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New Challenges for Sustainable Rural Development in the 21st Century

INTRODUCTION

"Sustainable development is the management and conservation of the natural resources base, and the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations. Such sustainable development in the agriculture, forestry and fisheries sectors conserves land, water, plant and animal genetic resources, is environmentally non-degrading, technically appropriate, economically viable and socially acceptable" (FAO, 1988).

The basis of all rural development is people. If a rural area has massive out-migration of young people or if a large percentage of the farmers is above the age of 65 (as is the case in many development countries), it will be very difficult to initiate endogenous economic growth.

Governments all over the world have focused on sustainable rural development in an organized way. Rural locations in particular need more economic development in order to match urban centric development. All the spheres of development including economic, social, and cultural have primarily benefited from urban locations. Even in case of industrial growth, urban places got the best of growth and prosperity. Many actions have been taken to fill this chasm between rural and urban growth.

New methods have also been encouraged for farming in barren lands. Most of the farming land remains unused during no-crop season in underdeveloped countries. To improve that, cyclical production of different crops is encouraged so that land does not remain unused.

There are also numerous agro-environment schemes launched to support the farmers. Income generation and equal growth are likely resultants of such initiatives. These initiatives are being taken not only in developing countries but also in developed countries.

The annual IGU conferences are organised around themes which explore and develop the long-term research tasks of the Commission: interpretation of "rural sustainability", regulation of rural sustainability, sustainability and the rural business enterprise, sustainability in the interaction between rural and urban systems, rural community dynamics and sustainability, and land use cover and change.

This is a special issue of the Journal for Geography published at the occasion of the 17th Annual Colloquium of the IGU Commission on the Sustainability of Rural Systems entitled New Challenges for Sustainable Rural Development in the 21st Century, which took place from 13th to 18th July 2009 in Maribor, Slovenia. In this issue, experts from Australia, Brazil, Croatia, Italy, Poland and Slovenia present, analyse and explain the diversity of ways to improve the quality of life in rural areas all over the world.

The human dimension includes the educational level of population, their cultural identity and their social structure. Human factors are not only relevant in the rural areas: the impact of urban lifestyle on rural areas, such as changes in leisure activities or food consumption of the urban majority, also needs to be considered.

In the 21st century, many rural areas in the developed world are experiencing planning and development challenges related to complex processes of population change. It is our contention that the nature, direction and regional manifestations of these changes are strongly related to varying levels of local amenity.

The findings presented by authors **Neil Argent, Roy Jones and Matthew Tonts** in the paper entitled Rural Amenity and Rural Change in Temperate Australia: Implications for Development and Sustainability raise important questions regarding the population turnarounds being experienced in some rural areas. While it is apparent that out-migration from metropolitan areas is part of the explanation for rural growth, it is part of a more complex story. Across much of rural Australia in-migration from metropolitan areas accounts for a relatively modest proportion of the new arrivals. Thus, the most significant source of in-migrants appears to be other rural/regional areas. This suggests that there is a need to understand high rates of in-migration in certain rural areas with reference to the exodus of people from other non-metropolitan places. In other words, contemporary migration patterns in rural Australia appear to be linked as much to population redistribution as to counterurbanisation. For this area, authors used a range of demographic, economic and environmental data sources, including migration flows, to construct an amenity index and to develop an amenity classification of nearly 500 social catchments. In later phases of this project, they will be conducting more detailed and localised studies in high and low amenity areas to identify both the planning and the socioeconomic implications of recent amenity-led migration.

In his paper entitled A Life Histories Approach to Gold Prospecting and Frontier Farming in the Brazilian Amazon, **Scott William Hoefle** examines the influence of gold rush on live frontier farmers. Gold was first discovered on the tributaries of the Tapajós river in the early 1960s and over the next two decades prospectors swarmed to the area establishing more than 300 camps and 200 dirt air strips to access remote creeks where gold was to be found blasting the river bank with water pressure equipment. The environmental impacts were degradation of river banks, silting of creeks and mercury pollution in the rivers. The immediate impact on population movements, besides attracting outsiders directly to the camps, was to empty the planned colonization projects being established along the Transamazonian (BR-230) and the Cuiabá-Santarém (BR-163) highways slowing down the process of settling western Pará by decades. Many present-day frontier farmers of western Pará come from the impoverished North-east and passed a part of their life as gold prospectors in the hope of becoming rich. Given the exploitive work relations and chaotic economic situation during the Itaituba gold rush very few were successful. They managed to escape the extreme poverty of their former life in Maranhão, the poorest state in Brazil. On the consolidated frontier of western Maranhão they had little land and work, most being migrant labourers, who earned little, had a poor diet and lived in poor housing in town and in the countryside, where they were poorly served by public health and educational services. However, their passage through gold prospecting can only be characterised as squalor. They arrived with no capital, continued being migrant labourers, who moved from camp to camp and worked too much to earn a low to medium income. Out in the bush they had no health or educational services and many died of malaria. As frontier farmers in comparison they have land, work when and how they choose, usually with family members. Income is low but self-provisioning furnishes a reasonably

good diet and they live in simple but sound housing. Living in communities they muster political clout in order to be better served by basic public services.

One of the major problems of farming in developed countries, including Slovenia, is the decreasing number of farm takeovers and farm transfers to successors. The number and strength of unfavourable factors are much higher than those keeping young people in farming.

Boštjan Kerbler discusses in his paper the succession of farms as the best example of intergenerational transfer of physical and human capital. The transfer of human capital across generations within the same family ensures its processing, while at the same time increasing the value of physical capital, both its actual value as well as the awareness of this value. To enable this, basic conditions must be fulfilled. The farm must be taken over by a successor, who will continue with farming, and the transfer of the farm to the successor must be carried out timely. In conclusion, the possible consequences of the continuous tendency of abandoning mountain farms in Slovenia are indicated and a few proposals for solving the problems of farm succession are put forward. Although the proposed solutions are far from being simple due to the complexity of the effect of factors of the socio-geographic structure of mountain farms, knowledge on the key factors of (non)succession of Slovenian farms and their interrelation is, however, essential for the development of appropriate measures for the preservation of farms as the basic pillars of the farming industry. The principle objective is to ensure the sustainable development of agriculture and the countryside, particularly in the mountainous areas characterised by unfavourable demographic trends.

Croatia experienced intensive industrialisation and tertiary processes in the second half of the 20th century. **Peter Feletar**'s paper entitled Daily migrations as a Transformation Factor of Rural Area Surrounding Zagreb deals with intensive processes of de-agrarisation and de-ruralisation on the one hand, and with urbanisation and suburbanisation on the other. These processes occur in a spatially differentiated manner. They are most intensive around cities, especially large cities with a wide gravitational zone.

In Zagreb, the intensive urbanization processes began in 1960s, when some 350,000 people lived in the city. The working power for the new industrial districts, the largest and the oldest being the industrial district of Žitnjak, was drawn mainly from its surrounding rural area, which was characterized by a traditional agricultural structure.

This caused intensive daily migrations to Zagreb, particularly from the distances within 50 km. The families of daily migrants started to move to Zagreb, and today the city has some 800,000 inhabitants. Intensive processes of suburbanization occurred in parallel in the city's rural surrounding, and the daily migrations have decreased substantially.

The daily migrations and their basic directions had an important impact on modification and organization of commuter traffic, as well as on Zagreb's urban traffic and other infrastructure.

According to **Eva Konečnik Kotnik**, education is a very important basis of sustainable development. In her paper, selected learning objectives of the

Geography syllabus for general grammar schools in Slovenia are analysed (a general secondary school in Slovenia is a secondary school with a general-educational emphasis that does not provide vocational education but prepares students aged 15 to 19 for further education at universities). The author has selected the learning objectives that relate to economic Geography as a general geographic topic, with special emphasis on learning objectives that refer to agriculture, rural areas and sustainable development.

The contribution presents the results of a generic comparative analysis of selected learning objectives in syllabi, which were issued in the period after Slovenia's independence (1992, 1998 and 2008), the results of the evaluation of the learning objectives from the viewpoint of social needs, educational guidelines and geographical science, as well as the results of the evaluation from the viewpoint of Geography teachers in general grammar schools. Educational problems associated with economic Geography, sustainable development and rural areas are highlighted accordingly.

Rural areas account for more than 80% of the territory of the European Union and are home to some 25% of the population. While urban people often believe rural areas would be just farms and forests, the reality is quite different. Rural areas in Europe are characterized by extremely diverse physical environments, a broad range of economic activities, unique social networks and century-old cultural traditions.

Matjaž Klemenčič and **Vladimir Klemenčič** examine in their paper the contemporary problems of the Slovene countryside with a special emphasis on the problems of the image of the cultural landscape, which developed as a consequence of the rapid economic development in Slovenia.

It is characteristic of the Slovene countryside that the relationships among individual land categories (woods, meadows, cultivated fields) are changing fast and that the remnants of the economic structure of classic agrarian society and the modern industrial society are intertwined. One of the characteristics of the Slovene countryside is also a fast decline of agrarian population. In their paper, the authors deal particularly with the consequences of the European market-oriented agrarian policy, which are applied in different ways to individual regions of Slovenia. There are large differences between plains and valleys, which are suitable for modern farming, on the one hand and mountainous and Karst regions on the other.

The crumbling of land in the future will hinder also economic production in the agricultural economy of farms regardless of their size. This means that underdevelopment with disintegration of cultural landscape in some less developed regions will increase. Slovenia will be able to avoid the consequences of the above-mentioned negative trends in the shaping of its cultural landscape only by using a suitable concept based on internationally verified theory and methodology along with proven application. Therefore in Slovenia, as well as in the other EU members, agricultural planning will have to be based on team and interdisciplinary work; scholars and research groups from various disciplines who deal with spatial development along with other responsible experts in various administrative functions and ministries will have to cooperate.

Today's reflections on the activation of rural areas focus mainly on issues of multifunctional development. Developing the sector of micro-, small and medium-sized enterprises is seen as an effective way of improving the situation of rural areas and their populations, mainly by increasing household incomes or with the elimination of redundant labour force from the agricultural sector. At the same time, very little attention is paid to large businesses located in rural areas, whose importance for their functioning is often fundamental, especially in areas of pure agricultural character.

Magdalena Dej' presents in her paper the diversity of large companies in the Polish countryside and determines the manner and scale of the chosen investments in the local situation in terms of both sociology and economy. The author has chosen companies established after 1990 in the areas which have lately been considered only as agricultural. The research was conducted among the local residents in the areas where the investments were made, and among the employees of the companies.

There are currently over 150 companies in the Polish regions outside the metropolitan areas, which employ over 200 people. The research was based on surveys and interviews dealing with migration tendencies of residents (a company as a factor encouraging/discouraging migration), their educational aspirations, their living standards (the connection between the establishing companies and the availability of services, the influence on average income) and their lifestyle (derived models from incoming people, influence on political and consumer preferences, new forms of activities and pastimes). Furthermore, they relate to economic issues, such as the connection between large companies and local entrepreneurship (an attempt to answer the question whether new companies stimulate or limit local entrepreneurship).

The research methodology enabled the assessment of the consequences of actions carried out by large companies in agricultural areas, where they are considered the major employers. They drastically change the labour perspectives of residents and trigger significant social and economic changes on the local or sometimes even on the regional scale.

Zoran Stiperski and **Zdenko Braičić** examine the influence of economic transition and war (the Croatian War of Independence) on the number and spatial distribution of the employed and the unemployed in Banovina between 1989 and 2007. The war additionally engraved the restructuring of the economy characteristic for transition societies, which affected the industrial sector in particular.

The regional differences in Croatia are the result of the past exposures to war operations and the different levels of acceptance of market economy elements. Banovina was to a great extent exposed to war operations and burdened by elements mostly deriving from the Real Socialist economy, which has made it an exceptional Croatian region with a strong drop in employment and increase of unemployment.

Agriculture is nowadays recognized as one of the biggest pollutants due to its negative impact on nature, especially soil, water and biodiversity. We can also question the quality of food produced by intensive agriculture and its (negative)

impacts on human health. An effective and positive answer to the problems of conventional farming can be found in organic farming.

Dane Podmenik and **Simon Kerma** have examined the conditions, problems and perspectives of organic farming in Slovenia with a special emphasis on the Slovene Istria. In comparison with the EU standards, Slovene organic farming raises above the average. However, the differences between individual regions as regards organic farming are still crucial. Another problem organic farming has to face is the structure of organic areas, for there are meadows which occupy 90% of all organic land in use. In the Slovene Istria, there are good natural conditions for the development of organic farming. Due to the lack of data related to organic farming in the Slovene Istria, the authors conducted field-work in spring 2008 and made some additional research in 2009. The questionnaires and interviews with organic farmers included various aspects, such as the characteristics of their farming activities, the demographic and socio-economic features, etc. The authors estimate that the entire hinterland of the Slovene Istria is an area with high natural and cultural value, with a high potential for the development of protected areas and environmental-friendly activities (organic farming, eco-tourism, various types of 'green' tourism, etc.), which can also be market-oriented, and a potential for creating new jobs and higher added value.

The Western Australian economy has always been underpinned by farming and mining. Over the last five years the economy has experienced phenomenal growth due to unprecedented global demand for resources and increasingly, agricultural land is being given up for mining. Over the last five years the economy has experienced phenomenal growth on the back of unprecedented demand for resources by the developing Chinese and Indian economies. The impact of renewed mining fervour in Western Australia has had far reaching impacts. Changing land uses challenge industry and community leaders; some communities are overwhelmed by a new population connected with mining, bringing with it a range of social and economic stresses and strains that small communities, in particular, are struggling to cope with.

Fiona M. Haslam McKenzie examines the impact of land use change focusing on two small rural communities, the Shire of Ravensthorpe on the Southern Coast and the Shire of Boddington in the Peel region of Western Australia. Both communities have, until recently, been dominated by agricultural activities, but with rising global resource prices, multi-national mining companies have moved in and established large mines with concomitant opportunities and adverse pressures. Drawing on in-depth, semi-structured interviews and focus groups with local community members in both locations, this paper will document the socio-economic changes that have been experienced by the communities and the people who live in them and the inevitable challenges these bring. The provision of infrastructure and the management of people and resources in frenetic economic boom conditions have tested policy makers and local governance structures. These challenges will be discussed and the inevitable opportunities that arise from such circumstances will also be considered.

