Volyns'koji oblasti za 2002 rik, 2003; Województwo lubelskie 2008, 2008.

## Vital statistics

The percentage of live births in Polesie was preconditioned by two distinct factors. One of them was the general fertility of women, which in border areas did not diverge greatly from the patterns set forth by both countries. The number of children per individual was launched into a downward spiral in both Poland and Ukraine at the beginning of the 1990s and in 2006 reached a low of 1.3 in the Lublin voivodeship and 1.7 in Volhynia. Such disappointing statistics are not enough to guarantee unhindered reproduction patterns in the future. Traditionally, larger values have been registered in the country areas than in urbanized zones (<http://www.stat.gov.pl/>, <http://www.vous.in.lutsk.ua/>).

The second factor that influenced birth statistics was the number of marriages being recorded in civil registries each year. Despite the noticeably higher social acceptance of extramarital childbirth in Poland in recent years, surveys and studies continue to show that most children “are born into families where the parents are in lawfully approved marital unions, within the first few years of their marriage” (<http://www.stat.gov.pl/>). This is particularly true of villages, where the conservative approach to marriage still holds firm.

The tide of diminishing tendencies in the number of marriages was turned in the 2000s, following an arduous decade during which said tendencies were upheld by the ongoing sociopolitical transformation of the nation. The period between 2002 and 2007 yielded 2400 marriages in the Polish part of Polesie, up by about 30% from a starting point of 1862; that same period bore witness to a 28% increase from 3748 to 4779 in the Ukrainian territories. Numerically speaking, more unions were brought to fruition in rural locations, but their total per 1000 inhabitants was greater in the cities (Rocznik statystyczny województwa lubelskiego 2003, 2003; Statystycznyj ščoričnyk. Mista i rajony Volyni 2007, 2008; Statystycznyj ščoričnyk Volyns'koji oblasti za 2002 rik, 2003; Województwo lubelskie 2008, 2008).

The aforementioned surge in the marriage count was a determining factor in the consequent rise in birth rate. This meant an average increase of approximately 6.5% in the parts of Polesie located in the vicinity of Lublin and of an even more respectable 16% in Volhynia from 2002 to 2007. A parallel strong rise in birth rates should also be pointed out in both the previously specified cities of Polesie – Chełm and Kowel (see Table 2).

Table 2. Vital statistics in the region of Polesie in the years 2002 and 2007 (in persons)

Specification	Births		Deaths		Natural increase	
	2002	2007	2002	2007	2002	2007
Counties of the Lublin voivodship	2722	2875	3068	3174	-346	-299
The city of Chełm	563	624	586	575	-23	49
Total: Lublin Polesie	3285	3499	3654	3749	-369	-250
Districts of the Volyn oblast	5980	6821	7292	7689	-1312	-868
The city of Kowel	784	992	773	779	11	213
Total: Volhynian Polesie	6764	7813	8065	8468	-1301	-655
Total: Polesie	10049	11312	11719	12217	-1670	-905

Source: Rocznik statystyczny województwa lubelskiego 2003, 2003; Statystycznyj ščoričnyk. Mista i rajony Volyni 2007, 2008; Statystycznyj ščoričnyk Volyns'koji oblasti za 2002 rik, 2003; Województwo lubelskie 2008, 2008.

Additionally, an increase in births took place in both the Polish and the Ukrainian territories of the region. This was less felt in Lublin Polesie, where the 9.5‰ registered in 2002 settled at 10.2‰ five years later, and significant on the other side of the border, where a starting figure of 12.1‰ went up to 14.3‰ in 2007.

Regarding the same set of statistics for Ukrainian municipal areas in 2007, they did not differ greatly from their rural counterparts, totaling 14.1‰ and 14.2‰, respectively (Statystycznyj ščoričnyk. Mista i rajony Volyni

2007, 2008). This stands in contrast to the results for the Lublin area, where the discrepancy between villages (10.7‰) and cities (9.7‰) was slightly more significant (own calculation based on data from <http://www.stat.gov.pl/>).

Sadly, higher birth rates in the region were swiftly followed by a subsequent rise in death rate (Table 2). In the period spanning the years between 2002 and 2007, this last rate continually reached high levels, increasing by 2.6% in the Lublin Polesie and by an even more disruptive 5% in Volhynian Polesie (see Table 2).

The territorial units of Polesie that belong to the Lublin voivodship are among the areas of Poland with ageing population; these demographic features have long been a fixture in the Lublin region. Due to the comparatively large percentage of individuals over 60, the overall death rate here is one of the nation's highest. That being said, the district is also notorious for having an abnormally high number of yearly deaths among men. Rural population centers are a case in point: in 1999, twice as many death certificates were signed for males as for females, while the cities carried on this tendency to a slightly less polarized extent, settling at a rate higher for men by some 87% (Cz. Stępień, 2001).

Recent decades have nonetheless shown that several coexisting factors are keeping the statistics for mortality rates from spiraling out of control. The average life expectancy is on the rise, which can be viewed as a useful cushion against rising mortality. The life expectancy for males in the entire Lublin region was estimated at 70.3 years in 2006, an increase of about 3.5 years with respect to 1999, while that of females saw an equally noteworthy improvement, crossing the threshold of 80 years and yielding an average of 80.2, which meant a boost of slightly less than 4 years within a seven-year period (<http://www.stat.gov.pl/>).

A similar improvement has been observed in infant mortality rates. While in the early 1990s 17 in every 1000 children born in municipal zones and 20 in every 1000 babies delivered in the country did not survive past infancy, by 2006 the rate had been brought down to just above 6 deaths per 1000 live births (<http://www.stat.gov.pl/>). This was undoubtedly the result of a universal improvement in living standards and in the quality of health care offered to the inhabitants of rural areas in particular.

As a result of the processes outlined above, as well as the steadily decreasing total population of the region, the final average mortality rate in Lublin Polesie was relatively stable and did not experience larger fluctuations. In 2007, the average death rate was 10.9‰, up from the 10.6‰ registered in 2002. It was in Ukrainian Volhynia oblast that Polesie mortality rate increased significantly, from 14.9‰ to 16.2‰ (own calculation based on: *Rocznik statystyczny województwa lubelskiego* 2003, 2003;

Statystycznyj ščoričnyk. Mista i rajony Volyni 2007, 2008; Statystycznyj ščoričnyk Volyns'koji oblasti za 2002 rik, 2003; Województwo lubelskie 2008, 2008).

The primary determining factor in the final number of births and deaths in the region was the age structure of the population, which itself stemmed from both historical and contemporary migration flows. This correlation was most notably present in the Polish borderland. Relatively low average birth rates were complemented by above-average mortality rates in areas whose population is mostly made up of citizens over 60. This is true for the region. Also when it is considered in the scale of the entire country (A. Mikulec, 2007). Examples of such territories in Poland include the fringes of the Chełm and Włodawa counties that border directly with Ukraine. The negative statistics on record in those two cases are offset by the comparatively “demographically young” counties of Radzyń Podlaski and Łęczna, which refuse to yield to the widespread aging of the country's population and continue to register more promising birth and death rates.

A similar interdependence of factors was observed in Volhynian Polesie, where two of the most representative examples are the regions of Turzysk and Kowel, in which the percentage of post-working age is estimated at 25%. Kowel and Turzysk were also the site of the worst mortality rates registered in 2007, coming dangerously close to 20% (Statystycznyj ščoričnyk. Mista i rajony Volyni 2007, 2008).

The negative natural increase that bore down on Polesie throughout the period in question was significantly alleviated in 2007, a fact derived from an increase in the number of live birth rate and a simultaneous stabilization of the death rate. And it was Volhynia that experienced these changes more than any other territory (see Table 2).

The above-mentioned positive trends contributed to the recovery of Polesie natural increase, which exceeded that of both the Lublin region and the oblast of Volhynia in Poland and Ukraine, respectively. Specifically, the natural increase rate of Lublin Polesie population increased from -1‰ in 2002 to -0.7‰ in 2007, while in the same period, Volhynia witnessed an even bigger improvement, moving away from 2002's -2.8‰ toward 2007's -1.9‰. Negative tendencies were exacerbated mostly by rural areas, given that Polesie's cities registered positive natural increase rate in both Poland (1.5‰) and Ukraine (2.5‰) in 2007, whereas the data for villages suggest -2.2‰ on the Polish and -4.1‰ on the Ukrainian side of the border<sup>1</sup>.

---

<sup>1</sup> own calculation based on: Rocznik statystyczny województwa lubelskiego 2003, 2003; Statystycznyj ščoričnyk. Mista i rajony Volyni 2007, 2008; Statystycznyj ščoričnyk Volyns'koji oblasti za 2002 rik, 2003; Województwo lubelskie 2008, 2008.

Overall, the natural increase rate of the population of Polesie varied greatly according to the counties, regions, cities and other units within the confines of the geophysical area (see Figure 3). The city of Chełm and the entire county of Łęczna yielded positive results in Poland, as did the municipality of Kowel and three other districts that neighbor with one another in northern Volhynia in Ukraine, where the lowest recorded growth rate was 2‰ and the highest – over 4‰. Three other Volhynian districts lie on the opposite side of the spectrum; the low values registered in Kowel, Stara Wyzivka and Turzysk exceed 6‰.

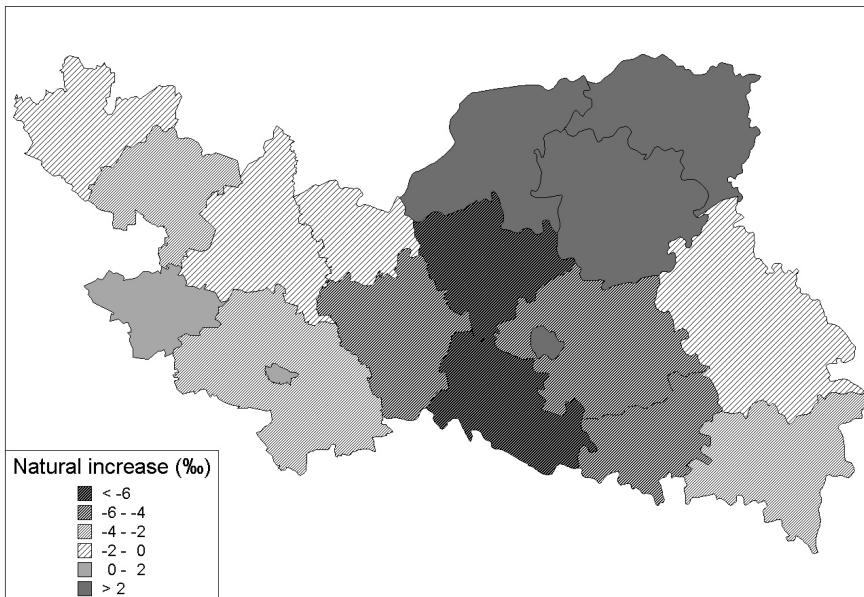


Figure 3. Natural increase rate in the Polesie region in 2007

Source: Own calculation based on: Rocznik statystyczny województwa lubelskiego 2003, 2003; Statystycznyj ščoričnyk. Mista i rajony Volyni 2007, 2008; Statystycznyj ščoričnyk Volyns'koji oblasti za 2002 rik, 2003; Województwo lubelskie 2008, 2008.

## Migrations

Migrations have without a doubt been vital in shaping the demographics of Polesie as it is today. On the one hand, they have a vast effect on population growth; on the other, they are largely responsible for carving out the age and sex structure of the population, which in turn determines vital statistics. Historically, the borderlands of Poland and Ukraine have been known to have a negative net migration, and excess outflow of inhabitants has been reaffirmed with even greater certainty at the dawn of the 21<sup>st</sup> century.



In 2007, the transnational region of Polesie became the home of an additional 12900 people who settled here throughout the year, but at the same time, over 15600 citizens emigrated and sought permanent residence elsewhere. The negative value derived from combining these two sets of data is around 2700 people, a 1500-person increase with respect to 2002. In other words, twice as many individuals left Polesie in 2007 as five years earlier. Essentially, the main culprit was emigration on the Ukrainian side of the border, which easily surpassed the same figures for Lublin Polesie (see Table 3).

Table 3. Population migrations in the region of Polesie in the years 2002 and 2007 (in persons)

Specification	Inflow		Outflow		Net migration	
	2002	2007	2002	2007	2002	2007
Counties of the Lublin voivodship	3405	3968	3955	4955	-550	-987
The city of Chełm	730	751	934	1056	-204	-305
Total: Lublin Polesie	4135	4719	4889	6011	-754	-1292
Districts of the Volyn oblast	6735	6749	7300	8237	-565	-1488
The city of Kowel	1398	1396	1310	1373	88	23
Total: Volhynian Polesie	8133	8145	8610	9610	-477	-1465
Total: Polesie	12268	12864	13499	15621	-1231	-2757

Source: Rocznik statystyczny województwa lubelskiego 2003, 2003; Statystyczny ščoričnyk. Miasta i rajony Volyni 2007, 2008; Statystyczny ščoričnyk Volyns'koji oblasti za 2002 rik, 2003; Województwo lubelskie 2008, 2008.

The rates of inflow and outflow per 1000 inhabitants were also revealed to be slightly higher in the Ukraine than in Polish part of Polesie, but the negative balance of migration was decidedly higher on Polish ground, approaching some -3.8‰ there and almost -2.8‰ in the part of Ukrainian Polesie (own calculation based on data presented in Table 1 and Table 3).

Out of all the administrative units taken into account for the purposes of this study, only in Kowel did the rate of migration balance to a positive value in 2007 (see Figure 4). Every piece of land besides said city yielded widely divergent negative values, ranging from -0.4‰ in the Turzysk region in Volhynia to a high of -6‰ in the county of Włodawa.

Estimates put rates of migration in the vicinity of larger cities like Chełm and Kowel at generally lower values than in other cases, which may have a twofold explanation. To a certain extent, it can be argued that it is the result of access to services of higher quality and the superior overall conditions that come with proximity to an important population center. However, one can also attribute these moderate migration statistics to the process of suburbanization, whose intensity does not cease to increase in suburban areas, both in Poland and Ukraine.

Conversely, the counties and regions that lie at some distance from densely populated municipalities, peripheral areas outside of urban perimeters, registered a comparatively high negative rate of migration balance (see Figure 4). Several of them comprise a kind of region that is characterized by high emigration and stretching between the Polish counties of Radzyń Podlaski, Parczew and Włodawa and over into the Ljuboml district in Volhynia.