In the Veneto central plane (Italy), historically shaped by agriculture, the countryside is interesting due to a particular form of urban sprawl, where cities, villages, single houses and industries cohabit with agriculture. This phenomenon is mainly analyzed as a typical urban/rural conflict, and the sprawl gets criticized as a

countryside destroyer. Yet in this area farming is still more profitable than in other more "rural" parts of the region; it has higher quality productions, the traditional rural landscape is paradoxically better preserved, and agriculture spaces manage to create a good ecological network.

Starting from these paradoxes, **Viviana Ferrario** proposes in the first part of her paper a different reading of the Veneto urban sprawl. Its "materials" (crops, hedges, paths, forests, single houses, public and private housing, industries, water, roads), mixed together apparently without order are analyzed from the point of view of their morphology, their relationships and their changes. Is this a rural area simply becoming an urban one, or is it a new, contemporary form – neither urban nor rural – of agricultural landscape?

Besides food production, agricultural areas in Europe are nowadays acknowledged also for energy production (with the alternative vegetal combustible materials), environmental preservation, cultural heritage preservation and recreational activities. These functions, increasingly accepted and supported also by the Common Agricultural Policy, give farming areas a public role, strictly linked to the urban population's needs. Agricultural space is becoming a "material" of the territory design. The new Veneto regional plan (PTRC), which is in course of preparation, proposes the idea of "agropolitana", a way to read and to re-design this region as a metropolis with a strong agriculture layer inside. In the second part of the paper, this proposal is presented and critically discussed.

In the paper entitled 'Cultural Landscape and Tourism on Historic Ranches of the Pantanal Wetlands of Brazil', **Ana Paula Correia de Araujo** and **Ana Maria de Souza Mello Bicalho** examine the rise of eco-tourism and rural tourism as new complementary activities which add value to traditional stock-raising functions on historic ranches located in the southern part of the Pantanal Wetlands of the Mato Grosso do Sul state in the Central-Western region of Brazil. As opposed to other rural enterprises of the booming Central-West, which produce the majority of Brazilian export commodities, the specific environmental conditions of seasonal wetlands and perennial swamp of the Pantanal restrict the viable options for gaining access to global markets. Consequently, after 1990, when new roads were built and rural electrification took place, ranchers of the Pantanal have developed tourist activities based on the spectacular natural beauty of the wetlands as well as the distinct ranching culture. The ranches have modernized with amenities to attract domestic and foreign tourists and tourism has assumed an importance source of their income.

The twelve papers published in this issue represent different views on how the development cycle begins when there is an economic, social, demographic, political, or environmental problem, or when someone sees a chance to improve the current conditions. This initiative can come from (ordinary) people living in rural areas (bottom-up approach) or from planners and decision makers (top-down approach). The most important task is to clearly identify and describe the problem or opportunity. Scientists can help at this stage by systematically analyzing (using empirical methods) the causes of current problems and opportunities.

Lučka Lorber
Chief and responsible editor

RURAL AMENITY AND RURAL CHANGE IN TEMPERATE AUSTRALIA: IMPLICATIONS FOR DEVELOPMENT AND SUSTAINABILITY

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Abstract
Rural Amenity and Rural Change in Temperate Australia: Implications for Development and Sustainability
Many rural areas in the developed world are experiencing planning and development challenges related to processes of population change. The nature, direction and regional manifestations of these changes are strongly related to the varying levels of local amenity. These result from the qualities of the local social, economic and physical environments and contribute to the ability of rural regions to attract and retain residents. In turn the presence or absence of this attractive ability is likely to engender development and sustainability challenges related to growth, decline or (where the attractive forces are demographically specific) social mix. This paper considers these challenges in the context of high amenity rural regions in temperate Australia.

Key words
rural amenity, migration, temperate Australia, counter urbanisation, demographic change

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1. Introduction

Over recent decades, there has been increasing recognition that migration into rural regions and communities across some parts of the developed world is driving complex and far-reaching processes of demographic, economic, social, cultural and land-use change. According to the Anglo-American literature, the key empirical markers of these changes can be seen in, for example, the conversion of once productive farmland into rural residential allotments; the effective abandonment of marginally productive country for conservation purposes; the growth of alternative, particularly boutique, farm industries; and the gradual displacement of long-established community and village families by highly mobile and frequently more affluent ex-urban migrants (Phillips 1993, 1999, 2002, Cloke et al. 1995, Ilbery and Bowler 1998, Loeffler and Steinicke 2007). It is now almost taken for granted that ex-urban in-migrants – especially those of higher socio-economic status and possibly those who comprise what Florida (2003) terms the 'creative class' – are attracted to particular environmental niches. Coastal, montane, lacustrine and riparian landscapes are usually regarded as the most popular settings for this group (McGranahan 1999, Deller et al. 2001, Burnley and Murphy 2004, Hunter et al. 2004, Loeffler and Steinicke 2007). By moving in, though, members (and perhaps especially the 'creative' members) of this group are also seen as moulding the social, economic, demographic and biophysical landscapes of their new home areas in accordance with their own tastes, producing long-standing and often dramatic impacts on their destination communities and environments. These impacts are variously seen as fundamental altering the original rural nature of these areas or as a means of fostering local or regional sustainability.

In the Australian context, many aspects of this scenario ring true, particularly if we adopt a narrow focus on the most highly accessible, high-amenity zones within the national ecumene. Yet considerable evidence also exists to temper at least some of the grander claims of widespread counterurbanisation-led rural gentrification. For example, Hugo and Bell's (1998) analysis of Australian counterurbanisation flows during the 1980s and 1990s highlighted the major role of social-security dependent ex-suburban residents in this migration stream. High housing establishment costs in cities and the portability of Australian welfare benefits were seen as key factors facilitating this group's migration into cheaper, but higher amenity, locations, typically in coastal regions.

Nevertheless, there is wide agreement that the socio-economic and demographic trajectories of the rural communities and regions within the Australian ecumene are diverging (Hugo 2005, Smailes et al. 2005, Holmes 2006). It is the argument of this paper that *amenity* is playing an increasingly powerful role in this process of diversification, with local socio-economic and land- use agendas being set by the modes of expression and comparative strengths of amenity values, relative to those of primary production.

We therefore seek, to investigate the environmental, demographic and socio-economic impacts of these migration trends upon temperate Australia's high amenity rural host communities.

2. Amenity-led migration into rural areas: a review

As a component of internal migration (i.e. permanent population movement within national boundaries), amenity-related migration is widely regarded as a key subset of counterurbanisation. In Australia, the lifestyle-related aspects of counterurbanisation have been popularised by media friendly labels such as 'sea change', 'tree change' and 'hill change' (see Burnley and Murphy 2004, Hugo 2005, Walmsley et al. 2009). One of the key concerns in the literature describing and discussing these particular migration streams, is the cumulative impact of the in-migration of relatively wealthy, well-educated, middle- to upper-class and, arguably, 'creative' people into hitherto predominantly working class, primary production-oriented rural communities, economies and labour markets. In short, counterurbanisation is assumed to lead to the gentrification and/or the revitalisation of these rural communities.

Rural gentrification has formed a major and growing theme in British rural studies over the past three decades (Cloke and Thrift 1987, 1990, Cloke and Goodwin 1992, Phillips 1993, 1999, 2002, 2004, Cloke et al. 1995, Lewis 1998). Arguing for a more carefully nuanced and interpretative approach to the study of gentrification, Phillips – by reference to Lefebvre's spatial triad – has explored the material processes by which gentrified rural spaces are created (e.g. the displacement of working-class rural residents by service-class, ex-urban residents over time and the resultant rural land value increases); the various forms and appearances that these gentrified rural spaces take (e.g. atavistic 'heritage' housing styles and land use zoning changes); the key agents involved in the gentrification process (including real estate agents and local government officers as well as the in-migrants themselves); and the (often contradictory) motives and ideals of in-migrants regarding their 'landscapes of desire', as well as the ideological and cultural lenses through which such people interpret its ongoing evolution.

According to Phillips, gentrification can be observed and examined as the following: 1) a series of material processes (e.g. flows of capital and migrants and the physical transformation of rural housing and land uses); 2) the various (and often competing) representations of these processes (e.g. changes in average income levels, and real estate advertising, the iconography of heritage housing styles and council zoning maps); and 3) the actual lived experiences of the key 'change agents' involved in this process (i.e. in-migrants' perceptions of their migration motives and their interpretations of their new host communities, and real estate agents' and local council planners' perspectives on the impacts of in-migration). In Australia, a number of case studies of amenity-led in-migration to select rural niches have touched on, or alluded to, the possible gentrification of rural communities and their hinterlands (Selwood et al. 1996, Tonts and Greive 2002).

Despite some recent valuable contributions to the literature concerning the motivations of counterurbanisation migrants (Flood 1991, Walmsley et al. 1998, Smailes 2002, Burnley and Murphy 2004), there has been little concerted effort to specify the ensemble of environmental attributes which comprise rural amenity, and the ways in which these affect the desire of ex-urban migrants to move to (certain) rural areas. Some recent light has been shed on this issue in a number of papers concerned with rural population growth and regional economic development (McGranahan 1999, Deller et al. 2001) and rural gentrification in North America (Hunter et al. 2004). Following McGranahan's (1999: 1) declaration that amenity is

the new "rural comparative advantage", these papers adopt a synoptic view of the measurement of amenity and the testing of its association(s) with rural population growth and with the in-movement of the more affluent and the more educated.

Not surprisingly, rural amenity is argued by these authors to intersect significantly with the set of environmental attributes that make areas attractive for natural resource extraction, including farming. Consequently, as 'new' interests interpret and 'value' these attributes in different (albeit, at times, in highly conservative and even conservationist) ways, resource conflicts ensue as land prices are bid up, leading to pressure for displacement, characteristically, of production by consumption.

McGranahan's (1999) amenity index – the independent variable – incorporated three seasonal climatic variables ('warm winter', 'winter sun' and 'summer humidity'), a single topographic variable and a surface water indicator, together with a proxy accessibility/remoteness variable ('urban influence code'). Detailed analysis of this index revealed that the individual climate attributes achieved the highest correlation coefficients, suggesting that the index was better able to predict winter migration than other types of population movement.

Deller et al. (2001) adopted a very similar approach to that of McGranahan, using a composite range of climatic variables, a surface water resource indicator, a land resource indicator (per cent of land in wilderness, forest, farms and state parks), a composite 'winter recreation' variable and a 'recreational facilities' indicator as input into a principal components analysis so as to identify high- and low-amenity rural regions, and the relationships between amenity, population growth and income. Hunter et al. (2004) similarly developed a composite amenity scale, incorporating measures of climate, topography and water area, in their quest to establish whether or not high amenity zones tended to experience higher levels of immigration and/or gentrification.

In Australia, the increasingly critical role of amenity values in shaping rural futures has been noted by leading researchers. Hugo and Bell (1998: 111) emphasised the "…growing dichotomy" in "…population growth patterns and the economic trends which underlie them" between the more attractive rural areas experiencing counterurbanisation impulses and the "…heartland farming and pastoral areas" where "…population decline is common and there is consequent diminution in their social and economic potential".
In strategically-located and amenity-endowed regions, rural land is progressively valued not for its productive capacities (i.e. what it can grow and return in financial terms to the farmer or forester), but for its perceived aesthetic and status characteristics (i.e. as a positional good to be consumed). Hence, rugged coastal ranges are sought after for homesites overlooking the ocean and nearby ranges, while small towns and old dairy farms are desired for their heritage and 'working countryside' ambience along with their close proximity and access to large regional centres. In other words, settlement and land use in such locations are driven more by 'consumption' values than by production ones (Holmes, 2006).

Smailes et al. (2005) also found rural amenity to be a powerful influence over the growing heterogeneity of rural communities, especially those in the mixed agricultural and coastal zones. In particular, high rural amenity was strongly and positively correlated with recent in-migration, total population growth, industrial

diversity and ageing populations, and strongly negatively correlated with younger age structures and agriculture's proportional share of the local workforce (Smailes et al. 2005). Following up on this research, Argent et al.'s (2007) multivariate rural amenity index explained (in a statistical sense) a substantial proportion of the variance in in-migration rates during the two intercensal periods of 1976-1981 and 1996-2001.

The most comprehensive appraisals of the regionally differentiated impacts of amenity values have been undertaken by Barr in his enquiry into regional structural differences in Australian agriculture for the National Land and Water Audit (Barr 2002) and, in greater detail, in his study of rural Victoria's 'social landscapes' (Barr 2005). Barr (2002: 107) observed that:
"Currently, demand for landscape amenity is a major influence upon the pattern of structural change in Australian agriculture. The influence is manifest in the high price of land in the more amenable and accessible parts of the rural landscape. These higher land prices restrict the capacity of agriculture to adjust to maintain competitiveness and inexorably drive the path of adjustment to a non-commercial agricultural future."

Of particular value is his depiction of the 'rural amenity landscape', which is focused on an examination of the pivotal role of what he terms the 'amenity premium' in entrenching the presence and retention of undersized farms, facilitating and even requiring pluriactivity (i.e. the creation of new on-farm or off-farm income streams) and part-time farming. In his Australia-wide study, Barr (2004) notes that farm incomes in the strict sense are generally lower in amenity landscape areas than in production ones, but that farm family incomes are higher, since, in such areas, they are tied to a higher component of (earned or unearned) off-farm income. Furthermore, the rate of decline of farmer numbers is lower than that in the 'agricultural heartland'. In contrasting these two landscapes, Barr (2005: 68) comments that, "… a consolidation of the division of rural Australia into high amenity and low amenity locations" seems to be occurring.