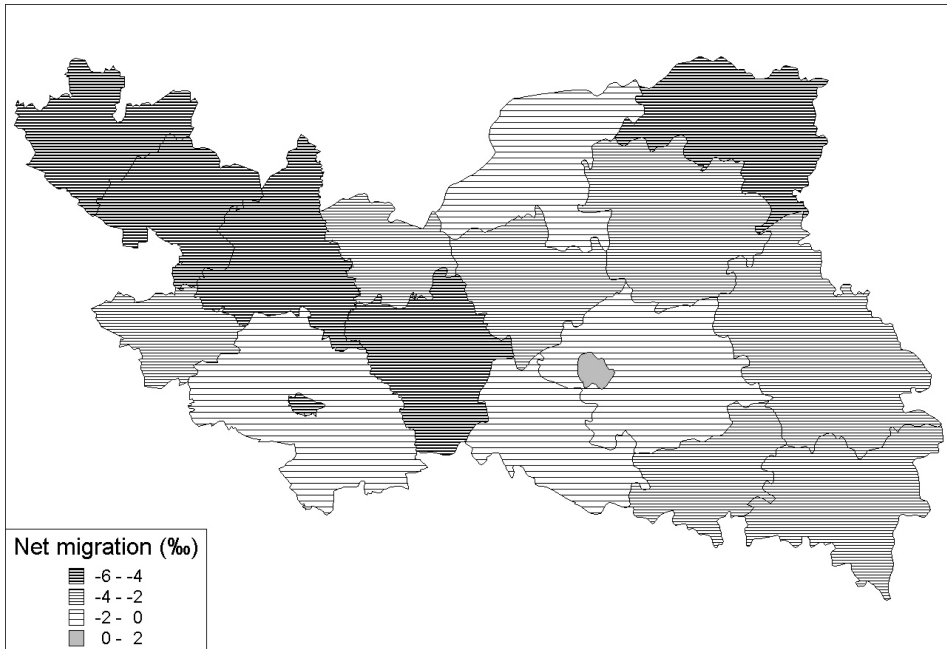


Figure 4. Net migration in the Polesie region in 2007

Source: Rocznik statystyczny województwa lubelskiego 2003, 2003; Statystycznyj ščoričnyk. Mista i rajony Volyni 2007, 2008; Statystycznyj ščoričnyk Volyns'koji oblasti za 2002 rik, 2003; Województwo lubelskie 2008, 2008.

A distinct difference arises when juxtaposing the outward flows of the urban and rural populations of Lublin Polesie in that the former registered noticeably higher values than the latter. This observation is supported by the fact that the first decade of the new millennium saw the average negative balance of population displacement become even more severe in urban areas, while a reversal of this process could be seen in the villages. Though the abandonment of the country for the qualities and perks associated with city life remained predominant, the cities of Polesie themselves were simultaneously abandoned in favor of urban areas located in other parts



of the country (J. Mościbroda, 2008). Once more, Volhynia followed the pattern outlined above and had most of the region's migration occur in the direction of its cities, which ultimately gave the latter a positive overall migration balance. An additional kind of population flow that took place in equal parts on both sides of the Polish-Ukrainian frontier was the previously mentioned transfer of city-dwelling individuals to nearby villages, where they build their homes and oftentimes launch their own business. The frequency of this phenomenon depends on the borderland city to which it pertains, the clearest examples being Chełm in Poland and Kowel in Ukraine.

The role played by interregional and international flows in determining the final figures for migration in Polesie differs quite greatly with the geographical location. The Ukrainian lands seemed to register much higher values for migration within the borders of the country, and yet in the closing days of the year, it became clear that international migrations (-231 individuals) had prevailed over interregional flows (-189 individuals) (*Statystycznyj ščoričnyk. Mista i rajony Volyni 2007, 2008*). The Lublin area was in turn subject to greater levels of internal migration between Polish administrative units; these migrations were responsible for the displacement of more citizens than in the case of transnational flows.

## Summary

The changing face of the population of Polesie is an expression of the regressive character these changes have had, both in the contemporary and previous periods. The numerous transformations that are taking place on Polish and Ukrainian land are akin to one another; the differences between the two countries can often be brought down to temporal factors, and diverging points in time at which these processes take place ultimately modify both their intensity and the extent they reach.

Between 2002 and 2007, the total number of inhabitants of Polesie fell, and this was a compound of the coexisting depopulation of rural areas and similar negative trends in the cities. It is important to clarify that the former occurred on a much larger scale in Ukraine, while the crisis of urban population had greater repercussions in Poland. In 2007, the final year of the study, the population of the grand majority of the region's administrative units was slowly chiseled away and decreased further still; the only three exceptions which could boast a higher number of inhabitants were the Ukrainian districts of Kamień-Kaszyski and Ratno, and the city of Kowel (see Figure 5).

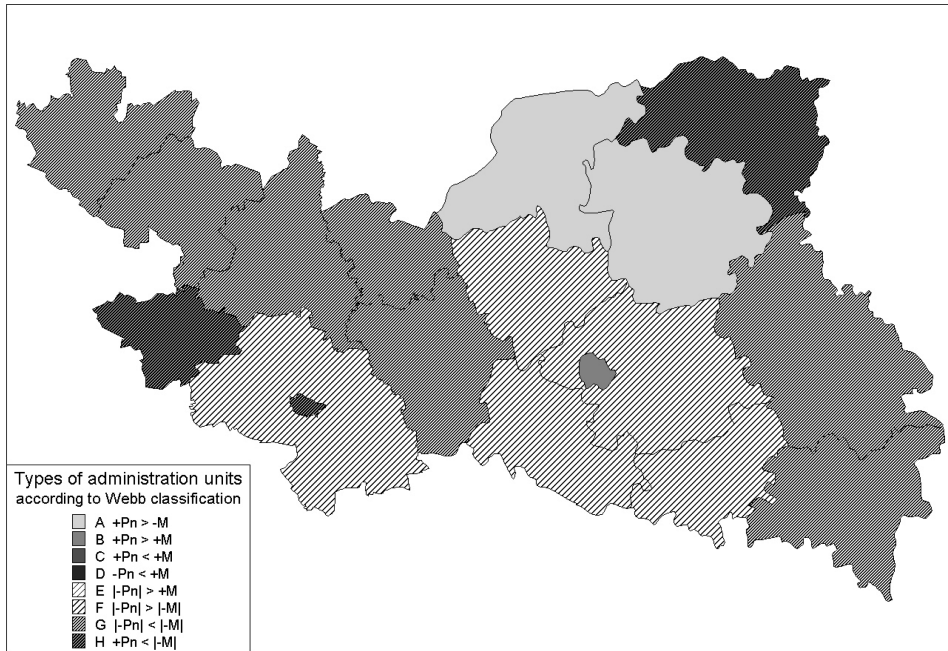


Figure 5. Types of population changes in the Polesie region in 2007 according to Webb classification

Source: Statystycznyj ščoričnyk. Mista i rajony Volyni 2007, 2008; Województwo lubelskie 2008, 2008.

The fall in Polesie population was caused by the negative natural increase so commonly observed in its territories and those that surround them, and augmented by negative migration balance. One should note, however, the arrival of new upward tendencies in population growth in the 2000s, tendencies at whose outset lay certain phenomena that determined birth and mortality rates. One of the most significant contributing factors was the rise in the number of marriages, which vicariously resulted in a greater number of births and an extension of the average life expectancy. This in turn helped reduce the death rate. In terms of population dynamics, the cities' statistics are far superior to those given by sparsely populated rural areas.

The onset of the 2000s also gave rise to greater population flows to places located outside of Polesie, which produced an elevated negative rate of migration. The migrants most commonly chose more economically viable and developed parts of their own countries, although international migration also played an important part in the entire process. Polish citizens in particular benefited from the easy access to work abroad conferred by Poland's accession to the European Union. This same factor hindered

the emigration prospects of Ukrainians, which until that point had been directed primarily at Poland as either the final destination or a transit point.

Additionally, internal migration from rural to urban areas was impossible to ignore in Polesie in the time period specified. It was shaped by local and regional economic viability and current migration trends, notably suburbanization. The liberties and conditions offered by cities in Ukrainian Polesie and the comparatively disappointing prospects associated with living in the country indicated the patterns assumed by migration, which involved a heavy inflow of rural populations in cities such as Kowel. The Polish side of the border saw another type of migration become more and more frequent – that of city dwellers leaving their urban havens in search of better living conditions, with eyes set on suburban areas or other large Polish cities.

The current status of the population of Polesie suggests the existence of factors that may undermine the future stability of the region in more ways than one. Should the existing regressive demographic tendencies, including negative natural increase and continued population outflow, take root, the general potential of the population and the state of the job market could come under serious threat.

The numerous processes mentioned in this study are at the same time at the heart of ongoing and disconcerting distortions in gender structure, as well as the ageing of the communities in question, which is most visible in the country. Due to their peripheral location and economic decrepitude, both the so-called “Eastern Wall” of Poland and the western reaches of Ukraine are particularly prone to such profound structural changes (S. Kurek, 2007; A. Potrykowska, 2007; O. Sablij, I. Hudzelak, H. Labińska, 2002). The unavoidable issue of providing retirement benefit to the increasingly numerous aged citizens will imply greater governmental spending, which in Ukraine’s case may threaten the financial security of other vitally important areas such as health care and education (E. M. Libanova, 2000).

Finally, the selective nature of migration favors the departure of the young, the well-educated and the business-oriented entrepreneurs, leading to the irretrievable loss of this most valuable part of the region’s “human capital”, this progressive age group that could otherwise contribute to social and economical revitalization. In this respect, it is not solely the depopulation of Polesie that carries negative implications, but also the so-called “structural depopulation”, which creates a serious barrier to the development and continued relevance of rural areas (I. Frenkiel, 1989).

## References:

- Barwińska L., 1971, Udział ludności województwa lubelskiego w wędrówkach międzywojewódzkich, *Annales UMCS*, sec. B, T. 26, p. 313–348.
- Chałubińska A., Wilgat T., 1954, Podział fizjograficzny województwa lubelskiego [in:] *Przewodnik V Ogólnopolskiego Zjazdu PTG*, Nakładem Oddziału Lubelskiego Polskiego Towarzystwa Geograficznego, p. 3–44.
- Eberhardt P., 1989, Regiony wyludniające się w Polsce, *Prace Geograficzne IGiPZ PAN*, nr 148.
- Flaga M., 2006, Procesy demograficzne oraz ich uwarunkowania w zachodnich obwodach Ukrainy w okresie przemian ustrojowych, Wyd. UMCS, Lublin.
- Frenkiel I., 1989, Problem wyludniania się obszarów wiejskich w opiniach środowiska naukowego [in:] *Opinie o wyludnianiu się wsi polskiej*, IRWIR PAN, Warszawa.
- Kurek S., 2007, Typologia procesu starzenia się ludności miast i gmin Polski na tle jego demograficznych uwarunkowań, *Przegląd Geograficzny*, 79, 1, p. 133–156.
- Libanova E. M., 2000, Pidvyščenja pensijnogo viku: neobchidnist' čy vygadka liberaliv, „Ljudyna i polityka”, Nr 6., *Geografičnij Zbirnik*, Vypusk 5, Vydavnictvo L'vivs'kogo Universitetu, L'viv, p. 40–46.
- Miazga M., 1990, Wyludnianie się wsi lubelskiej. Uwarunkowania, następstwa, środki zaradcze, *IGiPZ PAN*, Warszawa.
- Mikule A., 2007, Analiza starzenia się ludności w polskich podregionach, *Wiadomości Statystyczne*, Nr 1, p. 62–75.
- Mischczuk A., 1993, Wyludnianie się wsi a rolnictwo wschodniej Lubelszczyzny, *Dokumentacja Geograficzna IGiPZ PAN*, Z. 2.
- Mościbroda J., 2008, Demograficzne uwarunkowania rozwoju powiatów nadbużańskich [in:] M. Zięba (ed.) *Nasz Bug. Tworzenie warunków dla rozwoju obszarów przygranicznych Polski, Ukrainy i Białorusi poprzez waloryzację i ochronę dziedzictwa naturalnego i kulturowego*, KUL, Lubelska Szkoła Biznesu Sp. Z o.o. Fundacji Rozwoju KUL, Lublin, p. 147–159.
- Pięcek B., 2007, Wiejskie obszary wyludnienia w Polsce, *Wiadomości Statystyczne*, Nr 12, p. 34–44.
- Potrykowska A., 2007, Przestrzenne zróżnicowanie sytuacji demograficznej w Polsce. Tendencje i perspektywy, *Przegląd Geograficzny*, 79, 3–4, p. 483–513.
- *Rocznik statystyczny województwa lubelskiego 2003*, T. II, 2003, US w Lublinie, Lublin.

- Šablji O., Hudzelak I., Labinska H., 2002, Starzenie się ludności Zachodniej Ukrainy [in:] J. Kowaleski, P. Szukalski (eds.) Proces starzenia się ludności – potrzeby i wyzwania, I Kongres Demograficzny w Polsce. Sesja problemowa, Zakład Demografii Uniwersytetu Łódzkiego, Łódź, p. 41–48.
- Sadowa O., 2000, Analiz sutnosti ekonomičnyh zmin istoryko-geografičnogo rozvitku Volyni, Visnyk L'vivs'kogo Universytetu. Serija geografična, Vypusk 26, L'vivs'kij Deržavnyj Universytet im. I. Franka, L'viv, p. 216–220.
- Statystycznyj ščoričnyk Volyns'koji oblasti za 2002 rik, 2003, Deržavnyj Komitet Statystyky, Volyns'ke Oblasne Upravlinnja Statystyky, Luc'k.
- Statystycznyj ščoričnyk. Mista i rajony Volyni 2007, 2008, Golovne Upravlinnja Statystyky u Volyns'kij Oblasti, Luc'k.
- Stępień Cz., 2001, Terytorialne zróżnicowanie umieralności w Polsce w 1999 roku [in:] J. T. Kowaleski (ed.) Teraźniejszość i przyszłość demograficzna polskich regionów: materiały na konferencję naukową, Łódź, 18–19 czerwca 2001, Zakład Demografii, Instytut Ekonometrii i Statystyki Uniwersytetu Łódzkiego, Łódź, p. 39–55.
- Wilgat T., 1963, Budowa geologiczna, rzeźba i wody Polesia Lubelskiego [in:] T. Wilgat (ed.) Polesie Lubelskie. Materiały z sesji naukowej PTG, Wydawnictwo Lubelskie, Lublin, p. 9–30.
- Województwo lubelskie 2008. Podregiony, powiaty, gminy, 2008, US w Lublinie, Lublin.
- Zastavnyj F., Kusiński W., 2003, Ukraina. Przyroda – Ludność – Gospodarka, Wyd. Akademickie „Dialog”, Warszawa.
- [www.stat.gov.pl](http://www.stat.gov.pl)
- [www.vous.in.lutsk.ua](http://www.vous.in.lutsk.ua)

Lucyna Przybylska

## **The influence of politics on the development of the Roman Catholic parish network in Poland after 1945. Case study: Trójmiasto (Tricity)**

### **Introduction**

The impact of various factors on the history of religious communities can be noted in three coastal cities called Trójmiasto (Tricity). Apart from the natural environment (coastal location) and economic factors (financial capacity of religious communities) political conditions are clearly of key significance particularly after 1945 when the socialist system started to dominate in Poland.

The article firstly and briefly shows history and main characteristics of each city of Trójmiasto. This is followed by a description of the political impact after World War II on the number of parishes in Gdańsk, Sopot and Gdynia . The difference between the growth of inhabitants and the parish network in Trójmiasto has been underlined in conclusions emerging from the figures illustrating the phenomenon.

### **Trójmiasto (Tricity) – main characteristics**

Gdynia, Sopot and Gdańsk are situated adjacent to one other, in a row, on the coast of the Baltic Sea, in northern Poland, in Pomorskie voivodship. In 2005 Trójmiasto had population of 750 thousand people, 458 thousand in Gdańsk, 252 thousand in Gdynia and 40 thousand in Sopot. Sopot is located between bigger neighboring cities, Gdynia in the north and Gdańsk in the south. The name Trójmiasto was used informally or semi-formally only, until 28 March 2007, when the “Tricity Charter” was signed as a declaration of the cities’ cooperation.

Trójmiasto witnessed the tragedy of bloody events of December 1970, when shipyard workers of Gdańsk and Gdynia took - on behalf of the whole nation - the rebellion against the government of the People’s (only by name) Republic of Poland. There were also the joyous days, filled with rebellion and hope, in August 1980 when Solidarity was born preparing chain reaction changes in politics of other eastern European countries.



Trójmiasto is an important centre of naval economy, international trade, culture and tourism. Gdańsk Lech Walesa Airport is one of the three main international Polish airports; ferries to Sweden go from Gdynia and Gdańsk ports. There are 21 university education schools in Trójmiasto. Beside clean sandy beaches of Trójmiasto each town has its own unique tourist sites.

The Old Town in Gdańsk has numerous monuments worth sightseeing, e.g. renovated XVI–XVII century houses, monumental Main Town Hall and St Mary's Church, the biggest medieval brick-built church in Europe. Tourists also visit willingly the Oliwa Cathedral which hosts organ concerts in summer and the Oliwa Zoo, which is the largest in Poland.

The Maritime Museum and Aquarium (Oceanarium), the ships moored in the dockyards, like the destroyer *Błyskawica* ("Lightning") or a tall ship *Dar Pomorza* (the Pomeranian Gift) are among the biggest tourist attractions in Gdynia.

There are also various attractions of Sopot: the longest wooden pier in Europe (511.5m), the Hippodrome Sopot, Aquapark, the Fishing Harbour, the Forest Opera (an open-air amphitheatre with roofing) famous for summer international song festivals. Nowadays Sopot, a health spa with official status, aside from Warsaw has the highest property prices in the whole of Poland.

### **Gdańsk, Gdynia, Sopot – different history**

Apart from common Solidarity history Gdańsk, Gdynia and Sopot are of different origin with different history of parish churches. The oldest and the biggest is Gdańsk which celebrated its millennium in 1997.

The first written mention of Gdańsk comes from 997 records of the life of St Adalbert. The first sacral building in Gdańsk was probably a wooden chapel from around that year. The defensive and urban complex as well as a port started to form in the second half of the X century; civic rights received in 1263. The first parish church was St Nicholas's Church completed in 1190. The number of churches in the Old Town and its surroundings must be underlined: by the half of XV century 18 Roman Catholic churches had been built (T. Michalski, 1999). Since XVI century till 1945 Protestantism, mostly Lutheranism, predominated in Gdańsk. In 1871 Gdańsk was inhabited by 69.7% Evangelic, 26.3% Catholic, 3% Jews and 0.4% Mennonites (E. Cieślak, 1998, p. 507). Earlier (X–XV) and later (after World War II) most of the population was Roman Catholic. Since XVI century Gdansk had its "golden age". During this time Gdańsk was one of the wealthiest and most significant cities in Europe. The religious freedom turned the city into a true melting pot of nationalities and denominations. Beside Lutherans and Mennonites The Jewish Community also had its place of worship, the Grand Synagogue, built in the eighties of XIX century. In the late XVIII



century Gdansk as well as Gdynia and Sopot were annexed to Prussia. Gdańsk for two short periods was a formally independent state as the Free City of Gdańsk (1807–1813, 1920–1939).

Both Gdynia and Sopot were first mentioned in old documents from XIII century. Gdynia was a tiny fish men village until the last decade of XIX century while in the second half of XVI century the poor peasant village Sopot is transformed into a summer retreat for Gdańsk patricians. In 1819 the history of Sopot Spa and Resort began with the first public bath opened.

The opening of the railway line between Gdańsk, Sopot and Gdynia and further to Berlin in 1870 fastened the changes in villages of Sopot and Gdynia. The intensive development of these summer settlements and its transformation into a fashionable bathing-places with an urban character began. Until the twenties XX century Sopot was growing more rapidly than Gdynia. In 1870 the first churches were built in Sopot: a chapel for Catholics and a Protestant church. Around 1900 nearly 52% of Sopot residents were Catholic, 46% Protestant, 1% Jews. In 1901 Sopot received civic rights. The same year a Protestant Church was built (today the Catholic Garrison Church). In 1902 the Catholic Church Blessed Virgin Mary Star of the Sea was completed and in 1913 the synagogue. Following the signing of the Treaty of Versailles in 1919 Sopot became a part of the Free City of Gdańsk. In this year another Evangelical Church had been completed. In 1926 the number of permanent inhabitants in Sopot exceeded 25 thousand and maintained this level until 1939.

Otherwise Gdynia which the extent of the changes in pre-war period deserves underlining: in the years 1922–1945 the city spread tenfold to 65,8km<sup>2</sup> whereas the population grew from 1300 residents in 1921 to 114000 in 1937 (Statistical Yearbook of Gdynia City 1996, 1996). Gdynia port in 1934 was the leader among Baltic ports in terms of cargo turnover. What made Gdynia a big town, bigger than older Sopot? The answer lies in the politics and economy: the political and economic decision of Poland to build the sea port of Gdynia, the base for navy and fish men. Having regained, in 1918, its independence – so very much desired after 150 years of partitions – Poland was still lacking access to the sea. Under the Treaty of Versailles a small portion of the Baltic coast was granted to Poland and a village of Gdynia was chosen for a port.

Up to mid 1926 Gdynia belonged to the Oksywie parish dedicated to St. Archangel Michael, one of the oldest in Pomerania erected as early as in 1253 (J. Marcinek, 1996). Several months following the day of granting city rights to the city on February 10th 1926, the first parish was formed on the territory of the former village Gdynia. Several years later, in 1933, the number of parishes rose to 11 resulting in establishing of Gdynia

deanery. There was only one protestant church in Gdynia. Development of Protestant places of worship in Gdynia to the end of XVIII was influenced by landowners` policies which hampered the settlement of Protestants and made it in fact impossible. The influence on the smaller number of other than Roman Catholic religious communities had the proximity of the city of Gdańsk, an older and bigger settlement, a more developed religious centre drawing believers from neighbouring towns and villages, including those from Gdynia. The church census issued in 1938 (*Ordo et Elenchus pro 1938, 1938*) reads that Gdynia numbered 110 000 inhabitants with 96,7% Catholics, 0,3% Greek Catholics, 0,4% Orthodox Catholics, 0,7% Protestants, 1,8% Jews and 0,1% believers of other faith<sup>1</sup>.

Summing up, Gdansk and Sopot historical connections are clearly observed long ago while Gdynia was much longer in a shadow of urban life and then suddenly arose as "the city from sea and dreams", as Gdynia was called and remained under the influence of policy of a new state of Poland. The different history of Sopot and Gdańsk and Gdynia on the other hand resulted different denomination status in those cities in the past. Gdynia was predominately Roman Catholic and Gdańsk and Sopot Protestant. After World War II everything changed: economy, politics and population in Poland. Nowadays Gdańsk Archdiocese where Trójmiasto belongs, is inhabited by 93,7% Roman Catholics (*Statistical Yearbook of the Republic of Poland 2008, 2008*).

### **Gdańsk parish churches**

The Population of Gdańsk city grew 4 times after 1945 from 117 900 to 458 100 in 2005. Till the mid eighties there was one trend of population changes, a big increase visible on figure 1. Since 1980 the number of inhabitants is almost constant around 460 thousand people but we can already distinguish a period of a slight decrease, from 468 600 in 1985 to 456 600 in 2000. In the beginning of XXI century the population of Gdańsk was the same as in 1980 and in 2005 the number of inhabitants slightly grew to 458 100.

Considering the influence of the growth of the territory of Gdańsk city after World War II on the number of people and parish churches we can observe a big disproportion. The area grew from 11 km<sup>2</sup> to 262 km<sup>2</sup> in the seventies (over 20 times) whereas the population 4 times and the number of parish churches 3,5 times. Nowadays there are still lots of rural areas in the territory of Gdańsk city.

First years after World War II the number of parishes grew from 17 in 1946 to 22 in 1949. Then there was a long period of stagnation until the

---

<sup>1</sup> The order of listed religions as in the original.

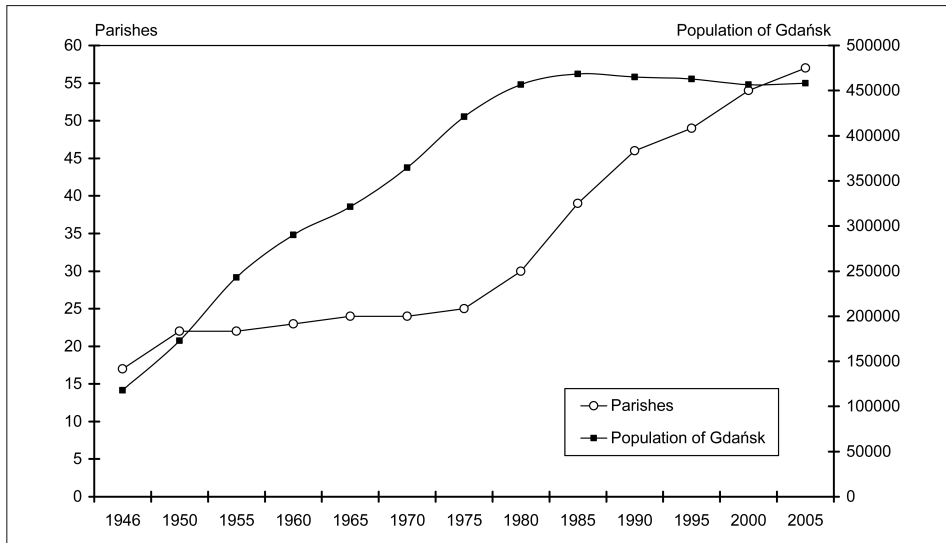


Figure 1. The parishes of the Roman Catholic Church and the population of Gdańsk in the years 1946–2005

Source: own studies based on Schematyzm Archidiecezji Gdańskiej 2006 (2006) and different Statistical Yearbooks; population based on balanced data, except for 1946.

eighties. In years 1949–1978 the parish network enlarged only up to 26 units. Half Roman Catholic parish churches in Gdańsk were erected before 1980 and the rest in the next 25 years resulting 57 in 2005. The biggest change, from 26 parishes to 46, were observed in the years 1978–1990. Next 15 years the increase was also significant (11 units) but not so dynamic as in the late seventies and in the eighties. It must be underlined that only in 1980–1985 the parish network arose 9 units. There have never been such time before and will probably never be in the development of Roman Catholic parish network in Gdańsk.

The changes in parish churches number in Gdańsk after 1945 are obviously connected with the political situation in Poland. For several decades following World War II the development of places of worship was restricted. The significant growth in the number of churches is connected with political transformations in Poland in 1980 and in Eastern Europe after 1989, which reflected religious freedom in the country and growing influence of local society on the decisions of the country's administration.

Contemporary historians consider the "Gdansk August" of 1980 the breakthrough that triggered the process of decomposition of the post-war order on the Old Continent. The mass strikes staged then, led to signing the famous August Agreement at the Gdansk Shipyard. This formed

a crack in the block that gradually led to the emergence of a new political map of Europe. Gdansk earned another image. It became the city the world will always associate with free trade unions, "Solidarity", and Lech Walesa, the winner of the Nobel peace prize and the first President of the III Republic of Poland.

It was Gdańsk that became the cradle of "Solidarność" which was to transform the then map of Europe. In 2003 Boards with 21 postulates from August 1980 by a decision of the UNESCO entered the list of World Heritage as a unique document, with exceptional social and humanitarian values, having influence on the history of Europe.

### Gdynia parish churches

Starting from the second half of the twenties the young city of Gdynia boasted 2 Roman Catholic parish churches whereas in 2008 their number rose to 30. The development of pastoral units in Gdynia can be divided into two consecutive periods of growth and stagnation (Figure 2.).

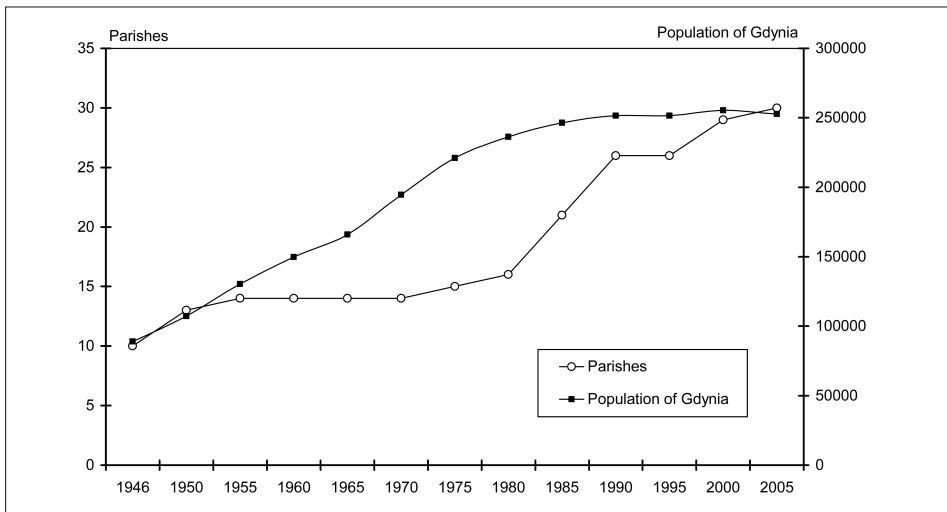


Figure 2. The parishes of the Roman Catholic Church and the population of Gdynia in the years 1946–2005

Source: own studies based on Schematyzm Archidiecezji Gdańskiej 2006, 2006; L. Przybylska, 2008; and different Statistical Yearbooks; population based on balanced data, except for 1946.

After the increase from 10 parishes in the mid forties to 14 in 1955 the situation remained unchanged for two decades. In the seventies the system of parishes grew a little till the 1980 (2 new parishes). There was an explosion of development of parishes in the eighties, from 16 to 26, and starting 1990 the number of parishes remained stable up to the end of XX century and the beginning of the next century when only 4 new ones were established.

It should be emphasised that the Church introduced changes in its territorial structure in the eighties, which resulted in the greatest transformation of the Gdynia parish system during a single decade. In the years 1982–1989 10 parishes were erected. The uneven development of the parish system in Gdynia, particularly the long period in the years 1952–1973 when no parishes were established was conditioned by the political situation adversely affecting the activity of the Roman Catholic Church at the time.

The growth of Gdynia population in the years 1946–2005 was until the beginning of the eighties very dynamic. Every 5 years the number of permanent inhabitants grew 15 000 or more resulting the increase of population more than twofold (from 89 100 to 236 400 people) while the number of parishes changed less dynamically, only 60% (from 10 to 16 units). As in the following years population growth was slowing down and since 2000 even going down the development of parishes had its “golden age” in the eighties and a slight slow down in the next decade. In future number of people and parishes in Gdynia seems to be constant only if political environment is stable, catholic percentage in the city is not going down rapidly and new areas of Gdynia are not built up with dwellings.

Extension of Gdynia’s administrative borders, and it should be noted the city doubled its territorial range twofold after the war (since 66 km<sup>2</sup> to 138 km<sup>2</sup>), had a minor impact on further development of parish organisations in the post war period (contrary to the situation before the war) as for example only Wielki Kack, which was incorporated by the city in 1953, had its own parish.

Apart from parish churches and chapels of religious orders in Gdynia today we can also discern 25 various types of Catholic chapels: 15 parish chapels, 5 cemetery chapels, three hospital chapels and two in facilities for the disabled (L. Przybylska, 2008). It is characteristic that the latter two types were established in the last decade of XX century. This is closely connected with political changes after 1989 and the possibility of arranging places of worship even in public space such as hospitals and homes for the disabled.

### **Sopot parish churches**

On the basis of Figure 3 we can identify four periods in the development of parish churches in Sopot in the post war period: first years after the war when the number of parish churches doubled from 2 to 4, an over thirty year period of stagnation in establishment of new parish churches (1947–1982), the years 1982–1993 with a growth in the number of parish churches from 4 to 7 and the turn of the century with over 10 years of stagnation (a 7 parish network unchanged since 1993).