Local and regional land markets are key 'agents of change' in this regionalisation process, pricing different commercial and socio-economic activities into and out of land ownership. Barr's (2005) notion of the 'amenity premium' is approximated by calculating the ratio of land value to gross value of production per hectare. In such conditions, conventional broad acre farming enterprises cannot compete for land with the relatively price-inelastic tastes and desires of ex-urban people on drought-proof and international commodity market-proof incomes (Barr 2005). Compared with the UK and New Zealand, Australia's spaciousness and the 'tyranny of distance' ensure a wide spectrum of locationally-induced, von Thünen-style land values, initially tied to production and marketing costs, although these are progressively being modified and frequently magnified by an amenity premium. Hence, this critical indicator of amenity can be seen as both an independent (indicating changes in the relative economic viability of farming, perhaps induced by changes in commodity prices or sectoral regulation) and a dependent variable (referring to the realisation of non-agricultural interests in agricultural land in select areas).

For some influential writers, therefore, rural Australia is bifurcating. Increasingly it is becoming polarised between dry, inland broad acre farming regions characterised by increasing economies of scale and higher levels of farm productivity, but ongoing demographic and economic decline with little hope of branching into new, and

possibly lucrative, income streams based on activities such as tourism, and well-watered, coastal and peri-urban fringe regions where above national average population growth occurs (based upon net migration gains) and agriculture forms a small, and declining, plank in regional employment and turnover (Hugo 2005). In summary, an understanding of the geography of the expression of these forces is central to appreciating how rural Australia is being changed, what these changes mean for the future economic, social and environmental development and sustainability of regions and communities, and what the policy implications of these changes might be.

3. The role of rural amenity

While it is clear that high rates of rural in-migration are not simply the outcome of processes of counterurbanisation and gentrification, it does appear that many new arrivals, regardless of origin, favour certain parts of the countryside over others. Some of the major drivers are undoubtedly the employment and other economic opportunities offered by larger regional centres and the resources industries. However, the strength of migration to areas other than these suggests that landscape amenity may also play a key role. Even a superficial analysis of the spatial patterns suggests that areas with certain environmental and/or other geographical qualities are strongly associated with high rates of in-migration. To examine this further, we draw on the index of amenity developed by Argent et al. (2007) for south eastern Australia. This index draws together the following environmental and socio-economic variables: annual rainfall; terrain and altitude; remoteness; duration of settlement; irrigation water resources; distance from the beach; and, employment in recreation and related services.

Following McGranahan (1999), an amenity index was created using z-scores of only those independent variables that are significant predictors of in-migration rates. A thorough discussion of the amenity index, as well as the rationale for the inclusion of these particular variables is provided in Argent et al. (2007). This work showed a relatively strong statistical association between amenity and in-migration for the periods 1976-1981 and 1996-2001 achieving a multiple r of 0.73 and r^2 of 0.53 when applied to their study area of south-eastern Australia. Thus, it is perhaps not surprising to find that this continued to be the case for the 2001-2006 intercensal period. In each state, and for the study area as a whole, rates of in-migration were strongly correlated with the amenity scores.

It is also notable that, although the broad analysis of the origins of in-migrants indicated that ex-metropolitan residents made up a relatively small proportion of new arrivals, the results suggest that high amenity areas are important to this group. In each state, the proportion of ex-metropolitan residents is highly correlated with amenity. In other words, those areas with a large proportion of ex-urban migrants also tend to be those with the highest levels of amenity. So, while ex-metropolitan residents may not dominate the in-migrant pool in such areas, it would seem they have a clear preference for these environments over lower amenity places.

These linkages between rural amenity and in-migration raise important issues for those communities experiencing an influx of new residents. As a number of researchers have pointed out, in-migration to high amenity environments has the potential to destroy the very attributes that have attracted many newcomers in the

first place. The combination of, inter alia, growing populations, land subdivision, new housing, and the expansion of commercial activity, present significant dilemmas for rural planners and policy makers. Moreover, the concomitant pressures on natural resources mean that amenity migration is a process that requires careful management if the broader goals of local and regional environmental sustainability, on the one hand, and harmonious residential and community development and land use, on the other, are to be met.

4. Ecological consequences of amenity-led migration

In many respects, rural amenity migration represents a deep structural shift for those communities affected by the process. In trying to understand this shift, social scientists have tended to focus their attention on issues associated with demographic change, economic restructuring, socio-cultural dynamics and political conflict. Yet, clearly, some of the most significant transformations associated with rural amenity migration will impact on the local environment. There is, for example, considerable evidence to suggest that amenity migration has direct impacts on vegetation, wildlife, streams and rivers, and coastal landforms (Jones et al. 2003, Gosnell et al. 2006, Klepeis et al. 2009, Mendham and Curtis 2009), although these impacts can be complex and both positive and negative. However, 'environment' needs to be interpreted broadly to incorporate not only 'natural' ecosystems, but also the cultural landscape. As a number of scholars have pointed out, the landscape values associated with traditional 'rural pursuits', such as agriculture, fishing and forestry, can be crucial components of amenity, and represent important elements of the heritage and attractiveness of high growth areas to locals and incomers alike (Rudzitis 1996, Barr 2003, Loeffler and Steinicke 2007).

One major driver of environmental change in amenity areas is land subdivision. This typically involves the subdivision of farms and other rural landholdings into smaller hobby farms and lifestyle properties. Alongside this is the expansion of existing settlements, to accommodate population growth and economic development (Bryant and Johnston 1992). From an ecological perspective, the central consequence of this process is landscape fragmentation (Knight et al. 1995). Those areas dominated by smallholdings also tend to be characterised by considerable diversity in land use, incorporating activities such as hobby farming and experimental agriculture, ecological restoration projects, fallow land, natural vegetation, and activities that even resemble light industry. The proliferation of small lots is often accompanied by a range of other developments, including new housing, sheds, access roads, power lines and fencing. All of this can serve to radically alter and fragment rural landscapes.

Just as there can be inconsistencies between the land uses and management practices of smaller landholders, similar problems can arise between more established industries and enterprises and new arrivals. The potential mismatch between these land uses and landscape sensibilities can lead to local social and political conflict (Hollier and Reid 2007). In the south-west of Western Australia, Schirmer (2007) noted considerable conflict between newcomers and other landowners over pesticide use. Much of this conflict was centred on the potential for agricultural and other pesticides to 'contaminate' neighbouring properties, despite the application of chemicals being a longstanding practice in these areas. Schirmer (2007) also noted concerns and conflicts regarding noise and heavy vehicle use of roads by farmers and timber companies.

The sometimes divergent views and motivations of established commercial landholders and new in-migrants can also be viewed in the declining viability of long-established rural institutions, such as farmers' associations and agricultural bureaux. In New South Wales, the Rural Lands Protection Board (RLPB) system provides an extensive regional network of 47 boards across rural NSW funded by local landowners' rates in order to safeguard livestock production against animal diseases and pest plants. In early 2009, the RLPB organisation underwent an extensive restructuring of its operations and management in response to a complex set of factors, one of which was the rising number of landholders in selected regions who objected to the compulsory RLPB levies and/or to the organisation's approach to land and animal management (IMC 2008).

From a broader environmental and aesthetic perspective, the fragmentation of landscape amenity also has the potential to erode the cultural attributes of places (Tonts and Greive 2002). In many rural areas, it is the broad acre agricultural and pastoral landscapes that form an intrinsic component of local heritage and landscape aesthetics (Woods 2005). Indeed, it is often these attributes that provide the stimulus for in-migration to rural areas. The breakup of farmland, the construction of housing and infrastructure and the introduction of new land uses can undermine the amenity of components of the landscape. Already in parts of the south-west of Western Australia, for example, have there been claims that some areas have become overdeveloped and now resemble parts of outer metropolitan Perth (Jones and Tonts 2003). In effect, the uniqueness of place has been eroded by suburban style development. Similar trends have also been reported in other parts of Australia (Gurran and Blakely 2007). From a conceptual point of view, there are similarities here to Butler's (1980) model of tourist area development. In rural amenity areas, such a perspective holds that, following initial 'discovery' and in-migration, ongoing development eventually leads to significant challenges for local planners amid claims of overdevelopment. On the one hand, planners are faced with the need to protect landscape amenity, and on the other, to continue to promote development.

A closely related set of challenges reflect the absolute loss of agricultural land. The process of land subdivision and conversion from agriculture to other uses necessarily results in a decrease in farm production. While it is individual farmers who generally make the choice to subdivide their properties in order to capitalise on the accumulated value of land, collectively there is often a concern that valuable agricultural land is being lost to the industry. The demand for land by newcomers, together with a cultural view among farmers, developers and planners that farming in particular areas has become less viable and will ultimately be supplanted has been described as the 'impermanence syndrome' in agriculture (Gallent et al. 2008). In response, some local authorities have initiated planning measures to protect agricultural land (Gibson et al. 2005). Of course, the problem with such measures is that they are sometimes seen as an infringement on private property rights, akin to disputes about heritage listing in high-amenity urban areas (Rosario 2007). Moreover, critics suggest that farmland preservation policies distort land prices by interfering with the market mechanism in the land economy, and can simply result in a transfer of demand and development to alternative locations.

While much of the literature has tended to focus on the negative impacts of amenity migration on rural environments, it is important to stress that the reality is far more complex. In research conducted in the United States, Jones et al. (2003) suggest

that the influx of new residents to amenity areas can contribute to 'greening' of local environmental values. They argue that, in contrast to the more utilitarian 'extractive-commodity' views of traditional rural residents, many newcomers are more focused on environmental protection and rehabilitation. Again, these differences have the potential to act as a source of social and political conflict within rural areas, and can present considerable challenges to planners and environmental managers.

The notion that newcomers might precipitate a shift in local environmental values has also been reported in Australia. In reflecting on research conducted in the Corangamite area of Victoria, Mendham and Curtis (2009) argued that new residents may not be bound to traditional land management practices. They claim such residents may have a stronger commitment to environmental stewardship than do many members of the traditional farming community, and that they can inject not only considerable enthusiasm, but also innovation and leadership. Not dissimilar findings were reported by Green (2003) in Perth's peri-urban arc. She found a high level of involvement by newcomers in local environmental groups, and argued that in many cases such residents had a stronger commitment to ecological restoration than did longstanding residents.

5. Conclusion

The findings presented here raise important questions regarding the population turnarounds being experienced in some rural areas. While it is apparent that out-migration from metropolitan areas is part of the explanation for rural growth, it is part of a more complex story. Across much of rural Australia in-migration from metropolitan areas accounts for a relatively modest proportion of the new arrivals. Thus, the most significant source of in-migrants appears to be other rural/regional areas. This suggests that there is a need to understand high rates of in-migration in certain rural areas with reference to the exodus of people from other non-metropolitan places. In other words, contemporary migration patterns in rural Australia appear to be linked as much to population redistribution as counterurbanisation.

There are also important ramifications here for debates regarding rural gentrification. Most significant is the widely held view that it is an ex-urban population from higher socio-economic backgrounds that are redefining many rural spaces, as discussed above. While there is evidence to suggest that this might indeed be the case in selected locations, for the majority of places experiencing high rates of in-migration it would appear that change is being driven by quite different demographic groups. One of the apparent shortcomings of Australian research on this theme is that case studies have often been undertaken in localities where ex-urban residents do indeed represent the majority of new arrivals (Curry et al. 2001, Tonts and Greive 2002, Holmes et al. 2002, Costello 2007). Yet, the reality is that these places are quite atypical. This reinforces the view that caution is needed in applying the rural gentrification thesis in a broad and uncritical way, particularly in an Australian context.

The shortcomings of the urban-led rural gentrification thesis also apply to the welfare-led hypothesis. While it is likely that some lower income and/or welfare dependent ex-urban people comprise some of the new arrivals in rural areas, the extent to which such groups have contributed to broader patterns of in-migration,

over the past intercensal period at least, is doubtful. The modest flows of people from the metropolitan areas to most of the more remote, high in-migration SLAs suggest that it might explain only a small component of the influx.

The perception of some rural areas as being desirable has always been an axiomatic driver of in-migration and the resulting in-migration has, equally axiomatically, led to local demographic and environmental change. That amenity-led migration in rural Australia should be having these effects is therefore unsurprising. What is perhaps more surprising is the inherent complexity and diversity of this current process. Australia's initial agricultural settlers may well have been influenced by the traditional cachet that land ownership bestowed in European society, but their primary motivations were economic and they were therefore focused on the productive potential of the land on which they settled. Even when they competed for land (as did the squatters and the selectors in the late nineteenth century) (Williams 1975, Powell 1988) the motivations of these two groups were both similar and mutually comprehensible.

Many contemporary, amenity-led migrants may also be seeking a living, or at least some form of financial gain, but nowadays the motivations for their moves are far more likely to also encompass lifestyle and aesthetics. In spatial terms, this causes such migrants to focus only on those subsections of rural Australia with the requisite accessibility and/or landscape attributes. This produces a dichotomy at the sub-regional scale between those growing localities that possess and those stable or declining localities that lack these desirable characteristics.

What this means for the areas experiencing amenity-led in migration is that their populations are becoming increasingly diversified. Characteristically, a (shrinking) traditional rural population remains. This demographic cohort is likely to be aging, predominantly Anglo-Celtic and to have ongoing socioeconomic links to the local productive/extractive industries. As this paper indicates, the in-migrants are less likely to be a homogenous group. They are not necessarily from the capital cities nor are they all seriously rich – or seriously poor. If they share any characteristic, it is, almost by definition, that they are attracted to a perceived environment and lifestyle that they valorise.

The inherent paradox in this situation is an all too common characteristic of amenity-led migration flows. The migrants are attracted to an environment as it is. But, not only do they change these environments by moving into them, they also fail to perceive that such environments are constantly changing and that their perceptions are therefore likely to be both idealised and nostalgic. In other words, many in- migrants wish to preserve the bucolic surface of the areas that they colonise (Jones 2002) even as they change its productive agricultural substance. This situation poses clear policy challenges for those entrusted with the governance of high amenity rural areas as they attempt to deal with, on the one hand, the grounded issues of settlement, land use and environmental management and, on the other, the different visions and aspirations of an increasingly diversified local population.