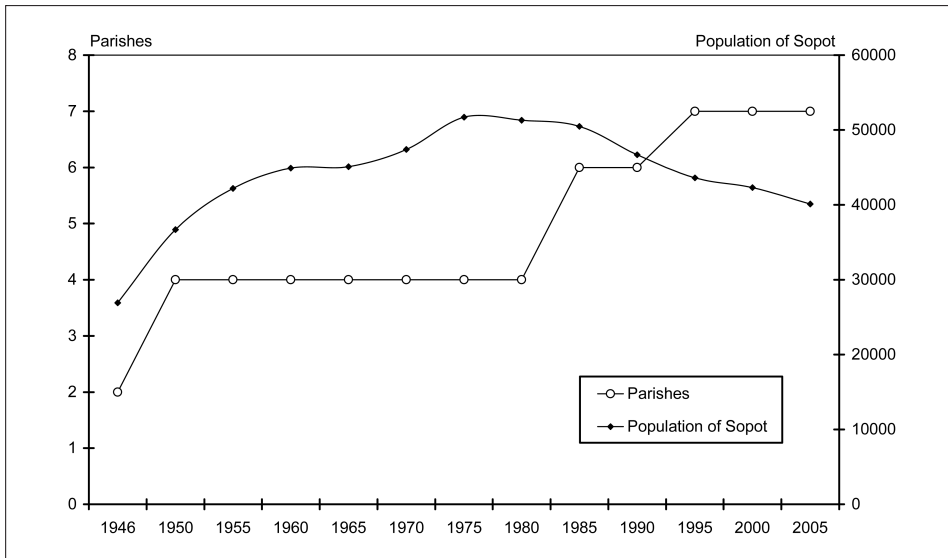


Figure 3. The parishes of the Roman Catholic Church and the population of Sopot in the years 1946–2005

Source: own studies based on Schematyzm Archidiecezji Gdańskiej 2006, 2006; and different Statistical Yearbooks; population based on balanced data, except for 1946.

Comparing to neighboring Gdańsk and Gdynia population changes in Sopot after 1945 were quite different. Similar to Gdańsk and Gdynia population doubled: from 26 900 in 1946 to 51 700 in 1975. Contrary to Gdynia and Gdańsk number of inhabitants began to decrease already in the eighties resulting significant depopulation rate from over 50 thousand in mid seventies to 40 thousand people in 2005.

Unlike Gdynia and Gdańsk Sopot territory did not grow after 1945 and is only 17 km<sup>2</sup>. Considering the population trend and the size of the city of Sopot (both area and people) I predict that no new Roman Catholic parishes will be erected in future.

## Conclusions

The article is to show, on the example of three cities in northern Poland, the impact of politics on the erection and development of the Roman Catholic parish network. Until World War II the cities of Gdańsk, Sopot and Gdynia developed differently. After 1945 started new chapter for Trójmiasto common history under the influence of socialist politics which ended in 1989.

After World War II, the internal policy of the state affected the development of parish churches in Poland. Up to 1989 state authorities

following the communist ideology hampered or even made it impossible to develop sacral architecture and conduct religious activity. Certain positive changes took place in the relations of State and Church in Trójmiasto after 1970 events and after the strikes in the year 1980–1981.

In the years 1945–2005, the number of parishes in Trójmiasto grew over threefold: from 29 to 94. It is characteristic that nearly half of them (49) were established before the beginning of the eighties and the rest (45) in the years 1980–2005.

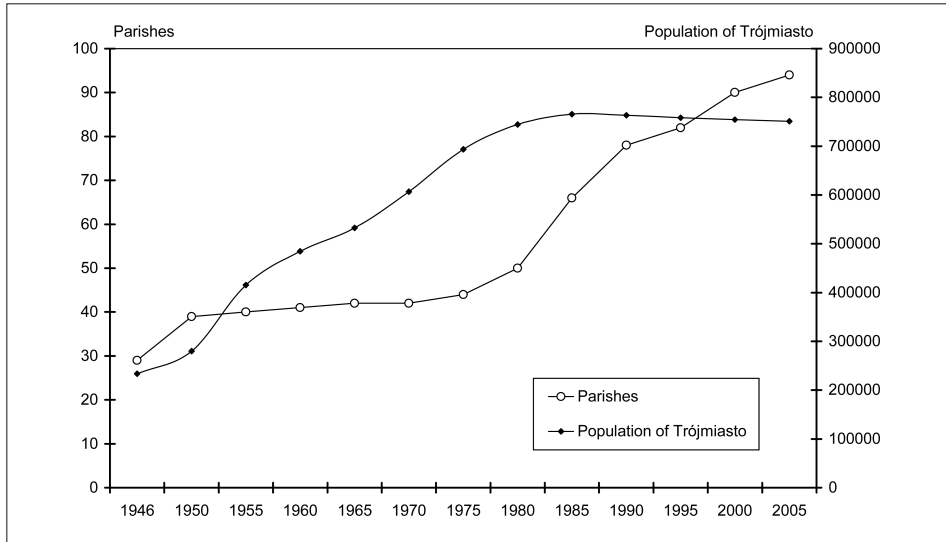


Figure 4. The parishes of the Roman Catholic Church and the population in Trójmiasto in the years 1946–2005

Source: own studies based on figures 1–3.

The influence of political events in the country on the number of parish churches in Gdańsk, Gdynia and Sopot in the years 1946–2005 was well illustrated on figures 1–3 on the basis of which figure 4 was made. We can identify 4 periods in the development of parish network in Trójmiasto in the post war period:

- 1945–1949 the years after the war when the number of parish churches rose rapidly from 29 to 39 (10 units in 5 years),
- 1950–1979 period of stagnation in establishment of new parishes (10 units in 30 years),
- 1980–1990 the explosion of parish network in the eighties from 50 to 78 (28 units in 11 years),
- period of stable growth from 78 to 94 parishes (16 units in 15 years).

It is characteristic that in years 1945–2005 both the population of Trójmiasto and the number of Roman Catholic parishes grew 3 times whereas the area



of Gdańsk, Gdynia and Sopot rose 4 times. It is obvious that the number of parishes depends on the number of population. But the development of parish network is often modified by other factors. B. Domański, K. Gwosdz, L. Luchter (2005) describing parish network in the Upper Silesian Industrial Region since 1800 say about 10 of them. I think politics was the most important in post war period resulting 4 distinguished periods of development of parishes in Trójmiasto related to political changes.

We can distinguish 2 periods of population changes in Trójmiasto: up to 1980 when population was increasing constantly (3 times up to 744 400) and the time of very little growth and very little slow down so it is nearly constant since then. On figure 4. the disproportion in development in parishes and population growth is very well observed. When population began to decrease in the eighties in Trójmiasto the number of parishes have just started to grow after a long period of stagnation because of political restrictions.

Summarising, political events in Poland had a big impact on the erection of new Roman Catholic parishes which was delayed in the period of fast population growth before the eighties and compensated after 1980, the year when political changes began preparing big changes in Eastern Europe in following years.

## References:

- Cieślak E., 1998, *Historia Gdańska*, t. IV/1, Instytut Historii PAN, Zakład Historii Gdańska i Dziejów Morskich Polski, Instytut Historii UG, Sopot.
- Domański B., Gwosdz K., Luchter L., 2005, *Przestrzenne zróżnicowanie rozwoju sieci parafii w regionie przemysłowym* [in:] B. Domański, S. Skiba (eds.) *Geografia i sacrum*, t. 2, Instytut Geografii i Gospodarki Przestrzennej Uniwersytetu Jagiellońskiego, Kraków, p. 207–218.
- *Kościół Archidiecezji Gdańskiej. Nasze dziedzictwo*, 2006, tom II, Studio Plus, Bydgoszcz.
- Marcinek J., 1996, *Kościół Najświętszej Maryi Panny Królowej Polski w Gdyni. 1920–1939. Historia budowy i rozwoju*, Wydawnictwo Harmonia, Gdańsk.
- Michalski T., 1999, *Cultural and historical conditions of the sacra buildings arrangement within the central part of the city of Gdańsk* [in:] M. Koter, K. Heffner (eds.) *Multicultural Regions and Cities. Region and regionalism*, No 4, University of Łódź, Governmental Research Institute, Silesian Institute Society, Łódź-Opole, p. 217–224.
- *Ordo et Elenchus pro 1938*, 1938, Kuria Diecezji Pelplińskiej, Pelplin.
- Przybylska L., 2008, *Zróżnicowanie przestrzeni sakralnej Gdyni*, series: *Regiony Nadmorskie 14*, Wydawnictwo „Bernardinum”, Gdynia-Pelplin.

- Rocznik Statystyczny Gdańska 1971, 1971, Miejski Urząd Statystyczny, Gdańsk.
- Rocznik Statystyczny Miasta Gdyni 1986, 1986, Wojewódzki Urząd Statystyczny, Gdańsk.
- Rocznik Statystyczny Województwa Gdańskiego 1958, 1959, Prezydium Wojewódzkiej Rady Narodowej, Gdańsk.
- Rocznik Statystyczny Województwa Gdańskiego 1994, 1994, Wojewódzki Urząd Statystyczny, Gdańsk.
- Schematyzm Archidiecezji Gdańskiej 2006, 2006, Gdańsk Metropolitan Curia, Gdańsk.
- Statistical Yearbook of Gdańsk City 2000, 2000, Statistical Office, Gdańsk.
- Statistical Yearbook of Gdynia City 1996, 1996, Statistical Office, Gdańsk.
- Statistical Yearbook of the Republic of Poland 2008, 2008, Central Statistical Office, Warsaw.
- Więckowiak J., 2000, Kościół Katolicki w Gdyni, Wydawnictwo „Bernardinum”, Pelplin.
- Wyznania religijne. Stowarzyszenia narodowościowe i etniczne w Polsce 2003–2005, 2007, Central Statistical Office, Warsaw.

Ion Gumienny

## **Aspects concerning the confessional politics of the Russian Empire at its western bordaries (The Case of Bessarabia)**

The incorporation of Bessarabia as a component part of Tsarist Empire and the transformation in a coterminous region of border after the conclusion peace from Bucharest from 1812, brought about before the Russian administration a series of problems both from the administrative and confessional point of view, being known the place which Balkans occupied in the outside politics of Russian Empire.

On the one hand the new territory followed to be joined in a united system of leadership both from the administrative and clerical point of view, but on the other hand Bessarabia followed to be an example for the nations from South-East Europe regarding "a good role" from the part of leadership Empire from the town of Saint Peter.

Moreover, the new part of the border empire was distinguished from the rest boundary owned by the tsarist Empire from the Baltic Sea to Black Sea. First of all the new territory from the component part of Empire was populated by a orthodox majority unlike the north-western region which was a majority catholic, while Besarabia was confined with a state which had the same national component as well as the territory between Prut and Nistru specially these factors influenced essential the confessional politics imposed by Tsarist Empire in Bessarabia both in first half of the XIX-th century and all over this century.

Therefore, among first measures taken, were to join the territory Pruto/Nistrean in the confessional system of Russia. Namely at 21 August 1813 was concluded the decree by Alexander I at Teplitz through which was founded Chisinau and Hotin Archbishop which included parts from the diocese of Proilavia, Husi, Iasi and Radauti, who till that moment were in the possession of Moldova Metropolitan seat, at which was added and the churches between Nistru and Bug including all together 852 churches.

In the van of the new orthodox diocese was named Gavriil Banulesc-Bodoni with the title of "Exarh and Metropolitan bishop" which had to manage the problems of the orthodox population through the agency of

Cathedral, Archbishop House, and of Dicasteria being directly submitted to Saint Synod from Sankt-Petersburg (§. Ciobanu, 1993, p. 287)<sup>1</sup>.

As far as we see we observe that the single difference of Orthodox Church from Besarabia in comparison with the Russian church is the existence of dicasteria which does not persist for a long time, because at 18 May 1832 by an imperial decree is transformed in a Consistoriu. This thing is explained even by the emitted act in which shows that the measure is effected in order to be the same as in the rest of the Empire (ПСЗ, Собрание 2, том 7, p. 318).

At the same time with the perseverance of the exarh Gavriil Banulescu-Bodoni at Chisinau was opened Theological Seminar (January 1813) which however functioned in accordance with an established program by imperial authorities as well as metropolitan printing works (May 1814) where were published a hole series of religious works, but which again were translated from Russian language being respected all the Russian canonical norms (I. Nistor, 1991, p. 226–227).

The representatives of the confessional minorities also were directed through the centers from the interior empire.

Thus, the catholic structures from Bessarabia which till the 1812 were subdued juridical to Catholics bishopric from Bacau, changed in accordance with the orders of the Emperor, where the bessarabian catholics were passed in the submission of the metropolitan bishop from Moghilev, Stanislav Bogus Sestrentzevici a spiritual leader of catholics from Russia. To 1814, Stanislav Bogus Sestrentzevici passed the catholics parishes from Bessarabia in the submission of the catholic bishop from Kamenitza but by an imperial decree from 20 february 1819 the bishop from Kamenitza is charged with the supervision of all Catholics parishes from Bessarabia inclusively of those created by colonists (H. Саганова, 2005, p. 122).

After which the relations between the Russian Empire and papacy was improved was signed the concordat from 1847, which selected and the problem as concerns the boundaries and submission of the Catholics from the south of Russia. In 1848 through the Pope bull Pius IX was founded the diocese of Hersone in which entered and the Catholics parishes from Bessarabia. Its center was transferred at Tiraspol but from 1856, at Saratov (H. Саганова, 2005, p. 123).

Therefore, and in the case of the catholics confessions as well as the case of orthodox may be establish the same thing and specially the submission from administrative and clerical point of view, more possible to control authorities power.

<sup>1</sup> Original: Полное собрание законов Российской Империи, том 32, Печатаного в типографии 2-го отделения собственно Его Императорского Величество канцелярии, 1914, Санкт-Петербург, p. 683.

In 1830 at 21 May, was received by the General Gubernator of Novo Russia and Bessarabia the signed decree by the emperor in which they let know about a considerable growth number of Armenians in such cities as Nahicevan, Grigoriopol, Carasubayar and in others cities from the South of Bessarabia and for a favorable rule of that confession was constituted the Diocese of Nahicevan and Bessarabia in the van of that being named the Georgian Archbishop Nerses (Arhiva Națională...).

Thus, the armeano-grigorian Church from Bessarabia formed in Russia one from those six Dioceses existent having in it's component part the churches from Sankt-Petersburg, Moscow, Ecaterinoslav, Herson and Bessarabia as well as Rostov and Taganrog. The bishop of that Diocese depended on Patriarch from Ecimiadzin – the supreme catholic of the nation Haican (Armenian), which was in Chisinau till 1875 year (Ș. Ciobanu, 1993, p. 314). From this fact the existent relationship between the Armenians from Bessarabia and the rest of Romanian territories, because in the moment when began the Russian-Ottoman war from 1806–1812 Grigore Zaharean was ordainment bishop of the Armenians from Moldovlahia. After finishing of this war Grigore Zaharean was established to live at Chisinau with the title of Archbishop of the Armenians from Bessarabia under his jurisdiction remained and the Armenians from Moldova and Valachia (D. Poștarencu, 2006, p. 211.).

Another confessional minority appeared after 1812 on the territory of Bessarabia was that of the Lutheran-gospels composed in majority by Germans which were colonized in that region or were under the administration service or Russian army.

Actually, the organization problem of the Lutheran Gospels church existed and in the Russian Empire, this fact was recognized as early as 1819 year. Because of the protracted disputes of Russian administration, as well as the bureaucratic machine which functioned hardly, as a solution was created a special commission at 22 May 1828. After its activity at 28 December 1832 was emitted the decree of the Czar by which was confirmed the unique organization of Lutheran Gospel church from Russia (ПСЗ., Собрание 2, том 76, p. 956).

In accordance with that, in the van of that confession was situated the General Synod of the Lutheran-Gospel Church, while the administrative ecclesiastical authority was the Supreme Council of the Lutheran-Gospel Church which was at Sankt-Petersburg and which at his turn was led by a lay president. For a good leadership all the representatives of the confession where divided in eight districts. From the first district of the provincial consistory of Sankt-Petersbourg made part the parishes being under the possession of Sankt-Petersburg, Novgorod, Pscov, Vologda, Oloneț, Arhanghelsc, Costoma, Iaroslav, Smolensc, Cernigov, Volâni,

Podolsk, Kiev, Poltava, Ecaterinoslav, Tavrida, and Herson gubernii with Odessa town and Bessarabia oblasti (ПСЗ., Собрание 2, том 76, p. 991).

Some of these observations prove us clear that in the initial period the major purpose of the confessional politics led by the tsarist authorities in Bessarabia, as a region of border of the Empire, was the submission from the administrative point of view of all the central power confessions and the standardization and the implementation of a new way of Russian administration.

Another direction of the confessional politics of Tsarist Empire in Bessarabia was centered to perform measures directed to create in the new annexed territory, an entity, "as more possible to be loyal to empire power", or with others constituted a component part of the russification politics led by the administrative- politics machine of the empire.

Here, I am sure that all of us accept the concept initiated by Alexei Miller which shows that at the present moment we can not to talk about a unique politics of general russification available for all the territory of Euro-Asiatic empire, but about politics of russification which depended of the context in which they happened, so it's necessary to understand a conception of that phenomenon from the situation point of view (А. Миллер, 2002, p. 135-136).

The same author, shows that it is important to consciences that the project of formation of new russified nationalities or of cultural expansion in more regions had in the vision of the russificators , rivals sufficiently important.

In case when the opposed factor proved to be stronger, at least for a nearer expectation, was considered as a most propitious solution to keep or to form a specific national identity, necessary for the blockage realization of some projects of assimilation and cultural consolidation (А. Миллер, 2002, p. 144-145).

Even in a such direction can be framed and the Russian confessional politics which made part by a series of complexes measures or of creation of a loyal identity of the empire authority. It is obviously and the fact that here can not be placed the signe of equality between what happened in the North region, the west boundary of Empire and Bessarabia. In the first case, we have a population of Slavonic origin, but which in a great part professed the catholic confession (we dwell on first place at Poland's) where the process of russification was made through the agency of converted population at Orthodoxy. It's a kind of manifestation of the faith before the Tsar adopting the faith at which he belongs to.

While, in Bessarabia, the majority of population was orthodox, but not with a Slavonic origin, as more as possible that in the adverse part of boundary existed government systems of the fellow countrymen.



This fact prevailed at the base of all transformation of organizational-administrative order made in faith plan by the tsarist authorities. It is necessary to remember that the creation of a new orthodox diocese on the territory recently annexed, as a component part of the boundary of Tsarist Empire from West, and the submission of that to Saint Synod of Russia, were not the singles measures undertook as concerns the creation of the necessary premises of a politics of citizenship and loyalty of population before the Tsar.

The institution of the Orthodox Church from Bessarabia was used by the empires authorities as an instrument of Russification of population. So, after the death of the metropolitan bishop Gavriil Banulescu-Bodoni in diocese chair of Chishinau and Hotin were named a series of clerical faces from the internal regions of Russia which didn't matter about bessarabian national culture, but which by theirs measures followed the purpose of denationalization of local population (Ş. Ciobanu, 1993, p. 284-302).

Moreover, beside the different administrative structures the Orthodox Church is an instrument by which the Russian language is implemented more assiduously in the bessarabian society. The Romanian language being excluded at maximum possible. Thus the services in churches were made in Russian language, which constituted an incomprehensible language for a big part of population.

Obligatory they introduced the Russian language in the theological seminar, for the spreading of the literature with religious contents in Russian Language through the population. The philorussian activity of the church didn't stop here. In the second half of the XIX-th century, during the shepherd of the bishop Pavel Lebedev, was closed the bishopric printing works from Chisinau, for brake the printing of clericals books in parishes from the interior empire and they brought speakers priests of Russian language in Besarabia, and tried to close some churches and orthodox places those being as centers of resistance of the Rumanian culture and customs (A. Boldur, 1992; I. Nistor, 1991).

Concerning the Catholic Church from Bessarabia also was a specifique politics. In the first place it is necessary to take in consideration the fact that the confession in her great majority was composed by Polish. On the one hand the empire administration must to present her "humans face" as concerns the politic about the neo orthodox confessions, but one the other hand it was necessary to lead a politics of limitation against the Russian influence. That is a real picture which shows and explains the tergiversation with which took place the reconstruction or the building of new holy places of that confession. So, to 1852 in the Pruto-Nistrean space were just only five catholic Parishes at Chisinau, Balti, Hotin, Crasna and Ismail



(H. Саганова, 2005, p. 132). A real example can serve even the construction of the Catholic Church from Chisinau the discussions about her construction began as early as 1834 and being hallowed at 6 May 1843 (Cf. A.N.R.M., Fond 2, inv. I, d. 2039.).

Therefore, on the one hand by the politics of colonization led by the Russian administration was impossible to stop or to oppress that confession. On the other hand, as we have mentioned the catholic confession was composed in majority by Polish people. The foundation of new catholic parishes constituted in the vision of the office state new focuses of propaganda of the anti empire ideas propagated by the polish patriots which found refuge in Bessarabia. By this fact all the catholic dioceses existent were supervised by the police organs. Thus in any moment to be possible to take action against any actions or hostile rumors, as concerns the empire administration or the Tsar for example as happened after the revolt from 1830 of the Polish patriots (H. Саганова, 2005, p. 128).

It is obviously that being a confessional minority concerning the Catholics didn't exert a stridently politics of conversion as was the case of border of gubernii from north-western empire. However the isolated circumstances of passing of Catholics at Orthodoxies can be registered and on the Bessarabia territory, but was not registered cases of conversion en masse (Cf. ANRM, Fond 2, inv. I; Fond VI, inv. II; Fond 205, inv. I-V.). On the general whole these conversions took place not from the cause of some sincerely convictions of understanding of the orthodox learning, but of certain materials stimulations, of certain favors or the possibility of rising on the administrative chain of command, being known the politics of limitation of Catholics to different jobs in administration (A.N.R.M., Fond 2., inv. I, d. 5838, f. 1-2.).

Another attitude was manifested as concerns Lutheran-Gospel confession and that Armenian.

In that case we can talk about a series of factors which in general didn't affect the frame politics of that territory in the administrative and cultural system of the empire. In the first place that confession includes a little number of parishioners (in 1842 the number of Lutherans from Bessarabia didn't outrun the cipher of 15 000) (A.N.R.M., f. 2., inv. I, d. 3704, f. 2-27 and d. 4282, f. 7-7v.), afterwards a considerable number between these represented colonists, arrived in Bessarabia with the license of the tsarist leadership which followed to assure in general lines the requirements of the new comers.

Moreover, that confession constituted unlike the orthodox or Catholic an isolated community, which didn't have lasting relationships with the Germanic space which was relatively placed far away of Bessarabia. At the same time if we talk about the spirit which prevailed it, was more loyal

and sub missed unlike the polish/Catholics with theirs spirit of revolt and the wish of reconstitution of the polish state and going out from the component part of Russian Empire.

A thing no less important constituted and the fact that a part from the Lutheran-gospel representatives occupied jobs sufficiently important both in the local administration and in that central of bureaucratic-administrative Russian system, having the possibility to influence concerning the taken decisions.

We consider that deliberately these factors established a pliant politics on the behalf of central authorities concerning that confession, inclusively on Bessarabia territory. In that way we can establish that for the Lutherans -gospels were sent clerical faces necessary for officiate the cult, also was financed to construct different holy places of that confession. Moreover, the Lutherans had the possibility to organize the Lutheran-gospel local synods (A.N.R.M., Fond 7., inv. I, d. 1-25.).

Another problem also very important is the confessional policy of the tsarist authority as concerns the Jewish confession. It is known the fact that unlike others regions from Tsarist Empire in Bessarabia the Jews received the right to establish with the life and in cities, fact that made that region very attractive. In a short time in all urbane centers from the pruto-nistean space appeared Jewish communities (one of them existed till the annexation of Bessarabia at Russian Empire The Society "Jewish fraternity of burying from Chisinau". Existed as early as 1774) (Ş. Ciobanu, 1993, p. 319), each having one or more holy places of cult. Each community had theirs cultural institutions and of blessing very well administrated by the representatives of communities. The single interdiction for the Jews from Bessarabia was the forbidden to establish with the living in the zone of 50 km. in vicinity of the empire's boundary (A.N.R.M., Fond 2., inv. I, d. 1452., ş. a.). In the rest the Jewish communities had all the freedom to profess the cult. At the beginning of the XX century these conditions made possible that in Bessarabia live approximately 352 thousands of Jews which had a number of 365 of Sinagogs and holy places (Ş. Ciobanu, 1993, p. 316).

With all these, it's necessary to mention the fact that from all the numbers of converters at orthodoxies from the Bessarabia territory, the number of Jews is the most usually, the orthodoxism was received not from the cause of some pressures and because of certain advantages by material order (Cf. A.N.R.M., Fond 2., inv. I.).

A particular place in the confessional politics of the Tsarist Empire had the multiple denominations appeared on the territory between Nistru and Prut, the majority having it's origin in Russia.

That being a subject sufficiently large this requires to be treated in particular and not here. We will show only the fact that the attitude of the

tsarist administration concerning these confessions in the gubernii from the outside empire is harsher than in Bessarabia. It can be established that the denominations which totally renounced of the Christian doctrine, so as was the case of the Subotnics both in the Empire and in the Bessarabia were exiled in Caucasus in the case of the denominations representatives deviated from the Russian Church schism, but we notice an attitude more favorable in the discussed zone than in the rest of Russia (A.N.R.M., Fond 6., inv. II, d. 75.).

It is interesting to observe the fact that the favorable politics as concerns these religious minorities it is proportionally with the process of colonization in Bessarabia of Bulgarians, Serbians and velicorussians. This thing made us to believe the actually the representatives of different denominations which in a great part had as a slave origin, and the sedentarily of these on that territory had as a real purpose to create some favorable conditions for the russification of the aboriginal population.

Some of these documentary information and suppositions exposed in these materials allow us to do a series of conclusions. Thus speaking about the confessional politics of the Russian Empire at its western boundaries can be observed in Bessarabia, it has with her specific realization. In the first place can be established a reorganization and reorientation of all the confessional structures which had as real purpose a maximum possible centralization necessary for a control as more possible rigorous both from the central ecclesiastical organism part and lay of the tsarist empire. At the same time by that measure was followed and interrupt any relationships with the similar organisms from the right hand of the Prut River.

Then the confessional politics of the Russian Empire from Besarabia constituted a component part from complex system of measures leaded by the central authorities, having as a purpose the russification of the population from that region, or at least to create a national entity loyal as concerns the imperial authorities and tsar.

Thought the orthodox churches they tried to introduce the Russian language. The Catholic church being represented in majority by polish and was stopped by different methods of extensions this fact didn't incite revendications from the other parts of catholic powers and through that to stop the spreaded ideas with a anti imperial and antirussian content.

Concerning the Lutheran, Armenian and Mosaic confessions the Russian authorities manifested a tolerant attitude, these confessions not presenting a major danger for the state politics.

At the end speaking about the representatives of the denominations resulted from the schism of the Russian church from the XVII-th century, we can declare that they were considered bearer of slave cultures elements on the territory of Bessarabia a favorable fact for the propagation of the russification elements.

**References:**

- Arhiva Națională a Republicii Moldova.
- Boldur A., 1992, *Istoria Basrabiei*, Ed. Victor Frunză, București.
- Ciobanu Ș., 1993, *Basarabia*, Chișinău.
- Nistor I., 1991, *Istoria Basrabiei*, Ed. Cartea Moldovenească, Chișinău.
- Poștarencu D., 2006, *Anexarea Basrabiei la Imperiul Rus*, Ed. Prut Internațional, Chișinău.
- Миллер А., 2002, Русификации: классифицировать и понять, «Ab Imperio», Nr. 2, p. 135–136.
- Саганова Н., 2005, Кишиневский Римско-католический приход «Божественного проведения в первой половине XIX века», *Analecta catolica*, vol. I, Chișinău.

Anna Dubownik

## **The role of IROP (Integrated Operational Programme of Regional Development) in the execution of the local government's plans in the Piła sub-region in years 2004–2006**

The European Union's regional policy is aimed at economic and social cohesion among the Union's member countries and regions. In order to lessen the diversified levels of social and economic development in specific member countries, regional policy-related actions have been instigated, the most vital being support for the least developed, so-called problem areas. According to P. Churski (2004), these are areas of a low level and a slow rate of economic development, necessitating economic restructuring and witnessing intense negative social consequences of the economic transformations. At stage one of EU membership, Poland was a problem area within Priority One of the EU structural policy: "Development and modernisation of the infrastructure to enhance the competitiveness of regions" and was granted financial support as part of the structural funds and the Cohesion Fund.

In 2004–2006 Poland received over € 1 billion; the monies were distributed and employed by means of six operational programmes, including the Integrated Operational Programme of Regional Development (IROP). IROP is the chief instrument of the European economic and social cohesion policy in Poland dedicated to regional administration (T. G. Grosse (ed.), 2004).

This article strives to highlight the changes in managing local authority units at the time of tailoring Poland's regional policy to the EU cohesion policy. The author of this article has also evaluated the progress of implementing IROP and its importance to the local authorities' activities.

The analysis includes the Piła sub-region i.e. five counties located in the north of the Greater Poland voivodeship. The sub-region includes the following counties: Chodzież, Czarnków-Trzcianka, Piła, Wągrowiec and Złotów. The Piła sub-region has been separated in the EU territorial units scheme as NUTS 3. The Piła sub-region is characteristic of specific conditions of the social and economic development. This is a peripheral region due to its location at the northern border of the Greater Poland voivodeship (Figure 1).



Figure 1. The Piła sub-region as part of the counties scheme in Greater Poland voivodeship

Source: author's own development.

The time scope of this analysis includes the time of IROP implementation in Poland's regional policy i.e. from May 2004 to the end of December 2008<sup>1</sup>.

The strategic goal of IROP is to "create the conditions for the increase of competitiveness of the regions and prevention of the marginalization of some areas, in such a way as to enhance the long term economic development of the country, its economic, social and territorial cohesion, as well as integration with the European Union." Increase of competitiveness is synonymous with positive changes to the economic and social structures of all the regions with respect to the situation in European regions, in the realm of economic productivity and work efficiency, innovation creation and absorption, the inhabitants' education level, their incomes and the technical infrastructure. "IROP is the biggest source of assistance for local governments of all levels both with respect to the finance involved and types of financing" (T. Dziurbejko, 2006, p. 159). The extent of the programme-related assistance strictly relates to the functions and responsibilities of county and commune authorities as analysed in this article. According to the act on county level authorities, "the responsibilities of public benefit entities include the commune's own tasks aimed at ongoing and uninterrupted satisfaction of the communities' needs by means of rendering commonly available services"<sup>2</sup>.