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RURAL AMENITY AND RURAL CHANGE IN TEMPERATE AUSTRALIA: IMPLICATIONS FOR DEVELOPMENT AND SUSTAINABILITY

Summary

In the 21st century, many rural areas in the developed world are experiencing planning and development challenges related to complex processes of population change. It is our contention that the nature, direction and regional manifestations of these changes are strongly related to varying levels of local amenity. Amenity levels both result from the qualities of the local social, economic and physical environments and contribute to the ability of rural regions to attract and retain prospective and established residents. In turn, the presence, absence or nature of these attractive forces are likely to engender development challenges related to growth, decline or (where the attractive – or repellant - forces are demographically specific) social mix. In this paper, we will report on the provisional findings of a study of the ecumene of temperate mainland Australia (the states of New South Wales, South Australia, Victoria and Western Australia). For this area, we used a range of demographic, economic and environmental data sources, including migration flows, to construct an amenity index and to develop an amenity classification of nearly 500 social catchments. In later phases of this project, we will be conducting more detailed and localised studies in high and low amenity areas to identify both the planning and the socioeconomic implications of recent amenity-led migration.

A LIFE HISTORIES APPROACH TO GOLD PROSPECTING AND FRONTIER FARMING IN THE BRAZILIAN AMAZON

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Abstract
A Life Histories Approach to Gold Prospecting and Frontier Farming in the Brazilian Amazon
In contrast to the usual faceless macro-economic and sociological treatment of development cycles in the Amazon, which at best offer generalities about 'social actors' labelled 'peasants', 'ranchers' and 'trans-national corporations', who represent the abstract categories of labour and globalised capital, a human face to frontier processes is offered here. The social and economic sustainability of the shifting back and forth from gold prospecting to family farming on the frontier is evaluated through the eyes of those who experienced it so producing an un-romanticised portrait of prospecting in western Pará during the gold rush of 1961-1990 as well as of frontier farming today. The economic origin and past quality of life of those who left local farms or came from the distant rural zones of impoverished Maranhão are compared and contrasted with that of their passage through the degrading living conditions of gold prospecting and finally with their current situation as struggling but independent frontier farmers in Itaituba and Santarém municipalities.

Key words
Amazon, frontier farming, gold prospecting, quality of life

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1. Theoretical Approach, Scale of Analysis and Research Method

Classic Marxist and Economic Neo-Darwinist approaches to development usually work at regional and global scales of analysis focusing on economic cycles powered by faceless technical innovation, capital flows, world-city networks and demographic surges, a good example being the work of Peter Taylor over the last thirty years (1985, 1989, 2007) as well as the current work of the contributors to the Globalization and World Cities Network, a rather reified example being Devriendt *et.al.* (2009). This is not to say that such a global approach is wrong but rather it is insufficient by itself, which is probably the principal lesson learned from the scales debate which took place in Transactions of the Institute of British Geographers from 2005 to 2007 (see Escobar 2007, Hoefle 2006, Jonas 2006, Jones *et.al.* 2007, Leitner and Miller 2007, Mariston *et.al.* 2005).

An opposite approach is used here, namely one that focuses on the life histories/paths of the individuals who animated the cycles. Often times the same person was involved in successive economic cycles in different places or in the same place at different moments of his or her life (see Thissen 2004 for a discussion of the life path literature in Human Geography). Macro-approaches often make questionable assumptions about technical efficiency and economic rationality to the point of treating capital or information networks as deus ex machina while the micro-approach used here tries to see the cycle through the eyes of its participants and their motivations. We will see, as Eriksen (2001) shows in different parts of the world, that the compounded sum of countless little places can result in extraordinarily large regional and global problems, in this case, the relationship between the reproduction of peasant poverty and deforestation in the Amazon, the latter easily observed from satellites but not always explained satisfactorily in terms of the people involved.

The research method used is based on the suggestion of Marcus (1995) to follow the people in their spatial movement through a process, in this case, from being desperately poor farmers on the past and now consolidated frontier of western Maranhão state to decades of gold prospecting in western Pará state and finally back to frontier farming in the same area after 1990. The life histories of 64 farmers were researched in interviews undertaken in 2008 on the expanding frontier in Itaituba and Santarém municipalities. The farmers interviewed were first selected to represent different economic activities present in the study area today in a project related to Taylor's World City Network but it was quickly perceived in the field that almost all of those interviewed had a common background of having migrated from Maranhão and having spent part of their life as gold prospectors. The idea for constructing the present work around the life paths of what would seem to be the most humble social actors of the Brazilian frontier occurred to me in the field after listening to repeated stories of the misery of their origins and the squalor of gold prospecting, which make their present situation as poor frontier farmers seem a vast improvement in life style.

2. The Failure of the Maranhão Project: Reproducing Misery

In the late 1950s and early 1960s the regional development agency of the impoverished North-east region of Brazil, SUDENE (Superintendência do Desenvolvimento do Nordeste) began yet another programme of shifting poor farmers out of the densely populated impoverished Agreste zone and the

environmentally problematic Sertão to settle frontier areas of western Maranhão, located in the zone of transition to the Amazon. Once again the immediate cause was a severe drought as had been the case in other population movements to the Amazon during the rubber boom in the late 19th Century and early 20th Century (Andrade 1964, MINTER 1973).

Judging by the social results, the programme only succeeded in reproducing the grinding poverty of the Agreste and Sertão in western Maranhão. In one or two generations, inheritance fragmented farms at the same time that ranchers expropriated peasants forcing them off the land into the poor parts of small and large cities, where they became under- and un-employed ghetto dwellers, inadequately served by public services, living in dilapidated disease-infested housing, so closing a circle of grinding poverty. Maranhão has the lowest per capita income in Brazil, the lowest index of human development and the highest percentage of families on child support programmes (Tab. 1).

Tab. 1: Income and quality of life indices according to state and region in Brazil.

State/Region	Per Capita Annual Income (US$2004)	Families on Child Support (%)	Index of Human Development 2002
Maranhão	999	59	647
Other North-eastern States	1,895	53	682
Pará	1,815	41	720
Amazonas	4,158	39	717
Other Northern States	1,936	43	730
Central-West	3,780	17	774
South-east	4,560	20	787
South	4,309	15	800

Source: FIBGE, IPEA.

To these push factors, a number of pull factors exist attracting maranhenses to the Amazon. As many Amazonian states hold out the promise of free land and today have higher income and social statistics it is no wonder that landless peasants have been attracted to the region since the late 1960s. Then add the gold rushes of the 1970s and 1980s and one can understand how a large number of maranhenses undertook leap-frog migration directly to the prospector camps.

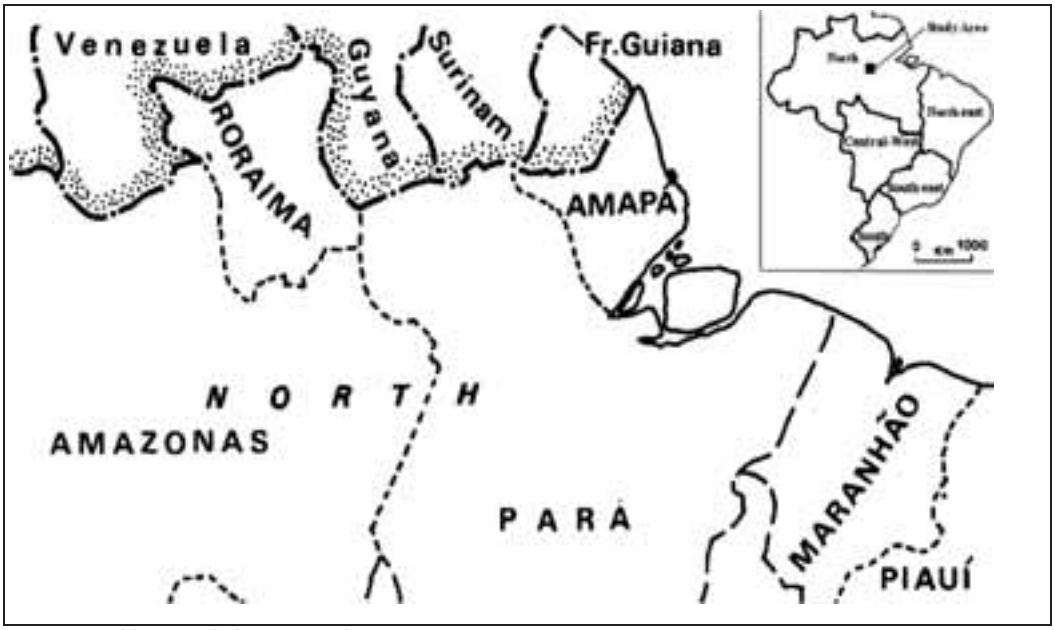
3. Amazonian Gold Rushes: From Misery to Squalor

In the second half of the 20th Century there were three major gold rushes in the Brazilian Amazon: 1) Itaituba (Pará), 2) Serra Pelada (Pará) and 3) Yanomamö Amerindian Territory (Roraima). The Itaituba gold rush was older and lasted longer (late 1960s to 1990), followed by Serra Pelada in the 1980s and Roraima in the late 1980s and early 1990s, which probably explains why first-hand study of Serra Pelada was made by Cleary (1990) and of Roraima by MacMillan (1995) while only a memoir of a prospector (Rabello, 2006) has been produced for the Itaituba gold rush. The intent here is not to provide a detailed historical study of this gold rush but rather to focus on stories concerning the squalor of the camps as opposed to the current situation of frontier farmers.

Gold was first discovered on the tributaries of the Tapajós river in the early 1960s and over the next two decades prospectors swarmed to the area establishing more than 300 camps and 200 dirt air strips to access remote creeks where gold was to be found blasting the river bank with water pressure equipment. The environmental impacts were degradation of river banks, silting of creeks and mercury pollution in

the rivers. The immediate impact on population movements besides attracting outsiders directly to the camps was to empty the planned colonization projects being established along the Transamazonian (BR-230) and the Cuiabá-Santarém (BR-163) highways slowing down the process of settling western Pará by decades.

Fig. 1: Leap-frog migration from Maranhão to the Itaituba gold rush and then the frontier.



Source: Field research (1997-2008).

Three actors were involved in the gold rush: 1) gold buyers, 2) site operators and 3) prospector peons. The gold buyers were Santarém- and Itaituba-based merchants who seized the opportunity to make large sums of money selling provisions and equipment to operators on credit and buying nuggets and powder at windfall prices. The operators came from all over Brazil and arrived with enough capital to guarantee credit arrangements from the buyers. They lived in the camps and suffered the same squalor as the peons who did the hard manual labour. As the activity was an informal one in which no one declared income for taxation and gold was often smuggled out of Brazil to avoid paying taxes, it is impossible to ascertain income and profit margins. An approximate idea can be obtained by differences in living conditions and in conspicuous consumption when prospectors went to town.

In the camps located long the tributaries of the Tapajós River, peons and operators alike lived in even worse conditions than those in Maranhão. Both slept in hammocks strung under flimsy plastic tarps which leaked or blew away during rain storms, eating irregularly and poorly and suffering from malaria which infested the camps. The greatest difference between operator and peons was working conditions. Workers passed long hours in the water and muck and were exposed to dangerous chemicals such a mercury used to separate gold. They were also compelled to work day in and day out, even when ill with malaria, when they were not sacked outright if they fell ill.

When peon and operator went to town to make up for months of monotony spent out in the wilderness far from urban social interaction (a highly valued part of life for Brazilians), they threw themselves into acts of conspicuous consumption undertaken for all to see, which assumed similar but qualitatively different forms. Interviewed workers thought it was easier to earn money in prospecting but they ended up squandering their hard-earned cash in drinking, gambling and whoring. Most operators also did the same but in more prestigious establishments in addition to buying expensive pick-ups to parade along main street Itaituba and Santarém. Some bought houses in town but only a few had the wisdom to invest in productive land, usually ranches around Itaituba. Almost all operators squandered everything. Even the man who first discovered gold and who was once elected representative to the Pará State Assembly ended his days in poverty.

The gold rush collapsed in 1990 when the federal government adopted a highly unconventional economic programme meant to tame hyper-inflation. The most polemical measure was to freeze all money in banks for six months and to not correct it for inflation, which was not tamed, so that savings lost most of their value. Over night the buyers lost access to the capital used to finance the operators who in turn paid the peons. Buyers also did not have access to the new currency, which was pegged at the rate of one-on-one with the US dollar (the currency used to calculate the price of materials and equipment) so increasing the cost of prospecting immensely. Even when buyers still had capital and tried to continue financing prospecting in 1990 the increased costs reduced profits to the point that operators did not make money, reneged on their advances from the buyer and fled to the gold rush of Roraima. Some peons did the same but many stayed on in western Pará where they settled farms located on feeder routes opened along the advancing frontier. MacMillian reports the same when the Roraima gold rush collapsed in the 1990s, which was also confirmed in interviews with maranhese settlers in my own field research undertaken there in 1998. Indeed, this is a common pattern along historical frontiers, such as those of western North America in the latter 19th Century, in which many prospectors went from gold rush to gold rush but some always stayed on in each place where they would become miners or farmers (Hine and Faragher 2000).

4. On the Expanding Frontier: From Squalor to Basic Necessities

The ex-prospectors who became frontier peasants in western Pará suffer the typical limitations to commercial farming along roads in the Amazon (see Bicalho and Hoefle 2008, 2009, Caldas *et. al*. 2007 for greater details). Most crops are harvested during the rainy season when the terrible unpaved feeder routes to main roads are mired in mud and traffic becomes impassable. Some try to raise cattle which are prime for sale at the end of the rainy season but a 100-hectare lot, of which legally only 20 hectares can be cleared for use, does not furnish enough pasture to support a herd large enough to generate a decent living. Consequently, farmers crop beans, maize, manioc and fruit trees for subsistence and rice for the market as well as pigs and poultry for self-provisioning. However, the main cash activity, rice production, is being curtailed due to the appearance of a fungus which destroys the crop, a reoccurring problem when commercial-scale cropping is attempted in the Amazon. Consequently, little monetary income is earned, usually from selling hardwood and animal skins, which obviously is not a sustainable practice.