The IROP priorities and the tasks of the counties and communes were complementary and focused on extending and upgrading the infrastructure targeted at enhancing the regions' competitiveness (Priority 1.), strengthening the human resources development in regions (Priority 2.) and local development (Priority 3.). Owing to IROP assistance, local governments managed to upgrade and extend the technical infrastructure, stimulate development in rural areas, implement training and education projects aimed at the local labour market and grant support for entrepreneurship.

The strategic goal of IROP was to be accomplished by focusing the state's activities on the priorities referred to in the National Strategy for Regional Development, including:

**Priority I. Development and modernisation of the infrastructure to enhance the competitiveness of regions** aimed at supporting the regional technical, tourist, cultural, social and medical care infrastructure.

---

<sup>1</sup> According to rule n + 2 when the programme's settlement continues for 2 years upon its completion.

<sup>2</sup> An Act of 8 March 1990 on county local authorities.



As part of this Priority, the following activities were implemented:

*Measure 1.1 Modernisation and Development of the Regional Transport System.*

*Measure 1.2 Environmental Protection Infrastructure.*

*Measure 1.3 Regional Social Infrastructure.*

*Measure 1.4. Development of Tourism and Culture.*

*Measure 1.5. Information Society Infrastructure.*

**Priority II. Strengthening the human resources development in regions** accounted for enhancing the locals' opportunities in the labour market by raising their education level, acquiring new skills and by means of vocational re-orientation.

As part of this Priority, the following activities were implemented:

*Measure 2.1 Development of competencies linked to the regional labour market needs and life long learning opportunities.*

*Measure 2.2 Equalising educational opportunities through scholarship programmes.*

*Measure 2.3 Vocational reorientation of persons leaving agriculture sector.*

*Measure 2.4 Vocational reorientation of the workforce affected with restructuring processes.*

*Measure 2.5 Entrepreneurship promotion.*

*Measure 2.6 Regional innovation strategies and transfer of knowledge.*

**Priority III. Local development** accounted for economic and social activation of areas endangered with marginalization by supporting local and regional centres which affect the environment's social and economic activities.

As part of this Priority, the following activities were implemented in various types of areas:

*Measure 3.1 Rural areas.*

*Measure 3.2 Areas undergoing restructuring.*

*Measure 3.3 Degraded urban, post-industrial and post-military sites.*

*Measure 3.4 Micro-enterprises.*

*Measure 3.5 Local social infrastructure.*

**Priority IV. Technical assistance** This Priority created the financial and organizational conditions for the process of implementing the Integrated Operational Programme of Regional Development in 2004–2006.

In the initial period of Poland's membership in EU, IROP was managed nationally by the Ministry of Economy and Labour while on 31 October 2005 it was taken over by the Ministry of Regional Development referred to as the managing authority (Figure 2).

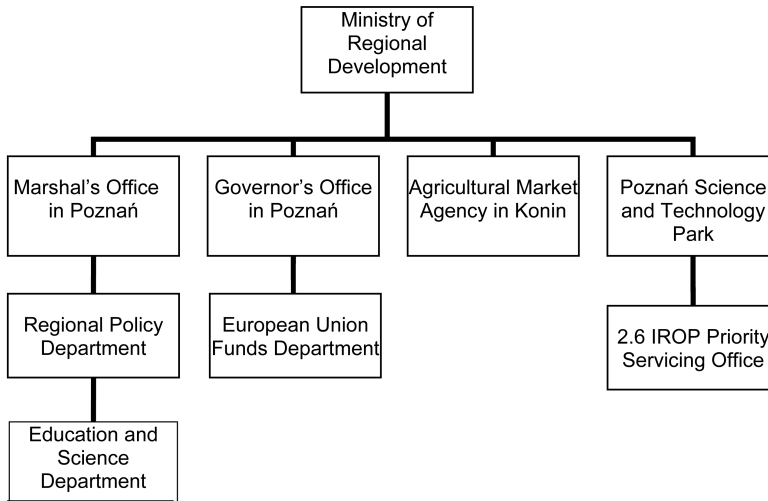


Figure 2. Organizational scheme of implementing IROP in the Greater Poland voivodeship

Source: author's development.

The process of applying for structural funds commenced once the Office of the marshal of the Greater Poland voivodeship published information on instigating a call for proposals as part of specific priorities. The end beneficiary (a commune or county) would submit an application before the Marshal's Office. A complete application would be first evaluated from the formal point of view by Marshal's Office's employees in charge of selecting proposals. The formal evaluation was made with reference to criteria adopted separately for each activity within IROP priorities, at the same time confirming the application's completeness and correctness. Once the proposals were formally evaluated, they were subjected to content-related and technical evaluation. It was conducted by the so-called experts panel consisting of independent specialists in specific areas. With reference to the data and documents available, the panel would evaluate the expected results of the projects. The results of this content-related and technical evaluation would form a ranking list of projects transferred to the Regional Steering Committee (RSC), a body offering its opinions and advice to the Voivodeship Management. The Regional Steering Committee would evaluate the projects' influence on satisfying the region's needs and the project's coherence with the assumptions underlying the voivodeship's development strategy. This institution was not capable of removing a proposal from the list drawn by the experts panel while it could change the order of priorities on the list by assessing a given venture's significance to local development. With reference to the RSC's recommendation, the Voivodeship's Management would make the final project selection decision,

following its own assessment criteria and would adopt a resolution of the Voivodship's Management. The final stage of the proposals selection procedure was an agreement to co-finance the project, initialled by the governor and the end beneficiary<sup>3</sup>.

IROP was also financed by means of two structural funds: the European Regional Development Fund (ERDF) and the European Social Fund (ESF). The grants available as part of Priority 2 as well as Activity 3.4 (micro-companies) and Priority 3 were transferred to the so-called implementing authorities. In the voivodship in question, they included the Regional Labour Office, respective units of the regional authorities and the Agricultural Market Agency. As part of Priorities 1 and 3, the grants' chief beneficiaries (final beneficiaries) included local authorities: communes, counties and voivodships as well as associations, unions and agreements thereof.

The total, the IROP budget in 2004-2006 amounted to € 4.23 million; 70% of this amount was attributed to the European Union's structural funds (€ 2.97 million). 85.2% of the funds come from the European Regional Development Fund, dedicated to grants within Priorities 1,3 and 4 while 14.8% of the EU funds came from the European Social Fund for financing Priority 2.

The remaining 30% of the IROP budget consisted of national public funds: the state budget (31%), the local authorities' budgets (69%) and private funds (3.5% of the total IROP budget).

Table 1. IROP budget structure in 2004-2006 (the Euro at current prices)

Priority	Costs total	National public funds						Private funds
		UE funds			Domestic funds			
		Total	ERDF [%]	ESF [%]	Total	state budget [%]	local authorities' budgets [%]	
1.	2608222771	1762567948	100	-	845654823	25	75	50297474
2.	598655828	438469535	-	100	160186293	100	-	14003097
3.	970033392	727523283	100	-	242510109	45	55	81904490
4.	53220003	39910003	100	-	13310000	59	41	-
ZPORR ogólem	4230131994	2968470769	-	-	1115456164	-	-	146205061
-	100	70	-	-	26.5	-	-	3.5

Source: The author's own calculations with respect to the Integrated Operational Programme of Regional: Programme Supplement, 2004, Warsaw.

<sup>3</sup> Developed on the basis of the Handbook of Procedures for Implementing the Integrated Operational Programme of Regional Development, Warszawa 2006.

The regional distribution of IROP funds was developed with respect to the same criteria as adopted when allocating pre-accession funds in 2000–2003. The division relies upon three criteria:

- *the demographic criterion* – 80% of IROP financial support was divided proportionally to the number of the voivodeships' inhabitants due to the fact that the whole area of Poland was covered with Goal 1 of the European regional policy.
- *the economic growth criterion* – 10% of IROP financial support was divided proportionally to the number of inhabitants of those voivodeships where in 1997–1999 the average GDP level per 1 inhabitant was lower than 80% of the national average. The voivodeships in question were: Lublin, Subcarpathian, Podlaskie, Świętokrzyskie and Warmian-Masurian.
- *the unemployment rate criteria* – the remaining 10% of IROP financial support was dedicated to counties where the average unemployment rate in 1999–2001 exceeded 150% of the national average. 72 counties fulfilled the above mentioned criteria.

The Greater Poland voivodeship received 7.1% of IROP financial support dedicated to the whole country (€ 196 million). Together with Masovian, Silesian and Lublin voivodeships, it enjoyed the biggest grants, in total 43.5% of IROP financial support.

The area under scrutiny, the Piła sub-region is a territorial unit with social and economic ratios ranking below the voivodeship's average. The sub-region's economy structure defined with respect to gross value added broken down to industries is characteristic of the agriculture's share of 9% against 4.8% in the voivodeship (Dubownik, 2007). This makes it economically the weakest agricultural sub-region and hence the analysis of IROP grants absorption.

Table 2. Gross value added by types of business activity in the Greater Poland voivodeship and sub-regions in 2003.

Specification	Agriculture, hunting and forestry, fishing	Industry and construction	Services
	Total= 100		
Greater Poland voivodeship	4.81	34.29	60.9
<u>Piła sub-region</u>	<u>9.29</u>	<u>33.26</u>	<u>57.45</u>
Poznań sub-region	6.04	38.02	55.94
Kalisz sub-region	7.29	33.9	58.81
Konin sub-region	8.14	36.8	55.06
Poznań City sub-region	0.06	30.52	69.42

Source: GUS (Chief Statistical Office) 2004, Regional Data Bank [www.stat.gov.pl](http://www.stat.gov.pl)

All projects implemented in the Piła sub-region in 2004–2006 can be broken down into three chief project categories with respect to investment in the realm of water supply and sewage infrastructure, road infrastructure and stipend payments. In the Piła sub-region, 8 out of 24 projects were related to building or upgrading roads. As a result of completing six projects, sewage systems were established or extended. Five local governments paid stipends to students of secondary or tertiary schools as part of projects financed by ESF. The remaining five projects related to a sewage processing plant, building water works, building a gymnasium as well as training and therapeutic workshops.

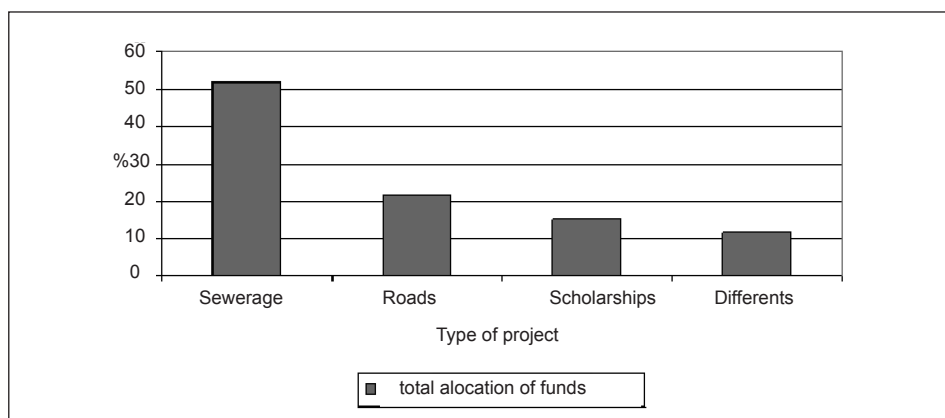


Figure 3. Percentage of the costs related to specific project categories of total allocation of funds dedicated to implementing projects as part of IROP in 2004–2006 in the Piła sub-region

Source: Author's own development.

Figure 3 gives grounds to claim that the projects implemented as part of IROP in the Piła sub-region chiefly referred to infrastructural investments of two types: sewage systems and roads; they consumed 75% of the allocated financial means.

The EU documentation divides projects into the so-called “hard” projects – related to infrastructure, and “soft”, related to activities for the benefit of social development. In the Piła sub-region, the projects related predominantly to the technical infrastructure both with respect to their number and the related costs. The social (“soft”) projects included: stipends for secondary and tertiary school students (5 projects), therapeutic workshops for the handicapped (1 project) and a language course for employees (1 project). The value of seven “soft” projects represented only 17% of the total value of IPOR projects implemented in the sub-regions.

Nearly 60% of all financial means was dedicated to implementing seven projects in Czarnków and Trzcianka county. Projects carried out in Złotów county represented 16% of all projects' value. The local authorities in Wągrowiec county employed 11% of total funds allocation in the sub-region. Piła and Chodzież counties spent each 8% of the total funds allocated to IROP projects implementation.

Figure 4 presents the total value and value of EU funds for projects carried out in specific counties of the Piła sub-region. The cost of projects implemented by local governments in Czarnków and Trzcianka county amounted to over PLN 30 million. The IROP-related financing amounted to PLN 20 million and represented 70% of the investment's total costs. Złotów county ranked second; the local governments spent PLN 9 million on implementing 4 projects. 74% of the related financing was provided by

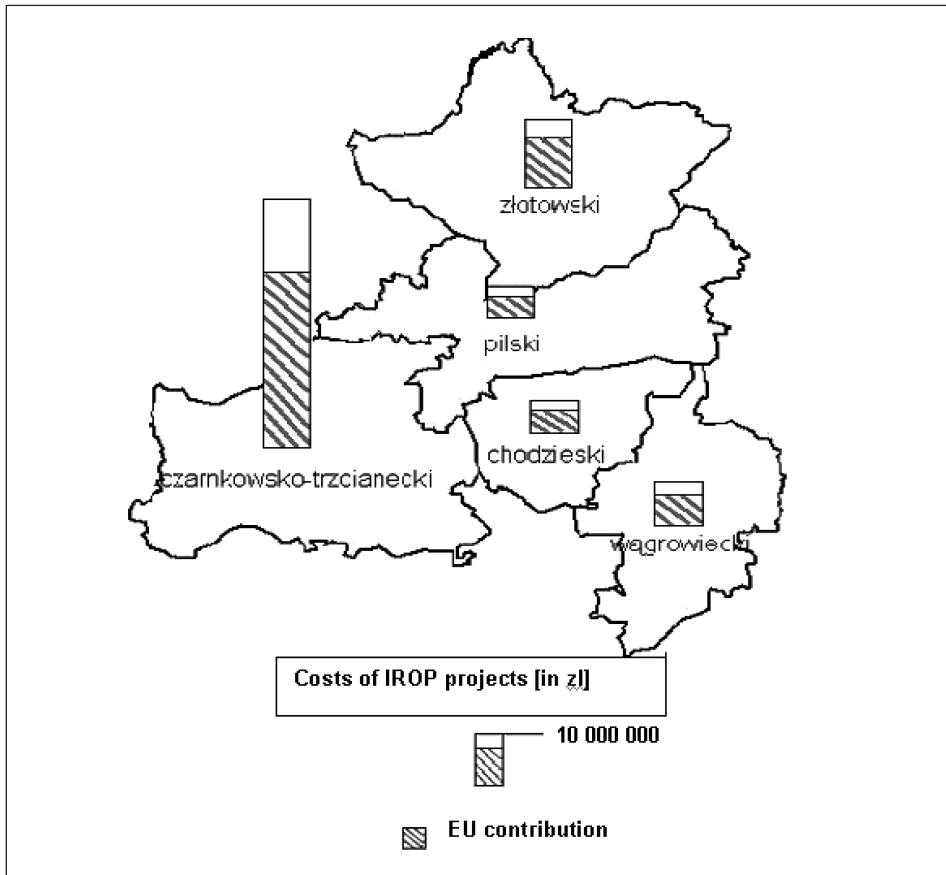


Figure 4. Costs of IROP projects and the EU contribution to the Piła sub-region's counties

Source: Author's own development.

European Union grants. Five projects completed by communes within Wągrowiec county and by the county authorities cost PLN 5.5 million of which 71% was provided by the European Union. The remaining counties undertook ventures of approximate value amounting to PLN 4 million while 72% of the Chodzież county projects and 72% of the Piła county projects were subsidized.

The Integrated Operational Programme of Regional Development as it was implemented in the Piła sub-region resulted in a significant improvement in the technical infrastructure. However, the local authorities failed to fully benefit from enhancing the educational and sports infrastructure, development in tourism and culture or building an infrastructure for an information society. The opportunities offered by Priority 2 of IROP were not fully exploited, either. The authorities could have developed human resources in the sub-region by vocational re-training for individuals abandoning agriculture and restructured industry branches and reducing the unemployment rate. As a result, the Piła sub-region is still plagued with high unemployment.

The two years of IROP operations in the sub-region is far too short to claim if the programme has resulted in significant social and economic changes. The Wielkopolska Regional Operational Programme has created conditions for further growth in the Piła sub-region. As part of the programme, the voivodeship's local authorities will be eligible for assistance in 2007–2013. European Union funds dedicated to the Greater Poland voivodeship as part of the new Regional Operational Programme are six times bigger than the EU funds within IROP. Assuming the growing activity of the local governments in the Piła sub-region one can expect further improvement of the sub-region's social and economic situation when resorting to EU funds.

## References:

- Churski P., 2004, Problem areas in Poland from the point of view of the European Union's regional policy goals, WSHE publishing house, Włocławek.
- Dubownik A., 2007, The role of the Integrated Operational Programme of Regional Development in the execution of the local government's plans in the Piła sub-region in years 2004–2006, Typescript of MA thesis, UAM, Poznań.
- Dziurbejko T., 2006. Commune development planning as an instrument for acquiring EU assistance funds, Difin publishing house, Warsaw.
- Gorzelak G., 2004. Polish regional policy in the face of Polish space diversification, *Regional and Local Studies*, no. 4(18).



- Grosse T. G. (ed.), 2004, Poland and the European Union's new cohesion policy, Public Affairs Institute, Warsaw.
- Integrated Operational Programme of Regional Development 2004–2006, 2004, Ministry of Economy, Labour and Social Policy, Warsaw.
- Integrated Operational Programme of Regional Development Programme, 2004, Ministry of Economy, Labour and Social Policy, Warsaw.
- Szlachta J., 2001, Poland's regional policy from the viewpoint of integration with the European Union, *Regional and Local Studies*, no. 1(5).

Jolanta Mazurek

## **Involvement on the part of local authorities and institutions in the development of farm tourism in the rural areas of Koszalińskie Coast**

### **Introduction**

The development of rural tourism including farm tourism strongly depends of the country's socio-economic situation and transformations taking place in rural areas: just like in the case of any economic activity. Organized activities of local communities, local authorities and other government administration institutions and also non-government institutions are of a crucial importance to this development.

For the past dozen or so years in Poland, activities have been observed connected with the implementation of a new development philosophy and making farmers aware of the necessity to modernize farms, and to look for new sources of income. Farm tourism, although it has been known as such for years, has a new meaning at present. Similarly as in the West European states, the chief reason for its promotion at home is to stop the degradation of rural areas. A faster development of this form of tourism is well justified. It deserves the public, legal and economic support.

### **Area, scope and methods of research**

Koszalińskie Coast is a part of the South Baltic Coasts. It constitutes a seaside lowland situated between the valley of the lower Parsęta River and the surroundings of the Rozewie Cape. The width of the region is 25 to 30 km: along the Parsęta River only; in the south-east direction, it reaches up to 60 km from the sea shore.

In the years of 2005–2006, questionnaire surveys were conducted in the rural areas of 30 communes on Koszalińskie Coast concerning development of farm tourism. One of the chief goals was to find an answer to the following question: how do the local authorities in the region participate in activities aimed at the development of farm tourism? Efforts were made to define the following, among others:

1. Are the objectives concerning the tourism economy pursued by independent departments?

2. How many of those working for the municipality deal with tourism and consultancy services for farmers concerning farm tourism and what qualifications do they possess?
3. What are the main areas of the commune's activities aimed at the development of farm tourism?
4. How do the owners of farm tourism lodgings evaluate the activities pursued by the local government and what type of aid do they expect?

In order to identify the research problem, a questionnaire was developed addressed to those offering lodgings. Information was obtained from 171 people (a large sample). A total of 48.7 per cent of all the owners of farm tourism lodgings in Koszalinские Coast expressed their opinions. The questionnaire survey also covered representatives of the commune's authorities, while personal interviews were made with the staff of Agricultural Consultancy Centres.

### **Activities pursued by the local authorities aimed at the development of farm tourism**

The chief task of those dealing with tourism in communes is the creation of an efficient system of the organization and management of the tourist industry. Such a system, which covers various areas of social and economic activities, may ensure proper conditions for the creation of a tourist product and obtaining a high level of this product. Separate sections for tourism in the organizational structure of the commune offices were established in ten cases. In the year 2006, they functioned in seven out of ten seaside territorial units (there were no such sections in Będzino, Puck and Ustka), and only in three out of twenty territorial units which do not border with the sea: Gniewino, Nowa Wieś Lęborska and Wicko. In the remaining 20 communes, tourism was most frequently combined with marketing and promotion.

In the area of Koszalinские Coast, 80.0 per cent of the commune offices employed staff who dealt with the development of tourism economy. The research proved it that a total of 39 officials worked on suitable positions. A majority of them (27 people, i.e. 69.2 per cent) possessed university education. Statistically, there was 1.60 regular employee per one commune located in the seaside belt; in the remaining area, this ratio was 1.15. As a rule, one (in 12 council offices) or two (in 11 entities) people devoted their time to the issues connected with tourism; in Postomino, it was as many as five people. In some of the communes, those workers had also other duties specified in their employment contracts. The council offices in Białogard, Karlino, Kobylnica, Łęczyce, Potęgowo and Puck did not hire any specialists to take care of the tourism management.

In the period of the restructuring and modernisation of Polish villages, it is absolutely necessary to seek and determine new and alternative solutions in the area of economic activity. Commune authorities bear the responsibility for effective overcoming of any economic and social barriers and problems. In practice, their task is to prepare a local development strategy and to stimulate initiative and to integrate local communities in order to perform the tasks assigned. Organization of trainings concerning principles of business activity is one of the actions aimed at activating the economy of communes. By the end of the year 2006, courses on farm tourism for those intending to start their own business or those who had already commenced their business activity, had been conducted in all of the communes. In 18 territorial units, their chief organizers were the staff of their council offices, and the personnel of the Agricultural Consultancy Centres in the remaining ones.

An important factor to encourage enterprise and which is advantageous to the development of farm tourism, is to propose to those farmers who offer lodgings a simplification of the administrative and legal procedure (depending of a given commune), an introduction of tax discounts (in the case of liabilities towards the commune) or a control of the real property tax. These possibilities were used only occasionally. It was only in the following communes: Główny, Manowo, Potęgowo and Świeszyno where real property tax concessions were offered.

The future of villages and their inhabitants depends to a large extent of the preparation and execution of the concrete concepts of the development of rural areas. Local economic programmes may concern various areas of the competence of communes; however, most frequently, one comprehensive planning document is formulated: the development strategy for a commune, which is developed to cover a specific period of time (usually 10 years). In mid 2006, all the communes except for Smóldzino possessed their development strategies. These documents usually covered issues concerning the future of farm tourism. These issues were not taken into account in the development plans of the following communes: Karlino, Sianów and Słupsk.

The representatives of local authorities were asked to indicate the main activity areas of the communes aimed at the development of farm tourism. In order to determine the validity of the individual undertakings, it was proposed to award to them a suitable number of points from 0 to 3. On this basis, the theoretical average "validity indices" of specific tasks were calculated for the whole area covered by this study. The results of the examinations reveal that the activities pursued by the authorities in connection with farm tourism are rational in most of the communes. The priority issues are as follows:

- $x_1$  – tourist promotional activities (2.2 pts.),
- $x_2$  – an improvement of the tourist infrastructure (1.9 pts.),
- $x_3$  – a development of tourist attractions (1.7 pts.)<sup>1</sup>.

The importance hierarchy list as established by the personnel of the council offices covered the following:

- $x_4$  – development planning (possession of strategies and programmes (1.50 pts.),
- $x_5$  – aid to those who start their businesses (1.27 pts.),
- $x_6$  – creation of new tourist products and development of existing tourist products (1.23 pts.)
- $x_7$  – an increase of the number of those employed in tourism (1.23 pts.),
- $x_8$  – coordination of work (0.97 pt.),
- $x_9$  – preparation of personnel (trainings, 0.87 pt.),
- $x_{10}$  – tourist market research (0.67 pt.).

An arrangement of the communes' objectives related to the development of farm tourism through the use of the "validity index" is of a purely theoretical nature. Average results do not convey the spatial diversification. The value of the measure is lowered by those territorial units where tourism is of a marginal significance as an economic function and those units which were represented in the questionnaire by incompetent persons without any insight into the situation. If only those communes are to be taken into account where the abovementioned types of business occur, then the value of the index falls within the range from 1.81 to 2.64 pts. In these units, the creation of new tourist products and the development of the existing ones is of the most important and equal significance together with tourist promotional activities and an improvement of the infrastructure. Very little attention is paid to the coordination of projects connected with farm tourism. The preparation of personnel through various trainings is relatively rarely appreciated. Only in 10 cases officials are convinced of any importance of tourist market research.

Conclusions that follow from an analysis conducted of those investments and tasks which are advantageous to the development of farm tourism, and which have been realized in the communes in the recent years:

- the activities undertaken related most often to the care of the aesthetic qualities and cleanliness of places of general access (pavements, bus stops, car parks): 93.3 per cent of the indications;

---

<sup>1</sup> According to A. Szwichtenberg, well-organized activities pursued by commune authorities in connection with tourism occur when "they are started from the region's marketing and promotional activities through an improvement and development of the infrastructure as well as a development of tourist attractions, to an increased employment and obtaining new jobs." (A. Szwichtenberg, 1995, p. 25).

- in all of the seaside communes and in ca. 50 per cent of the remaining communes, efforts were undertaken to create such conditions for tourists that they could go in for sports, go on trips, take strolls (the following were prepared: wooden benches, rubbish bins, toilets, fitness trails, walkways, areas for football and tennis), and attractive tourist descriptions were provided (site plans and informational texts were installed);
- quite commonly (in 2/3 of the entities), school and local communities were engaged to do some work for the commune; environment-friendly behaviour and attitudes were propagated among the residents and tourists;
- in 15 communes, various forms of tourist activities were encouraged (e.g. canoeing, hikes, bicycle rallies), and tourist information centres were established in 11 communes (most often in seaside communes: 9 cases);
- in fewer cases, various tourist services were established (8 replies) and old and historic buildings were restored (4 examples);
- it was only in five communes: Choczewo, Darłowo, Manowo, Ustronie Morskie and Wicko where efforts were undertaken to obtain external funds for the development of farm tourism;
- few questionnaires included other activities: for example, in Będzino Commune, a competition was organized under the title "A Beautiful Village is Your Credit", the purpose of which was to improve the aesthetic qualities of the precincts, while the Commune of Mielno provided a financial support to "Kosa" Farm Tourism Association.

These days, it is mass media that contribute largely to the process of spreading of new ideas: television, radio and (more and more frequently) the Internet. However, farmers appreciate aid obtained through more interpersonal contacts. Agricultural Consulting Centres can play a significant role in this respect. At the end of the year 2006, talks were conducted with the representatives of these centres in order to determine to what extent they contribute to the popularisation of the idea of farm tourism. All the consultants admitted that they deal with the development of farm tourism as their professional duties: chiefly through organizing courses, offering individual counselling and providing aid in obtaining loans. Training and counselling services are most frequently provided in their basic range and they most frequently concern the regulations connected with making farm tourist lodgings available to tourists, preparation and fitting out farms, sanitary conditions, aesthetic qualities, nutrition principles, cost estimates and promotion of services. In several communes, farmers could additionally attend classes on nutrition, legal and financial aspects of farm tourism businesses, promotion as well as an improvement and extension of the offer. In the opinion of 22 counsellors, there is a demand for further trainings;

three people had no opinion on this subject. The counsellors who represent the following communes: Biesiekierz, Damnica, Kobylnica, Malechowo and Sianów say that there is no need to organize any further courses. Apart from this, the personnel of Agricultural Consulting Centres say that they organize shows of those farms which are functioning at present (27 replies), they participate in the promotion of the communes (26), cooperate with farm tourism associations (25), and also participate in the preparation of farm tourism development programmes (21).

The staff employed in the commune offices and in the Agricultural Consulting Centres were asked to indicate the most important objectives, the realization of which would contribute to the development of farm tourism in the communes. The following were listed in the order of priority:

- investment in the communications system (road repairs, new connections: 73.3% replies),
- an improvement of the existing technical infrastructure (55.0%),
- provision of additional tourist attractions (53.3%),
- restoration of historic buildings (51.7%).

It was only every third respondent that indicated the need for such activities as the preparation and implementation by the local authorities of the development concept of farm tourism and cooperation on the part of the owners of farm tourism lodgings in the preparation of an extended tourist offer. It was interesting to note that the personnel from the seaside communes perceived on the average twice as many tasks to be executed than the remaining respondents.

Attending to tourists, organizing leisure activities for them and provision of various services involves suitable knowledge and preparation. The transformations occurring in agriculture condition the nature of consulting work and require at least basic knowledge also of the issues of tourism management. The representatives of the Farm Consulting Centres usually are perfectly familiar with their local areas and the problems of the inhabitants. Most frequently, they claim that rural areas are poorly and very poorly used for tourist purposes; they see real prospects for the development of this function only rarely. They are of the opinion that the main reason why farmers choose not to undertake farm tourism business are as follows, in the order of priority: lack of funds (3/4 of the replies), the farmers not being convinced of the profitability of this form of business and a poor technical shape and aesthetic quality of the farms (1/2 replies). On the average, every fourth person indicated the following primary problems: lack of rooms and tourist attractions or traditions in the local area (these opinions related only to those communes which were located in the opportunity area). On frequent occasions, lack of initiative, laziness,



alcoholism and the advanced age of the residents was indicated as a barrier to enterprise.

Most of the counsellors claimed that in theory there are good conditions for the development of farm tourism in the communes; however, the concepts and guidelines concerning this area are only occasionally implemented. In numerous cases, it was respondents themselves who expressed their disbelief in the enterprise of the residents or the possibility to have tourists interested in a given area and having constant profits from guests. Also, they frequently expressed their doubts as to the attractiveness of rural areas. They were unable to indicate in their communes any brand-name tourist products or any elements in the space which could mark the beginnings of these.

### **Evaluation of the activeness of the local authorities for the development of farm tourism as seen in the opinion of those providing accommodation**

The necessary condition for the development of tourism in the rural areas of Koszalińskie Coast is to guarantee guests arriving here a high quality of services and a suitable infrastructure connected with recreation and leisure pursuits, which requires cooperation of those providing accommodation with the district authorities. The local government is the basic governing body in rural areas. It is the administrator of the district and deals with all the elements of the economy irrespective of the nature of ownership and institutional solutions; it is responsible for the development of the area and the implementation of strategies; it executes tasks connected with the needs of the local community, through its own undertakings and with the aid of independent entities.

The owners of tourist farms should possess a possibility to consult district consultants. Most of the farmers: 66.5 per cent are aware of the fact that in the districts where they live, there are people who offer support and advice to those who provide, or intend to provide, farm tourism services. The remaining farmers do not know where to turn for help (18.5 per cent), or claim that one cannot count on this help because of the shortage of specialists.