This notwithstanding, in interviews farmers considered themselves to be well off in comparison to their former life in Maranhão and fortunate to have survived the squalid conditions of life in the prospector camps. Of the 78% of the farmers who considered their life to be better today than when they were prospectors, paramount were considerations concerning owning land, working with family members, housing conditions and quality of diet. In the words of one elderly woman whose son brought her to live with him after he settled down, "to those who stayed behind in Maranhão today I am rich". A 40-year old man stated, "today I have a family, no one is going to sack me because I am sick and I have food to eat", a sentiment also expressed by a 52-year old man who said, "When I was a prospector I spent a long time away from my family and now I am with them constantly and we work together". Housing, health and diet are interrelated in the comment made by a 48-year old man, "I now work for myself and not others, no one forces me to work when I am sick and I eat better today" as in another statement made by another middle-aged man, demonstrating the problems of life and work in an equatorial climate, "Today I live in a house. When I was a prospector I lived under a plastic sheet and would get drenched when a rain storm occurred in the middle of the night". Finally, the camps could be quite violent, especially as the only recreation after work was drinking cane spirits. There were some woman prospectors and one commented about her present life, "This place is peaceful, I live on my own land and nobody comes around bothering me".

So we can see that farmers now live in a proper house even if it is a modest one and eat regularly even if the food is from the crops grown and animals raised for self-provisioning. They are married and do not squander their hard-earned cash in drinking and whoring, subject to all kinds of infirmities. Finally, and most important of all, is the fact that as frontier farmers they are their own bosses, who work when and how long they want to and do not have to get out of a sick bed to go to work.

Some ex-prospectors considered themselves worse off today. This is usually due to low monetary income today. One lamented that, "as a prospector I earned money faster but prospecting ended and nothing better appeared", referring to the collapse of 1990. Also negative opinions can be held by farmers living out in the countryside and not in legally constituted communities in which public educational, health and utility services are available.

5. Conclusion

The flexibility of the concept of sustainable rural livelihoods allows us to accept the fact that what we would think of as poor frontier farmers consider themselves to be prosperous when contrasted with the abject misery in Maranhão and the squalor of the gold camps. However, the reproduction of frontier peasant farming, together with ranching and recently soybean farming undertaken by medium and large farmers, is devastating the whole eastern Amazon. In addition to this, one has to question the grinding poverty of Maranhão, which propels landless peasants into the Amazon. Indeed, Maranhão has little to show for the fact that its politicians have occupied some of the highest posts in Brazil, such as the Presidency, the Leadership of the National Senate and Federal Ministries, though the politicians themselves have profited enormously in the form of well-paid federal jobs and widespread corruption and graft.

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A LIFE HISTORIES APPROACH TO GOLD PROSPECTING AND FRONTIER FARMING IN THE BRAZILIAN AMAZON

Summary

Many present-day frontier farmers of western Pará come from the impoverished North-east and passed a part of their life as gold prospectors in the hope of becoming rich. Given the exploitive work relations and chaotic economic situation during the Itaituba gold rush very few were successful. They did manage to escape the extreme poverty of their former life in Maranhão, the poorest state in Brazil. On the consolidated frontier of western Maranhão they had little land and work, most being migrant labourers, who earned little, had a poor diet and lived in poor housing in town and in the countryside, where they were poorly served by public health and educational services. However, their passage through gold prospecting can only be characterised as squalor. They arrived with no capital, continued being migrant labourers, who moved from camp to camp and worked too much to earn a low to medium income. Their diet consisted of salted beef and manioc meal and they basically camped for months on end. Out in the bush they had no health or educational services and many died of malaria. As frontier farmers in comparison they have land, work when and how they choose, usually with family members. Income is low but self-provisioning furnishes a reasonably good diet and they live in simple but sound housing. Living in communities they muster political clout in order to be better served by basic public services.

SUSTAINABLE RURAL DEVELOPMENT AS AN EDUCATIONAL STARTING POINT IN GENERAL GRAMMAR SCHOOLS IN SLOVENIA

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Abstract

Sustainable Rural Development as an Educational Starting Point in General Grammar Schools in Slovenia

Education is a very important basis of sustainable development. That is why the selected learning objectives in the syllabus for geography in general grammar schools in Slovenia will be analysed within this contribution (general grammar school in Slovenia is a secondary school with a general-educational emphasis that does not provide vocational education, but prepares students aged 15 to 19 for further education at universities). We have selected learning objectives that relate to economic geography as a general geography topic, with special emphasis on learning objectives that refer to agriculture, rural areas and sustainable development.

This contribution will present the results of generic comparative analysis of selected learning objectives in syllabi that were issued during the period since the emergence of Slovenia as an independent state (1992, 1998 and 2008). The results of the evaluation of quoted learning objectives from the viewpoint of social needs, educational guidelines and geographical science, as well as the results of the evaluation from the viewpoint of geography teachers in general grammar schools will also be examined. Educational problems associated with economic geography, sustainable development and rural areas will be highlighted accordingly.

Key words

sustainable development, general grammar school, syllabus, Slovenia

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1. Introduction

The United Nations proclaimed the years from 2005 to 2014 as the Decade of Education for Sustainable Development. The chapter of the Habitat Agenda entitled "Commitments" includes the obligation of the United Nations (UN) member states to educate the experts, as well as the general public. In the conclusion of this chapter, it is emphasized that the long-term realisation of sustainable development objectives is possible only by means of interconnected and comprehensive education, which must be based on the development of the need for a quality environment (Internet 1). In 2005, the Strategy for Education for Sustainable Development was adopted at the High-level meeting of Education and Environment Ministries in Vilnius, which gave priority to education for sustainable development. The main idea of the adopted document was to encourage the development of new educational methods for approaching the problems of and finding solutions for sustainable development. Especially emphasized was the need to depart from traditional approaches, as well as from connecting sustainable development with too narrow an environmental education in terms of content (Uzelac 2008; qtd. in Kolenc Kolnik 2007, 22).

Most countries incorporating the requirements for sustainable development into their development strategies take the following five dimensions of sustainable development into account:
global responsibility;
- intergenerational equity;
- integration of economic, social and environmental objectives;
- the principle of developmental caution and
- the principle of cooperation with the public and its integration in decision-making (Kolenc Kolnik 2007, 22).

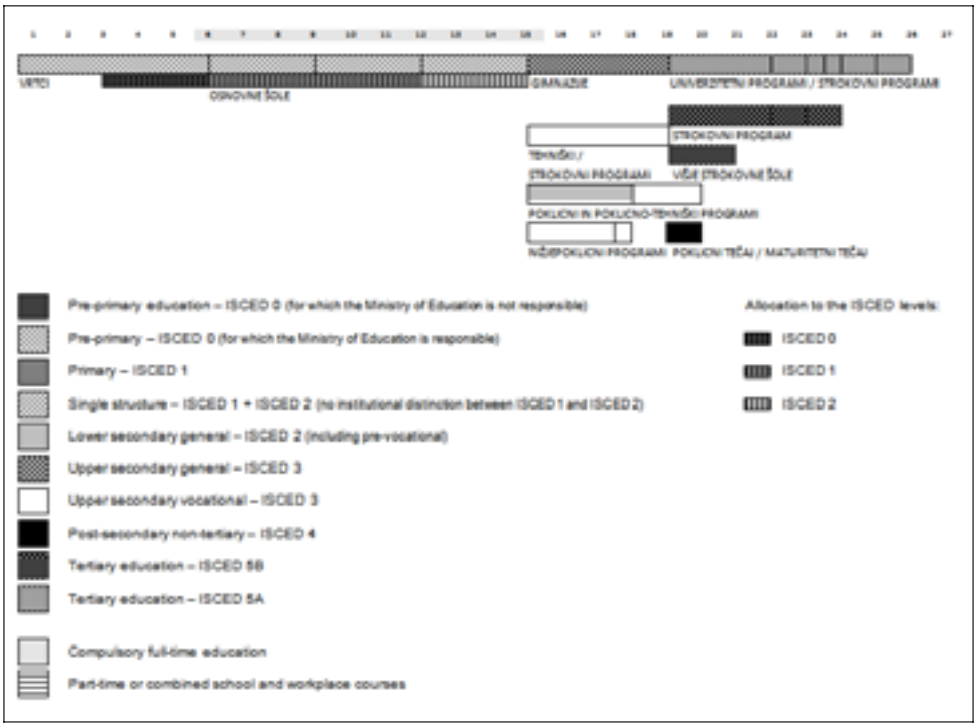
When incorporating these dimensions of sustainable development into the education process, the principles of proactivity have to be taken into account in geography education:
- encouraging the development of values and relations that contribute to responsible decision-making in accordance with the idea of sustainable development;
- incorporating the possibilities of connecting various local, regional and global areas and issues;
- introducing the students to active cooperation (participatory education) in democratic decision-making processes;
- linking various aspects of education, such as cognitive and emotional aspects, as well as ethical and aesthetic aspects (Kolenc Kolnik 2006).

1.1 Objectives and Methodology of the Study

In our study, the results of which are presented in this paper, we focused on select dimensions of sustainable development and their application in geography education on the level of Slovenian general grammar schools. (In Slovenia, general grammar schools are secondary schools providing general education and preparing students aged between 15 and 19 for further education at university. Because an increasing number of the primary school population is enrolled in general grammar schools, they represent an important part of Slovenia's education system. Educational impulses in general grammar schools are the basis for lifelong learning, especially

since the enrolled population is capable of the highest cognitive processes, and because the population will attend universities, thus decisively affecting their future quality of life, as well as the sustainable development of the Earth). We restricted ourselves to studying the integration of economic, social and environmental objectives.

Figure 1: The Slovenian education system.



Source: Internet 3.

The basic research process involved a comparative analysis of the basic documents for geography education in Slovenian general grammar schools. Three syllabi from the period after Slovenia declared its independence were used: one each from the years 1992, 1998 and 2008. Analysing each syllabus, we tried to answer the following questions:

- Is the idea of sustainable development incorporated, and, if so, in what way?
- Is the integration of economic, social and environmental objectives present? How is the integration realised? Could it have been realised better?

As far as structure is concerned, all studied Slovenian geography syllabi for general grammar schools consist of the following four basic sets of lesson objectives: general geography, regional geography of the World, regional geography of Europe and regional geography of Slovenia. General geography is concerned with the thematic units physical and social geography, which are subdivided into the following chapters: Origin and Structure of the Earth, the Earth's Surface, Weather and Climate, Soil, Vegetation, Hydrosphere, Population, Settlements and Human Economic Activity. Regional geography is concerned with regio-geographical aspects

(physical and social geography of a particular region). In the study, we focused on general geography, which, because of its thematic orientation, meets the demands of spatial integration**,** which is one of the most important criteria of education for sustainable development (in the objectives of regional geography, spatial integration is limited to an occasional comparison between different regions). The learning objectives in general geography related to the basic understanding of economy, agriculture, the countryside and sustainable development are most dominantly represented in the chapters entitled "Settlements" and "Human Economic Activity".

In the comparative analysis of the syllabi, the following structural elements of the Slovenian geography syllabi were taken into account: general objectives, content and operational objectives.

Additionally, the data used in the study was collected with the help of evaluation questionnaires (protocols), which were filled out by university geography teachers (78.5% of the selected university teachers took part), geography teachers in Slovenian general grammar schools (37.5% of the population took part) and half (14) of the students of the Faculty of Arts in Maribor who were in the fourth year of their studies in 2008 (when the research was conducted) and were familiar with the grammar school syllabus in some detail.

On the basis of the evaluation questionnaires (protocols) a quantitative and qualitative analysis followed. Within the framework of the quantitative analysis, the data was statistically processed using the SPSS statistical software package for Windows (version 15.0). The nonparametric Kruskal-Wallis test was used for determining the differences between groups of teachers concerning their period of employment and level of education. The qualitative processing was done by closely examining and summing up the evaluation protocols (questionnaires). Common characteristics were especially emphasized and abstracted.

2. Results of the Study

2.1 Inclusion of the Idea of Sustainable development in the Syllabi

In many instances, the general geography learning objectives in the studied documents clearly relate to the idea of sustainable development. 50% of the learning objectives in the 1992 and 1998 syllabi include the idea of sustainable development, although the term itself is not mentioned directly.

An example of a general objective from 1992 (138): "become aware of the consequences of unplanned management of natural resources, and thus, trained to make conscious decisions regarding activities affecting the environment that will not damage it or disrupt the natural balance (ecological aspect in spatial decision making)".

An example of a general objective from 1998 (4): "develop the ability to evaluate the environmental contradictions in the modern world stemming from population development and economic development; in this way, understand the disregard for spatial limitations of human activity".

The absolute number of general objectives supporting the idea of sustainable development is higher in the 1998 syllabus. The 2008 syllabus differs substantially

from preceding syllabi in the way the general objectives are formulated. On approximately three pages, the general learning objectives are defined. They are then divided into cognitive objectives; objectives related to spatial understanding; objectives related to the knowledge and understanding of geographical structures, processes and relationships; objectives related to the application of knowledge and skills; and educational objectives (in total, there are 57 general objectives, which is approximately five times more than were in the preceding two syllabi). In addition to the aforementioned general objectives, the 2008 syllabus also contains eleven groups of important inter-subject competences that can be developed in geography lessons. Approximately 75 competences are defined. All of the above serves the purpose of strengthening interdisciplinarity, which is important for the understanding and realisation of sustainable development. Objectives supporting the idea of sustainable development are present in each group of general objectives and particularly in the group of educational objectives.

Examples of general objectives in the syllabus (2008, 11):
"…are raised to be interested in societal needs; in solving general spatial (sustainable) problems on a national, a wider regional and a global level";
"…adopt a concern for a balanced spatial use and for the preservation of the natural and social environment for future generations (sustainable development)";
"…are raised to understand the importance of values when making decisions about activities affecting the physical space";
"…develop an awareness about solving local, regional and global problems in accordance with the principles of sustainable development, as well as the principles of the Universal Declaration of Human Rights".
The term "sustainable development" is directly included in the general objectives of the 2008 geography syllabus for Slovenian general grammar schools. This idea is thus incorporated in the system of geography education.

2.2 Integration of Economic, Social and Environmental Objectives in the Syllabi

In the 1992 syllabus, only the content is defined, whereas the operational objectives are not. The direction towards sustainable development is evident in 70% of the chapters concerned with general geography. The cognitive comprehension of the effects of human activity on nature is the primary objective. The issues of the countryside and the sustainable development of the countryside are included in the chapters entitled "Settlements" (rural settlements, urbanisation problems) and "Human Economic Activity" (agronomic conditions in the World, limit of life, types of agriculture, food production, production of industrial raw materials, impact of agriculture on the landscape).

In the 1998 syllabus, the (operational) learning objectives are defined in detail. A detailed analysis of the operational learning objectives in general geography showed that the share of learning objectives related to raising environmental awareness and co-responsibility in environmental protection (educational cross-curricular component) is 46.6%. These objectives are most common in physical geography, followed by social geography; especially in the chapter entitled "Human Economic Activity". The share of learning objectives addressing the understanding of spatial problems and directing towards a responsible development of society and the economy is 58.5%.

In the 2008 syllabus, the share of "environmental" objectives in general geography rose especially in the chapters entitled "Weather and Climate" and "Human Economic Activity". In the latter chapter, the largest share of "environmental" objectives is found in the thematic sets entitled "Energy and Industry" and "Agriculture", whereas in comparison to the preceding syllabi, the thematic set entitled "Sustainable Development" is completely new.
In the chapter entitled "Agriculture" (2008, 24), the students become familiar with various types of agriculture and the causes for their origin, evaluate the use of soil using select examples and learn which elements of the landscape are functionally related to agriculture. They also "try to determine which environmental problems arise from intensive agriculture, as well as which environmental problems related to the irresponsible management of nature affect nature the most", and "develop a positive relationship towards the importance of agriculture for food supply, the supply of raw materials and the preservation of the cultural landscape". In the example of agriculture, the difference between the two newest syllabi is that the 2008 syllabus more clearly puts emphasis on educational moments and the importance of the development of knowledge and talents.

In the thematic set entitled "Sustainable Development" (2008, 25-26), which is clearly application-orientated, the main emphasis is put on learning about the concept and the essence of sustainable development and its components, on understanding of the importance and the issues of spatial planning, the inclusion of the public in the decision-making process, the assessment of various activities from the perspective of sustainable development and the awareness of the complexity and limitations of space, as well as on the assessment of development processes and the spatial development of economic activities.

We can conclude that the 1992 and 1998 syllabi represent a narrower environmental education in terms of content, whereas the new syllabus represents education for sustainable development.

Although in the 1998 and 2008 syllabi, there are relatively more objectives in general geography that can be connected to the idea of sustainable development, the chapter entitled "Human Economic Activity" shows that the approach towards economic activities is still very much systematic and descriptive (learning about different economic activities separately). This places doubt on the actual effectiveness of the integration of economic, social and environmental objectives.

2.2.1 New Syllabus Simulations - a Step towards the Integration of Economic, Social and Environmental Objectives?
In order to make a step forward towards the integration of economic, social and environmental objectives, two additional simulations were prepared on the basis of the chapter entitled "Human Economic Activity". In the simulation, the results of the assessment of the 1998 syllabus were taken into consideration. The societal needs, educational guidelines and geographical science were considered, as in the study described in the introduction (Konečnik Kotnik 2008).

2.2.1.1 Simulation Description
The transition in the first simulation is slower, representing an evolutionary step towards modern processive understanding of economic geography, whereas the second simulation represents a more significant (revolutionary), content-related leap forward. In addition to the description of select economic activities included in

the 1998 and 2008 syllabi, the first syllabus simulation also includes some tertiary and quaternary activities not included in the aforementioned syllabi, despite their importance in the economically developed world. Most objectives of the first simulation are directed towards the development of psychomotor skills and talents of the students along with the students' personal assessment of economic problems and their stance on these problems, thus combining different aspects of education. The biggest difference regarding content is in the fact that, in addition to human economic activity, the first simulation includes economic processes (tertiarization of the economy, economic globalization, economic integration, spatial planning, indicators of sustainable development, etc.). The reason for including these objectives is the need for procedural emphasis; not only methodical, but also content-related procedural emphases need to be included.

The main difference between the first and the second syllabus simulation is the fact that individual economic activities are not described (not addressed) in the second. Instead, the second syllabus is limited to the crucial indicators of economic development, social development and environmental development. In it, these indicators are also compared on the basis of more developed and less developed or undeveloped regions of the World. This represents a completely different content-related approach. In terms of content, the approach of the second simulation was a distinctly complex and processive one, relevant from the viewpoint of modern economic geography, as well as from the viewpoint of raising awareness of the importance for the sustainable development of the Earth.

Some examples of learning objectives from the second syllabus simulation - students:

- define key indicators of economic development;
- determine the key indicators of economic development of the selected developed and underdeveloped regions (by comparing the relevant data); with special focus on Slovenia;
- establish the factors that influenced the development of the most important economic activities, and assess the importance of these factors today and in the past; using developed and underdeveloped regions of Slovenia as concrete examples;
- determine the key indicators of social development of the selected developed and underdeveloped regions (by comparing the relevant data); with special focus on Slovenia;
- compare the key indicators of economic and social development; with the help of concrete regional examples;
- determine the key indicators of environmental development of the selected developed and underdeveloped regions (by comparing the relevant data); with special focus on Slovenia;
- compare the key economic, social and environmental indicators; with the help of concrete examples;
- assess, with the help of examples, how their own values can have an impact on the economic, social, environmental and political problems of local and global regions (Konečnik Kotnik 2008).

2.2.2. Key Findings

In our study, the 1998 and 2008 syllabi and the described simulations were assessed by their direct users – those who were involved in the teaching process: grammar school teachers and geography students. We wanted to determine how big

a "leap" the teachers and students were willing to make in their teaching/learning or how they assessed the different principles of the integration of economic, social and economic objectives. The participants assessed the syllabi and the simulations using the following criteria:

Tab. 1: Criteria for syllabus assessment from the viewpoint of the direct users of the syllabus.

1. criterion:	The proportion between cognitive objectives ("material" knowledge), psychomotor objectives (skills, talents) and educational objectives.
2. criterion:	Accordance with life and societal needs.
3. criterion:	Applicability of the knowledge.
4. criterion:	Relevance of the content and concepts.
5. criterion:	The possibility of content actualisation.
6. criterion:	Accordance with geographical science.
7. criterion:	Concept of the approach (methodological approach to forming the syllabus for each chapter).
8. criterion:	International comparability of the syllabus.
9. criterion:	The burden on the teacher (difficulties in planning and carrying out the lessons).
10. criterion:	The level of freedom and creativity that the syllabus allows the teacher.
11. criterion:	The level of assistance the syllabus offers the teacher.
12. criterion:	The burden on the students.
13. criterion:	Student motivation.
14. criterion:	Suitability of the scope of the chapter considering its educational potential.
15. criterion:	Syllabus support by textbook material, literature and sources.

Source: Konečnik Kotnik 2008.

We established that practising teachers in Slovenian general grammar schools prefer gradual changes, since they evaluated the second (most "revolutionary") syllabus simulation as the least appropriate. On the other hand, this simulation was evaluated by university teachers as the best, since it was also developed on the basis of their ideas. We can presume that practising teachers in Slovenian general grammar schools regard describing (of economic activities – e.g. which types of agriculture exist) and understanding of (economic) processes as an equally important part of geography education. Finding the right balance between these two aspects of geography education can prove very difficult. There is a risk of the quantity of the information becoming more important than the quality. Assessors with a higher level of education, along with geography students, were more in favour of more drastic syllabus changes. Teachers with a shorter period of employment were also more in favour of syllabus changes. An interesting difference was also found in the ascribing of importance to different criteria. For practising teachers, the most important criteria were "the teacher's burden", "the level of assistance the syllabus offers the teacher" and "support by textbook material, literature and sources". This suggests that the basis of their thinking is their own work. For student assessors, the most important criteria of evaluating syllabuses were "the level of creativity the syllabus allows the teacher", "accordance with geographical science" and "international comparability". It is evident that they strive for a more liberal syllabus that is open to scientific research, as well as to international developments.

3. Conclusion

The results of the study prove that the idea of sustainable development is firmly grounded in the Slovenian geography syllabus for general grammar schools. Nevertheless, certain dilemmas persist in this field. The first relates to the fact that

the general objectives of geography education in the syllabus are formulated to pay regard to basic social and educational requirements of modern times and not to the trends in geographical science. This is true for the 2008 syllabus, as well as (to a lesser extent) for the 1998 syllabus. Problems arise in the realization of the general objectives in the framework of the operational objectives, since the teachers have to deal with these directly. Examining the 1998 syllabus, it is evident that only 23% of the operational objectives were educational in nature, 30% of the operational objectives were related to the development of skills and talents and 26.3% were cross-curricular operational objectives. The idea of interconnecting different educational aspects is one of the foundations of education for sustainable development, and that was well formulated in the general objectives. Nevertheless, it was not reflected adequately in the operational objectives. The question of the realisation of the general objectives and competences in the 2008 syllabus remains open to research. In the future, more emphasis is going to have to be put on the proportion between general and operational objectives. In this respect, encouraging the continuing professional education of teachers is also of great importance.

This study established that there are other possibilities for (greater) integration of economic, social and environmental objectives in the Slovenian education system. Considering that educational practice adapts to evolutionary changes easily, gradual and planned syllabus development in the direction of greater integration of the aforementioned groups of objectives is necessary.

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SUSTAINABLE RURAL DEVELOPMENT AS AN EDUCATIONAL STARTING POINT IN GENERAL GRAMMAR SCHOOLS IN SLOVENIA

Summary

In our study, the results of which are presented in this paper, we focused on select dimensions of sustainable development and their application in geography education on the level of Slovenian general grammar schools. We restricted ourselves to studying the integration of economic, social and environmental objectives.

The basic research process involved a comparative analysis of the basic documents for geography education in Slovenian general grammar schools. Three syllabi from the period after Slovenia declared its independence were used: one each from the years 1992, 1998 and 2008. Analysing each syllabus, we tried to answer the following questions:

- Is the idea of sustainable development incorporated, and, if so, in what way?
- Is the integration of economic, social and environmental objectives present? How is the integration realised? Could it have been realised better?

Additionally, the data used in the study was collected with the help of evaluation questionnaires (protocols) that were filled out by university geography teachers (78.5% of the selected university teachers took part), geography teachers in Slovenian general grammar schools (37.5% of the population took part) and half (14) of the students of the Faculty of Arts in Maribor who were in the fourth year of their studies in 2008 (when the research was conducted) and were familiar with the grammar school syllabus in some detail.

The results of the study prove that the idea of sustainable development is firmly grounded in the Slovenian geography syllabus for general grammar schools. Nevertheless, certain dilemmas persist in this field. The first relates to the fact that the general objectives of geography education in the syllabus are formulated to pay regard to basic social and educational requirements of modern times and not to the trends in geographical science. This is true for the 2008 syllabus, as well as (to a lesser extent) for the 1998 syllabus. Problems arise in the realization of the general objectives in the framework of operational objectives, since teachers have to deal with these directly. Examining the 1998 syllabus, it is evident that only 23% of the operational objectives were educational in nature, 30% of the operational objectives were related to the development of skills and talents, and 26.3% were cross-curricular operational objectives. The idea of interconnecting different educational aspects is one of the foundations of education for sustainable development, and that was well formulated in the general objectives. Nevertheless, it was not reflected adequately in the operational objectives. The question of the realisation of general objectives and competences in the 2008 syllabus remains open to research. In the future, more emphasis is going to have to be put on the proportion between general and operational objectives. In this respect, encouraging the continuing professional education of teachers is also of great importance.

This study established that there are other possibilities for (greater) integration of economic, social and environmental objectives in the Slovenian education system. Considering that educational practice adapts to evolutionary changes easily, gradual and planned syllabus development in the direction of greater integration of the aforementioned groups of objectives is necessary.

THE EFFECT OF FACTORS OF THE SOCIO-GEOGRAPHIC STRUCTURE OF MOUNTAIN FARMS ON SUCCESSION ON THESE FARMS

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Abstract
The effect of factors of the socio-geographic structure of mountain farms on succession on these farms
The basic premise of this paper is that certain factors of the socio-geographic structure of mountain farms have an influence upon succession on these farms. The conducted survey confirmed this hypothesis. The most prominent influence that was observed included factors that reflect the tradition and the opinions of the householders, and especially that express the economic power of a farm. In the conclusion of this paper, we offer some solutions regarding the problem of succession in Slovene mountain farms. These solutions are not simple, due to the complex mixed rate of influence with respect to the various factors.

Key words
social geography, agrarian geography, rural geography, mountain farms, farm succession, Slovenia.

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1. Introduction

Farms are mainly the property of families ("family farms") and are therefore the only part of society that, alone, are assuring its socio-professional reproduction. The managerial control of the farm and farm ownership are transferred inter-generationally within the family on family farms (Gasson and Errington 1993). According to Laband and Lentz (1983), successions on family farms are five times more frequent than in other professions and are the best case of the inter-generational transfer of assets and human capital. Within the process of socialization, the potential successor gains detailed insight into the work of the householder and the rural way of life, direct experiences with the inter-generational passing of skills and knowledge and, at the same time, forms a respectful attitude towards the land as the primary source of survival on the farm.

According to Laband and Lentz (1983), the transfer of human capital between generations within the family also represents its enrichment and the increase of assets: both their real value and the realisation of their value. In order to achieve this, certain preconditions have to be fulfilled, namely that the succession and the continuation of farming on the farm in question take place and that the handing over of the farm is performed in due time.