Those who provide accommodation expressed their opinions concerning the activeness on the part of the district authorities concerning the development of farm tourism. It is evident from the responses given by 130 people (77.8 per cent) that the district authorities act in support of this development. However, in this group, this support was relatively rarely evaluated as very positive. Most frequently, the farmers assessed it to be limited (41.0 per cent) or insufficient (29.5 per cent). At the same time,

nearly 1/3 of the respondents expressed their satisfaction: they claimed that the aid offered by the district authorities is large (4.5 per cent) and sufficient (25.0 per cent). 27 (16.2 per cent) and 10 people (6.0 per cent) saw hardly any or no actions on the part of the district authorities respectively.

Those respondents who appreciated the actions undertaken by the local authorities focused on the development of the tourist function, gave as a rule a positive evaluation of the promotion of the assets of their district on the Internet, in brochures and leaflets. On many occasions, they noticed the involvement to the work on the marking of tourist areas and the setting up of district tourist information centers, as well as organization of cultural and sporting events, trainings and consulting services for farmers (cf. Table 1).

Table 1. Those actions pursued by local authorities for the development of farm tourisms which were most frequently perceived by the farmers

No.	Type of tasks carried out	Responses	
		numbers	percentage
1.	Promotion of the district's assets on the Internet, publication of brochures, leaflets, etc.	106	67.9
2.	Tourist marking of the district	78	50.0
3.	Setting up of a district tourist information centre	77	49.4
4.	Organization of cultural and sporting events	75	48.1
5.	Organization of trainings and consulting services for farmers	68	43.6
6.	Preparation and maintenance of tourist trails, fitness trails, sports fields, beauty spots, etc.	65	41.7
7.	Starting of various tourist services in the district	35	22.4
8.	Taking care of the condition of the communications infrastructure	31	19.9
9.	Initiation of ideas for the development of tourism in the district	28	17.9

Indices refer to 156 responses.

Source: author's own research.

## Proposals from the owners of tourist farms

The farmers expect help and support from local authorities; most frequently, they postulate that the authorities should do the following:

- take care so as to guarantee a suitable level of the infrastructure as well as sanitation conditions: recommendations concern mainly building of the sewerage and gas systems;
- take care of an improvement of the technical condition of communications routes, better road signs, lighting, building of pavements, as well as maintenance of the existing ones, and to mark out new tourist trails;
- to create prospects for farm tourism, to take care that concrete conceptions for the development of farm tourist are prepared and implemented;
- to initiate various undertakings, exchange of experiences, and trainings with the aim of improving the tourist function in rural areas;
- to take care so as to improve the attractiveness of the space by an improvement of the esthetics of the villages, tourist signs in the district, protection of the monuments of culture, maintenance of the functioning recreational and sporting facilities, shopping and service centers (e.g. information tourist centers, community centers, etc.), as well as to create new ones;
- to systematically disseminate information concerning the values of the district, and to promote the tourist offer on the Internet, in the press, on the radio, TV, in catalogues, tourist guides, maps and any other materials, to participate in exhibitions as well as regional, national and international tourist fairs;
- to participate in the organization of various regional exhibitions, fairs, cultural and sporting events, to offer the district's space for special undertakings: rallies, training practices, courses, conferences, etc.

The respondents were requested to indicate such three tasks which are favourable to the development of farm tourism in the districts, which in their belief are most important. In the replies, the improvement of the existing infrastructure, especially in the area of communications investments was indicated as the chief priority. Nearly 40 per cent of the owners of lodgings would like original concepts of the development of farm tourist to be prepared for the communes, and to be successively implemented. Every third person on the average would like to see an increase of the number of cultural and sporting events, and a greater involvement on the part of the local authorities in the promotion of the district. Many of those participating in the survey (27.5 per cent) are aware of the fact that those people who use farm tourism services do not limit themselves to staying on the farm only, and hence they call for cooperation between the owners of lodgings as regards preparation of a wider tourist offer. Generally, 25.7 per cent of the respondents indicated the need to organize additional attractions in the districts (Fig. 1).

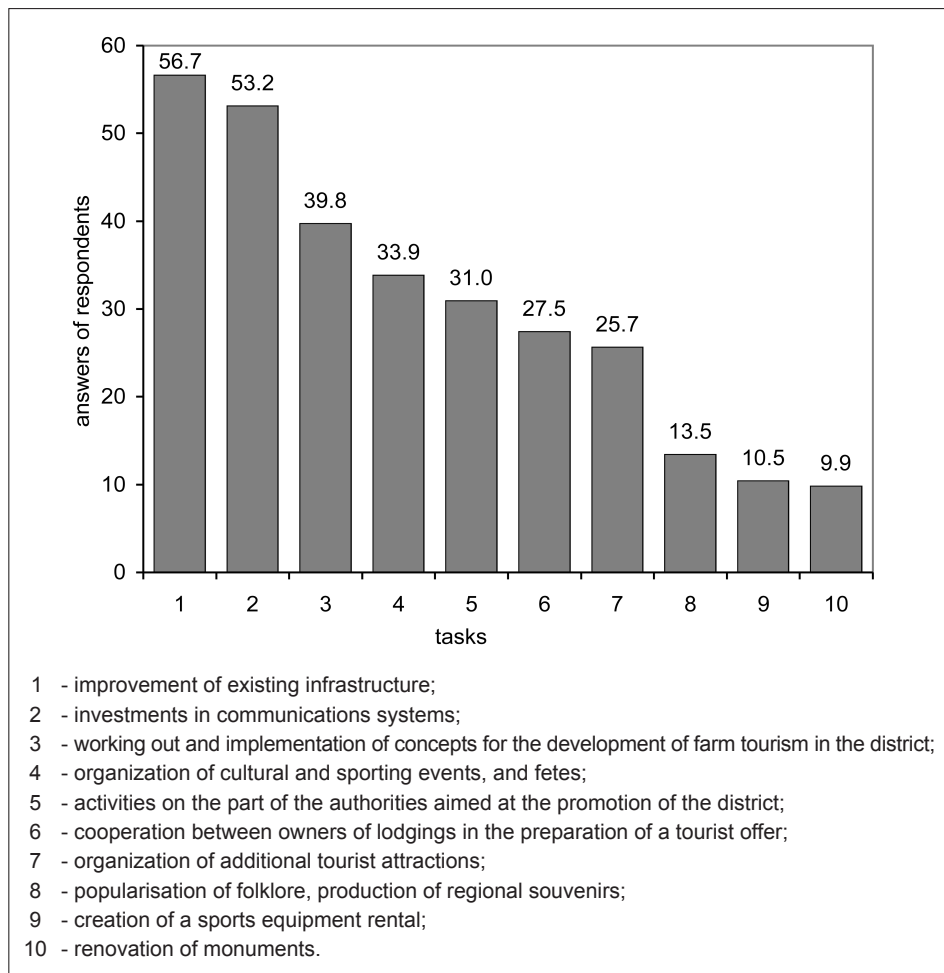


Figure 1. The most important tasks beneficial for the development of farm tourism as indicated by the respondents

Source: author's own research

For the purpose of the development of the tourist function, the necessary actions undertaken by authorities must be focused on the provision of the suitable level of the infrastructure, transportation, healthcare services, safety, waste management, trade, culture and any other services aimed at the satisfaction of the needs of the residents and tourists. According to A. Szwichtenberg, "the district ought to be the chief driving force, and also sponsor, of rural tourism, especially on the first stage of its development." The future of farm tourism depends to a large extent from the preparation and implementation of concrete concepts for the development of rural areas, ones which take into account this line of business.

## Conclusions

The development of farm tourism may contribute to an economic growth of the rural areas in Koszalińskie Coast on condition that the product is adapted to the requirements of the modern market. At the end of the year 2005, the number of farm tourist accommodation places in the region was assessed to be ca. 5 thousand. The resources of the Coast certainly allow for the farm tourist offer to be enlarged. Nevertheless, attractive tourist values are not sufficient for the creation of a high quality tourist product. The quality of a farm tourist product depends from a variety of factors: it requires suitable management as well as joint efforts on the part of the owners of accommodation places, representatives of the tourist industry, the local authorities and any other institutions involved in its creation process. It is above all the local and regional authorities that should perform the role of a coordinator, and be also responsible for the planning and execution of projects.

The following conclusions can be drawn on the basis of a comparison of the activities pursued in the communes of Koszalińskie Coast in connection with the development of farm tourism investments with the expectations on the part of those offering lodgings:

1. The main activity areas of the local authorities: tourist promotion, an improvement of the infrastructure and a development of tourist attractions are perceived by the owners of farm tourism lodgings and they coincide with their expectations.
2. The farmers emphasize very strongly that the preparation and consistent implementation of innovative concepts of farm tourism is indispensable for the future of farm tourism. At the same time, the officials appreciate the importance of such activities much less frequently. They are often of the opinion that those objectives which are included in strategic documents and which specify among others the prospects and directions of the development of tourism, are only occasionally implemented, with very few exceptions.
3. Those who provide lodgings indicate an improvement of the existing infrastructure (especially transport infrastructure) and a preparation of a wide tourist offer as chief priorities for the development of farm tourism. In the majority of cases, the communes contend with the lack of funds for investments. Nevertheless, they undertake too scarce efforts so as to finance investments from external funds and programmes. One of the reasons is an ineffective training of the managerial personnel and, as the officials maintain, there are too many formalities and limitations.

The results of the research conducted are of a practical value: they provide detailed information concerning not only the involvement of the local

authorities in the development of farm tourism, but they also reveal the experiences and views of the owners of farms. The recognition of the opinions and postulates voiced by those providing lodgings serves to extend the practical knowledge required for the preparation of as good as possible an offer for tourists in the future.

**References:**

- Kandefer W., 2001, *Strategia rozwoju regionalnego a usługi turystyczne na wsi*, Zeszyty Naukowe WSE w Warszawie, nr 1(23).
- Karbowski K., 2003, *Zarządzanie jakością w turystyce*, Roczniki Naukowe SERiA, t. 5, z. 3, Warszawa-Poznań-Koszalin.
- Schwichtenberg A., 1995, *Gospodarka .turystyczna w okresie przejściowym*, WSI, Koszalin.

## Contributors:

prof. Nikolay Bagrov, National Tavrida Volodymyr Vernadsky University of Simferopol, Akad. Vernadskoho str. 4, 95007, Simferopol, Krimea (Ukraine), phone: +380652516527, e-mail: rektor@tnu.ua

Stefan Bouzarovski, Lecturer School of Geography, Earth and Environmental Sciences, University of Birmingham, Edgbaston, Birmingham, B15 2TT (United Kingdom); Visiting Professor Institute of Geography, University of Gdansk, Bażyńskiego Str. 4, 80-952 Gdańsk (Poland); Visiting Professor Department of Social Geography and Regional Development, Faculty of Science, Charles University in Prague, Albertov Str. 6, 128 43 Prague 2 (Czech Republic); e-mail: buzars@adf.bham.ac.uk

Anna Dubownik Msc, Institute of Socio-Economic Geography and Spatial Management, Adam Mickiewicz University, Dzięgiełowa St. 27, 61-680 Poznań (Poland), e-mail: annadbv@amu.edu.pl

dr Małgorzata Flaga, Department of Economic Geography, Institute of Earth Sciences, University of Maria Curie-Skłodowska in Lublin, Kraśnicka Ave 2 cd, 20-718 Lublin (Poland), phone: +48815375510, e-mail: malgorzata.flaga@poczta.umcs.lublin.pl

prof. Ion Gumienny, Faculty of History and Psychology, Moldova State University, A. Mateevici Str. 60, MD-2009 Chişinău (Moldova).

prof. Anatoliy Jacobson, Department of Management, Irkutsk State University of Railway Engineering, Ćernyškogo Str. 15, 664074 Irkutsk (Russian Federation), e-mail: yakobson\_ay@irgups.ru

dr Wojciech Janicki, Department of Economic Geography, Institute of Earth Sciences, Maria Curie-Skłodowska University, Kraśnicka Ave 2 cd, 20-718 Lublin (Poland), phone: +48815375510 ext. 121, e-mail: wojciech.janicki@umcs.pl



dr Aleksander Kuczabski, Department of Public Administration and Self-Government, Lviv Regional Institute of Public Administration, National Academy of Public Administration, Office of the President of Ukraine, Sukhomlynskoho str. 16, 79491 Lviv-Brukhovychi (Ukraine), phone: +380322346171, e-mail: ok5@ukr.net

dr Jolanta Mazurek, Department of Tourism, Technical University of Koszalin, Kwiatkowskiego str. 6e, 75-343 Koszalin (Poland), e-mail: jola-maz@o2.pl

Tatyana Melnychenko Msc, Illa Mechnykov National University of Odessa, Shampanskyj pr. 2, 65058 Odessa (Ukraine), phone: +380482687693, e-mail: melnichenko\_tat@mail.ru

dr Tomasz Michalski, Department of Regional Development Geography, Institute of Geography, University of Gdańsk, Bażyńskiego Str. 4, 80-952 Gdańsk (Poland), e-mail: geotm@univ.gda.pl

prof. Kostyantyn Nyemets, Vasyl Karazin National University of Kharkiv, Svobody sq. 4, 61077 Kharkiv (Ukraine), phone: +380577075486, e-mail: ggfekonom@yandex.ru

prof. Ludmmyla Nyemets, Vasyl Karazin National University of Kharkiv, Svobody sq. 4, 61077 Kharkiv (Ukraine), phone: +380577075486, e-mail: ggfekonom@yandex.ru

Valentyna Olijnyk Msc, Illa Mechnykov National University of Odessa, Shampanskyj pr. 2, 65058 Odessa (Ukraine), phone: +380482687693

dr Andreas Papastamou, Economic Counselor, Permanent Mission of Greece to the United Nations in Geneva, 4 rue du Léman, 1201 Geneva (Switzerland), phone: +41229098940, e-mail: apapastamos@gmail.com

dr Lucyna Przybylska, Department of Regional Development Geography, Institute of Geography, University of Gdańsk, Bażyńskiego Str. 4, 80-952 Gdańsk (Poland), e-mail: geolp@univ.gda.pl

prof. Roman Rudnicki, Institute of Socio-Economic Geography and Spatial Management, Adam Mickiewicz University, Dziegiełowa St. 27, 61-680 Poznań (Poland), phone: +48618296162 e-mail: romrud@amu.edu.pl

---

prof. Valeriy Rudenko, Geographical Faculty, Chernivtsi Yuriy Fedkovych National University, Kotsyubynskogo Str. 2, 58012 Chernivtsi, (Ukraine), phone: +380372525077,  
e-mail: rudenko\_valery@ukr.net

Natalia Sypion-Dutkowska Msc, Urban and Regional Studies Unit, University of Szczecin, Mickiewicza Str. 18, 70-383 Szczecin (Poland),  
phone: +48914442484, e-mail: natalia.sypion@univ.szczecin.pl

prof. Oleksandr Topchiyev, Illa Mechnykov National University of Odessa, Shampanskyj pr. 2, 65058 Odessa (Ukraine), phone:  
+380482687693

dr Uladzimir Valetka, Organization of Production and Real Estate Management Department, Belarus State Technological University, Sverdlov St. 13A, 220006 Minsk (Belarus),  
e-mail: uladzimir.valetka@gmail.com

dr Oleksandra Vis'tak, Ivan Franko National University of Lviv, Doroshenka str. 41, 79000, Lviv (Ukraine), phone: +380322394722