Within the agricultural sectors of developed countries, including Slovenia, one of the biggest issues is the decrease in the number of farm takeovers or farms transferred to successors. The number and influence of negative factors are much stronger than the number and influence of positive factors that keep young people within the agricultural sphere. In recent years, a series of research oriented towards the identification and quantitative evaluation of these factors has been performed abroad. Kimhi and Nachlieli (2001) for example, studied the factors of succession on Israeli farms, Glauben et al. (2002) studied the same factors on Austrian farms, Corsi (2004) on Italian farms, Tietje (2004) on German farms, Hennessy (2004) on Irish farms, etc. Researchers focused on the "internal" factors typical for a farm or "deriving from it". The goal of the research was to establish models for predicting the probability of succession on farms with regard to their structure.

Slovenia has only recently conducted such forms of research. The first one was performed in the context of a doctoral thesis. Following examples from abroad, amongst those factors that we assumed have an influence on succession, we focused on factors of the "socio-geographical structure", i.e. factors regarding the population structure, the farm estate structure, the demographic structure, the production (economic) structure, the technical structure and the developmental-innovative structure.

As we wanted to ensure the most homogeneous structure with respect to the farms within the realm of the research in order to achieve comparable results, we limited our research to one segment of Slovene farms, namely mountain farms. According to Hribernik (1994), the process of abandonment of farms in Slovenia is typical primarily in mountainous areas. This is especially worrying, as mountain farms are the most important element of the mountain cultural landscape: they are the landscape's permanent creators and preservers (Natek 1989). Their potential concentrates those elements of the landscape, which, through various effects, influence changes in the landscape (Markeš 1998).

This paper represents the results of our doctorial research. We explain factors of the socio-geographic structure of farms in Slovenia and to what extent those factors have an influence, if any, upon succession on these farms. We also propose a number of solutions.

2. Terminology

In our research, farm succession will be defined as a hyponym of the phrase farm succession, which integrates:

- Farm succession status and decision, where farm succession status means whether a person who is going to take over the managerial control of the entire farm and will then become the householder and owner of the farm is already in control or will be appointed/expected; while farm succession decision means whether this person has decided by him/herself to succeed the householder and whether this person has decided to continue farming after taking over the farm.
- The timing of the handover of the farm to the successor or the timing of handing over the farm to the successor, namely the moment when the current householder will formally hand over the farm to his/her successor.

3. Methodology

We acquired the research data through the use of surveying. In comparison to the data of statistical departments, a survey enables a more detailed view into farm succession statuses and decisions, as well as into the timing of succession and the socio-geographic structure of the farms themselves. Thus, in this way, we can obtain important data that statistical departments don't gather.

In order to ensure relevant observations and to have the most homogeneous socio-geographical structure of farms, we ascertained the influence of factors by using a random sample that included 11.6% of Slovene mountain farms, which had to fulfil the following criteria:

- The farm had to be in the Alpine and subalpine areas of Slovenia.
- The main production orientation on the farm was livestock breeding.
- The farm householder's age was 45 or above.

The influences of factors were ascertained with the help of discrete choice models, which, as probability models, enable forecasting the probability of the realisation of events (Liao 1994; Wooldridge 2002; Greene 2003) or in our case the events regarding the takeovers and handover of farms. The ascertained factors' influence on succession in mountain farms were compared and integrated with the opinions and reflections of the householders gathered during interviews. The interviews ensured compliance with the empirical analysis results and disclosed the connections between the causes for farm succession statuses and decisions and the stipulated time of the farm handover. The quantitative methods didn't disclose these causes. Apart from that, we assessed the feelings and actions of the householders in question regarding the mountain farm succession process.

4. Results and discussion

The empirical analysis results show that farm succession statuses and decisions are influenced by all factors regarding the population structure, the farm estate

structure, the demographic structure, the production (economic) structure and the developmental-innovative structure, for which those influences were foreseen. The only exceptions are those factors with reference to the technical structure. This confirms Kovačič's (2001) observation that Slovene farms are over-mechanised and that the ownership of agricultural mechanisation represents a status symbol. The time of farm handovers is also influenced by almost all foreseen socio-geographical factors on these farms, except the factor defined as employment of the householder and/or his off-farm partner.

The intensity and direction of the influences of the socio-geographical factor on farm succession are shown in Tab. 1. The intensity of influences is determined by the *t*-value, while the direction of the influence of each factor refers to (if not stated otherwise) favourable (positive) succession status and decisions on a farm and is determined through the increase of the factor value, if it is quantitative; or with affirmation, if the factor is quantitative, where the only two possible answers are either 'yes' or 'no'. All influences in Tab. 1 are statistically significant to at least a 90 percent confidence interval.

Tab. 1: The intensity and direction of the estimated influences, with regard to socio-geographical factors, on succession statuses and decisions on mountain farms in Slovenia, and the timing of their handover.

Socio-geographical factor	**Intensity and direction of influence**
Succession statuses and decisions on mountain farms	
Factors of the population structure of the farm	
Location of a farm – time/spatial remoteness of a farm and its position with regard to natural factors [the direction of influence is determined if the location of a farm is not favourable]	– –
Perception about the remoteness, isolation of a farm [the direction of influence is determined if the householder believes that the farm is extremely remote from the main road in a valley and the closest administrative centres]	– – – –
Factors of the demo-geographical structure of the farm	
Number of persons on the farm	+++
Number of children in the householder's family	++
Number of male children in the householder's family	++++
Number of generations of which the farm has been in the hands of the householder's family	++
Householder's decision regarding whether or not he would still decide to take over the farm and run it if he had the opportunity to make this decision again	++++
Householder's age	–
Householder's gender [the direction of influence is determined if the householder is male]	+
Householder's succession from the previous householder	+
Householder's marital status, respectively unmarried status	+
Highest completed level of householder's general education	+
Householder's formal agricultural education	+
Householder's off-farm employment and/or off-farm employment of his/her partner	+

Socio-geographical factor	**Intensity and direction of influence**
Successor's gender [the direction of influence is determined if the successor is male]	++
Successor's familial relationship to the householder [the direction of influence is determined if the successor is the householder's son]	++
Successor lives on the householder's farm	++
Highest completed level of successor's general education / (highest foreseen level of successor's general education at the end of his/her present schooling) [the direction of influence is determined if the successor's general education is on the level of secondary school / (if successor's education is, or will be above the level of secondary school)]	++ / (– – –)
Successor's formal agricultural education	++
Successor's off-farm employment	– –
Volume of labour input on the farm	+++
Changes of volume of labour input on the farm in the last ten years / (in the future) [the direction of influence is determined if the volume of labour input on the farm has increased in the last ten years / (will increase in the future)]	+++ / (++++)
Factors of the farm estate structure	
Farm size	++++
Perception about the farm size [the direction of influence is determined if the householder believes that his/her farm is big]	++
Changes in the farm size in last ten years / (in the future) [the direction of influence is determined if the farm size increased / (will increase in the future)]	++++ / (++++)
The area of agricultural land that is not in use for agricultural production in relation to the total size of the farm	– –
Leasing of agricultural land on the farm / (leasing out of agricultural land on the farm)	+++ / (–)
Factors of the production (economic) structure of the farm	
Marketing of the stockbreeding production	++++
The intensity of stockbreeding	++
Quantity of annual removal of wood	++
Vitality of the forest's potential [the direction of influence is determined if the householder believes that the forest is vital]	+++
Engagement in supplementary activities	++
Annual gross income derived from the farm's sources	++++
Satisfaction with the amount of annual gross income derived from the farm's sources	++
The share of income derived from the farm's sources / (from off-farm sources) in relation to the total annual gross income on the farm itself	+++ / (– – –)
The share of subsidies in relation to the total annual gross income	+++
Types of income sources from which the annual gross income in the last ten years has increased most / (which will prevail in the future) [the direction of influence is determined if in the last ten years the annual gross income has increased mostly from the farm's resources / (if this annual gross income will prevail on the farm in the future)]	+++ / (++++)
Factors of the technical structure of the farm	
Farm equipment with machines and devices	o
Farm equipment with machines and devices in the future	o
Factors of the developmental-innovative structure of the farm	
Financial capability of the farm for investment in further developments	++++
Debit of farm for further development owing to debt of loans and other	– – – –

Socio-geographical factor	**Intensity and direction of influence**
financial loads	
Engagement in ecological farming	+
Time of handing over of the farm to the successor	
Factors of the demo-geographical structure of the farm	
Number of persons on the farm	++
Number of male children in the householder's family	++++
Householder's age	+
Householder's off-farm employment and/or off-farm employment of his/her partner	o
Factors of the farm estate structure	
Farm size	– – –
Factors of the production (economic) structure of the farm	
Annual gross income derived from the farm's resources	++++
Factors of the developmental-innovative structure of the farm	
Financial capability of the farm for investment in further developments	+++

Legend:
[++++] distinctive positive influence,
[+++] great positive influence,
[++] moderate positive influence,
[+] small positive influence,
[– – – –] distinctive negative influence,
[– – –] great negative influence,
[– –] moderate negative influence,
[–] small negative influence,
[o] no influence.

Amongst the 52 factors that were assessed to have an influence upon mountain farm succession statuses and decisions and the timing of their handover, 13 of them have a very significant influence upon farm succession. They can be divided into three groups:

1. Factors reflecting the economic power of a farm:
– farm size,
– the marketability of a farm, and
– the annual revenue deriving from the resources on the farm.

2. Factors reflecting the tradition or traditional way of thinking and acting:
– the number of male children in the householder's family.

3. Factors reflecting householders' positions, perceptions and opinions:
– householder's perception about the remoteness of the farm,
– householder's decision regarding whether or not he would still decide to take over the farm and run it if he had the opportunity to make this decision again,
– householder's opinion regarding the changes of the volume of labour input in the future,
– householder's opinion regarding the changes of the farm size in the future,
– householder's perception about the farm size,
– householder's opinion regarding the vitality of the forest's potential,

– householder's opinion regarding the biggest increase in the amount of annual gross income that will derive from the farm's resources,
– householder's opinion regarding financial capability of the farm for investment in further developments,
– householder's opinion regarding debit of farm for further development owing to debt of loans and other financial loads.

4.1 Factors reflecting the economic power of a farm

The fact that factors reflecting the economic power of a farm and its developmental orientation have a significant influence on succession is confirmed by Ana Barbič's (1993, 265) finding that "young people who persist in agriculture do this less and less for emotional and more and more for economic reasons." According to Kovačič (1995), increasingly tougher management conditions in agriculture call for continuous innovations and adaptation of the production structure to suit market demands. In such an environment, positive development is achieved only by farms with householders who posses enough confidence, creativity, flexibility and self-initiative and who follow innovation processes in the fields of economics, technology, legislation, policy, organization, informatics, environmental protection, sociology and culture. According to Vrišer (1995), young and dynamic people manage best in such circumstances.

Farm size is one of the most important factors reflecting their economic power. The importance of this factor is shown through the fact that the majority of researchers (for example Kimhi and Lopez (1999), Stiglbauer and Weiss (2000), Kimhi and Nachlieli (2001), etc.) included this factor in their analyses. Glauben et al. (2004) state that farm size is the main factor in decisions regarding the cessation of farming. These findings comply with conclusions by Rosemary Fennell (1981) and Ruth Gasson et al. (1988) that an insufficient farm size is one of the main reasons why the householder's children don't take over the farm.

Although potential successors on bigger or economically stronger farms more often than not decide to take over and continue farming than those on smaller and economically weaker farms, findings regarding the timing of the handover showed the contrary: householders of big farms hand over the farm to their successors later than householders on smaller farms. A more detailed analysis shows that householders often delay the handover after their successors start investing their energy into the farm and (formally) keep the farm until they die or get weaker or sick and aren't able to manage the farm anymore. Their decision to hand over the farm is often too late, since the designated successors as well as other potential candidates find other jobs in the non-agricultural sector and have usually made other plans by then.

According to Pinterič et al. (2006), management of the farm gives a householder power, rights, value and as a consequence, guarantees him/her the obedience of his/her family and other farm workers. Farming is still a way of living and a meaning of life for many Slovene householders; not just capital, but a life project that needs to be continuously enriched. Householders of big farms, where the farm is the main source of income for the family, are very tightly connected with work and life on the farm and are more emotionally attached to it than householders of farms where the greater percentage of income is created off-farm. With the handover itself, the householders are scared of losing their rights and value and, consequently, their sense of self-worth.

4.2 The influence of tradition or traditional patterns of thinking and acting
The number of male children in the householder's family is without a doubt a factor reflecting the tradition. Kimhi and Nachlieli (2001) determined that householder's sons traditionally have an advantage over their daughters. This is evident from the ratio between the number of male and female householders on studied farms and from the ratio between appointed or foreseen male or female successors. The majority of householders and potential successors are male.

A more detailed analysis of research data shows that the householders choose a daughter for the farm takeover only because they don't have any male descendants and that daughters are usually just foreseen and not actually appointed successors. Taking into account that almost all foreseen female successors on the studied farms are below 40 years old (the majority of them are below 30 years old), we can assume that some householders still hope to be able to choose their successors amongst their grandchildren or to name their son-in-law as the appointed successor. Tietje (2004) therefore ascertains that householders prefer to appoint their sons-in-laws as their successors rather than their own daughters.

What is interesting is that a son's appointment as successor usually goes without saying. We can conclude this through the reflections of one of the householders participating in the survey:

/.../ I have one daughter and only one son, who just finished secondary school. He likes to work on the farm and if I don't hand him the farm soon, he could lose interest and leave. Then I won't have anyone to hand the farm over to. There are a lot of similar cases in our mountains /.../

Although tradition is, according to Hribernik (1993), still a very strong factor to persevere in farming, even amongst the younger generations – due to their devotion to tradition, which is more typical for the rural population than for other spheres of the population, the abandonment of farming is lower than we could expect with regard to the marginalisation of farming as an occupation in Slovene society – we should be very careful when interpreting factors such as "traditional" sanctioning of male descendants. Traditional patterns can endanger the existence of farms as well, as they impede the succession process and the timely transfer of farms to the impending successor. Waiting for a male successor forces householders to delay the appointment of their successor and potential female successors may experience a decrease in their interest in a takeover, which may cause the handover of the farm to not take place at all. With ageing the householder becomes also less creative and less interested in market innovations, etc. The growth and the financial stability of the farm are, thus, gradually diminished, which may further encourage potential female successors in deciding not to take over the farm. According to Hribernik (1995, 210), "return to the farm after the 'chased away' successor has already built his/her life elsewhere is certainly less probable."

Slovene mountain farms should recognise and overcome such traditional patterns in order to strengthen the positive meaning of succession. Householders should realise that women can be good and able householders as well!

4.3 The influence of the householder's perceptions and opinions
The education of potential successors to become future householders takes place on farms entirely within families. The parents' orientation therefore plays a pivotal role

in the preservation of the continuity between generations. In a traditional, predominantly patriarchal society, as is the norm in rural society, householders' standpoints, perceptions and thinking play a very important role in farm life. The behavioural and thinking patterns received by potential successors during the socialisation process from householders as role models for future occupation of the position of householder are very well preserved in the transfer of agricultural activities between the generations. Tietje (2004), referring to Neldert et al. (1981) says that the parents' orientation frequently passes to their children.

We assume that this is especially true for farms in mountainous areas, which have evolved in a very specific fashion for centuries, when compared to the development in valleys and plains. This development was based mainly on autarchic farms and the closeness of the rural society.

If a householder sees his/her farm as isolated, removed from all main traffic routes and the nearest administrative centres, and working on the farm/farm life is perceived as a burden and if he/she is worried about the future development of the farm or doesn't have trust in his/her farm as the main source of income, the probability of a farm takeover and the continuation of farming is greatly decreased. The opposite is true when the householder thinks positively, so showed the results of the empirical analysis.

With a positive orientation, encouragement, satisfaction and joy to work and live on a farm and with a good opinion about the farm, its structure (especially economic) and its current and future development, householders can greatly influence the potential successor's decision to take over the farm and continue farming, and thus enable the continuous development and existence of the farm itself.
The most influential factor amongst those that express the householders' perceptions and opinions is the factor that we named householder's decision regarding whether or not he would still decide to take over the farm and run it if he had the opportunity to make this decision again. According to Fasterding (1995 and 1999) and Tietje (2004), the householder's decision to take over the farm and run it if he had the opportunity to make this decision again expresses his satisfaction with his job. Besides that, it expresses his joy to work and live on the farm, his respectful attitude to farming and the preservation of the heritage of past generations. All this has a very important motivational effect for the appointed or foreseen successor for his/her preparations and decisions regarding the takeover of the farm.

Satisfaction with work on the farm expresses the opinion or mindset of a young householder on a mountain farm. The successor will continue farming. He is 24 years of age, has finished secondary school in agriculture, wants to increase the number of his livestock and plans to equip his farm with new machines and devices. The former householder, his father, would still decide without hesitation to take over the farm and run it if he had the opportunity to make this decision again. During the interview, the young householder said:

/.../ On this farm, we have been working with joy and tenacity for many years. Therefore I decided to continue farming even as a young lad. We cultivate all the land, even the steepest parts of the farm. If the situation for farmers doesn't worsen too much, I'll be happy to continue farming. I disapprove of the tightening up of controls over farmers and I don't intend to become a slave /.../

The second case is in stark contrast with the first one and shows how a householder's discontent with his job can have the opposite effect:

/.../ I don't wish for any of my children or grandchildren to have such a strenuous and frugal life. Joy for nature and animals alone cannot make up for all the hardships and struggles that life on such a mountain farm brings /.../

This farm doesn't have an appointed or foreseen successor yet and the householder is not looking for one. By the time he stops running the farm, he won't find or appoint one. If the householder had the opportunity make the decision again, he would never decide to take over the farm and run it.

As a measure to encourage farm takeovers, especially farms in the mountain regions of Slovenia, the government should therefore, aside from financial incentives, promote this new awareness amongst the farming population, i.e. the fact that farms themselves can do a lot to ensure their own takeovers. There is not sufficient incentive for the potential successor to become the future householder of the farm. Current householders have to believe in what they are raising their potential successors for.

5. Conclusion

Research has shown that succession statuses and decisions on mountain farms are influenced by factors related to population structure, farm estate structure, demo-geographical structure and the production (economic) and developmental-innovative structure of the farm, but are not influenced by factors related to the technical structure of the farm. The most influential factors are those which reflect the traditions or traditional mindset and behavioural patterns and the householders' standpoints, perceptions and opinions. Nevertheless, the joy of work and life along with tradition on mountain farms are only a preliminary condition for a potential successors' decision as to whether to take over the farm and continue farming. The overriding conditions for this are: an appropriate farm size, a suitable annual amount of gross income derived from the farm's resources and the ability of the farm to invest in its own further development. If these conditions aren't met, factors that have negative influences on mountain farm succession statuses and decisions come to the forefront. These factors gradually prevail and the insistence of traditional behavioural thinking patterns may endanger the further development and existence of farms.

Although, due to the complexity of the solutions to these problems, we, nevertheless, think potential successors would decide to take over and continue farming on Slovene mountain farms more often and householders would hand over their farms quicker and more efficiently if:

- The Slovene state would more clearly emphasise the importance of mountain farms for the landscape and all of society and accept the preservation of mountain farms as a national value, and even more so, if Slovene society would accept them as a national treasure.
- Mountain farms would recognise and overcome those traditional patterns of thinking and behaviour that impede the succession process and endanger the further development and existence of mountain farms.

- The realisation that positive thinking, encouragement, self satisfaction and joy for work and life on farms must prevail, especially amongst householders, as they can have a huge influence upon their children's decisions.
- Members of a farm, especially the householder, realise that he can trust his children, believe in them and doesn't need to be afraid to hand over what he worked hard to create.

The suggested solutions would have an indirect influence on mountain farm succession as well: with their realisation, the influence of those factors that have a negative effect on succession regarding the socio-geographical structure of mountain farms would certainly be diminished, while the importance of those factors with a positive influence would increase. Nevertheless, the proposed solutions wouldn't necessarily have an equally strong and positive effect in all cases. Every farm is unique and the succession process differs from case to case. For this reason, we should focus on studying the life cycle of every individual farm separately when looking for appropriate solutions.

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THE EFFECT OF FACTORS OF THE SOCIO-GEOGRAPHIC STRUCTURE OF MOUNTAIN FARMS ON SUCCESSION ON THESE FARMS

Summary

Succession on family farms is the best case of the inter-generational transfer of assets and human capital. The transfer of human capital between generations within the family also represents its enrichment and an increase of assets: both their real value and the realisation of their value. In order to achieve this, certain preconditions have to be fulfilled, namely that succession and continuation of farming on the farm in question take place and that the handing over of the farm is performed in due time.

Within the agricultural sector of developed countries, including Slovenia, one of the biggest issues is the decrease in the number of farm takeovers or transferring of farms to successors. The number and influence of negative factors is much stronger than the number and influence of factors that keep young people within the agricultural sphere.

Nevertheless, Slovenia has only recently conducted research studying the effects of various factors on farm succession. The first one was performed in the context of a doctoral thesis. The findings are presented in this paper. It explains which factors and the extent to which the social-geographic structure of farms influence succession on these farms. We focused on a specific section of Slovene farms, namely those defined as mountain farms, and on the factors of 'socio-geographical structure', i.e. factors regarding the population structure, the farm estate structure, the demographic structure, the production (economic) structure, technical structure and the developmental-innovative structure.
The established influences of factors with respect to the socio-geographical structure on mountain farm succession were examined and enriched with the householders' reflections regarding factors that are most important to them; and especially with the findings regarding how these factors refer to their feelings and actions in connection to succession itself. Thus, we have revealed additional quantitative developments of this issue.

Research showed that succession statuses and decisions on mountain farms are influenced by factors relating to population structure, farm estate structure, demo-geographical structure and production (economic) and developmental-innovative structure of the farm, but are not influenced by factors related to the technical structure of the farm. The most influential factors are those that reflect tradition or traditional mindset, behavioural patterns and householders' standpoints, perceptions and opinions. Nevertheless, the tradition and joy of work and life on mountains farms are only a preliminary condition for the potential successor's decision as to whether to take over the farm and continue farming.

The suitable conditions for that scenario to take hold are: an appropriate farm size, a suitable annual amount of gross income derived from the farm's sources and the ability of the farm to invest in its own further development. If these conditions aren't met, factors that have negative influences on mountain farm succession statuses and decisions come to the foreground, and will gradually prevail. The results show that certain traditional patterns of behaviour and thinking, which are still deeply rooted in Slovene mountain farms, may have negative influences on the

succession process and may endanger the further development and existence of the farms themselves.

In conclusion, we propose some solutions with regard to solving Slovene mountain farm succession problems. Although, due to the complexity of the influence of factors with regard to socio-geographical structure of farms on the succession process of these farms, the solutions aren't simple, the knowledge regarding the basic factors for (not) taking over farms in Slovenia and the inter-connection of these factors is necessary if we want to develop measures to promote the preservation of farms as fundamental holders of agricultural activities and provide sustainable development of agriculture and countryside, especially in mountain areas with negative demographic trends.

THE FUNCTION OF ZAGREB AS A FACTOR OF THE TRANSFORMATION OF THE GREATER ZAGREB GIRDLE – WITH A SEPARATE COMMENTARY ON DAILY MIGRATION

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Abstract

The Function Of Zagreb As A Factor Of The Transformation Of The Greater Zagreb Girdle – With A Separate Commentary On Daily Migration

With an almost monocentric development, the most powerful central functions in Croatia are concentrated in Zagreb. These functions have a powerful influence on the transformation of the area towards which they gravitate. This influence is greatest on the geographic area of the Greater Zagreb girdle area, i.e. Zagreb County. The processes of the transformation of the Greater Zagreb girdle relate above all to the urbanisation and suburbanisation of the area. These processes extend to rural areas in a very spatially differentiated way, depending primarily on the level of development and the spatial distribution of the transport network. Spatial differentiation and the level of urbanisation and suburbanisation in the Zagreb environs are illustrated through an analysis of the intensity and distribution of daily migration in Zagreb and through expressed changes in the spatial distribution of inhabitation. These processes were considered to be in parallel in the period from 1948 to 2001, the period of the most intensive change.

Key words

greater Zagreb girdle, spatial distribution of inhabitation, daily migration, suburbanisation, spatial differentiation

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1. Introduction

Croatia experienced intensive industrialisation and tertiary processes in the second half of the 20th century. The basic structure of its population underwent significant change – from what had been, until then, an agrarian country, Croatia developed into a society of developed secondary and tertiary-quaternary activities. This key change in the professional structure led to deep reaching changes to other elements of the structure of the population and to changes to the spatial picture of inhabitation, way of life, etc. There are intensive processes of de-agrarisation and de-ruralisation and, on the other hand, of urbanisation and suburbanisation. These processes occur in a very spatially differentiated way. They are most intensive around cities, especially large ones with a wide gravitational zone.

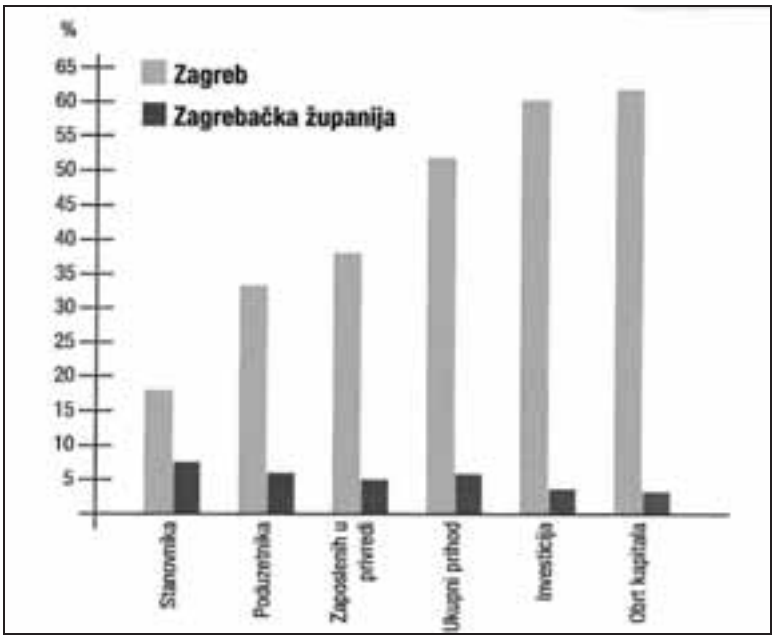

Fig.1: The percentile participation of Zagreb and Zagreb County in some basic indicators in Croatia in 2007 (inhabitants, entrepreneurs, employed in the business sector, total earnings, investments, banking capital turnover).

We can define the process of the urbanisation of what had been until then, rural areas, simply as the growth of cities. It is a matter of the transformation of village and mixed settlements into municipal (urban) settlements, i.e. of the expansion of municipal structures and way of life to rural areas. Suburbanisation, however, is the process of the merging of the suburban environs and their population with non-agrarian elements and activities. The city's rural environs gradually take on the characteristics of urbanity.

The greatest focus of expanding urbanisation and suburbanisation in Croatia is the capital city of Zagreb. The Croatian metropolis has grown in population from about 300,000 in 1848 to almost 800,000 in 2001. Zagreb drew the greatest number of people, especially in the initial and mid phases of development, from the rural girdle that surrounds it. That is why the population of Zagreb grew by 159 percent from

1948 to 2001 and by only 38 percent in the girdle, i.e. in Zagreb County. Just how massive the strength of Zagreb is as the hub of central functions and its effect on the gravitational zone is evident from data on its monocentricity in Croatia.

The gravitational zone of Zagreb, therefore, encompasses a large part of the country, with emphasis on Central Croatia. In the frame of this spatial differentiation, the greatest influence of Zagreb on the expansion of the process of urbanisation and suburbanisation is precisely in the directly neighbouring rural environs, i.e. on the geographic area of Zagreb County.

2. Daily migration as an indicator of change in the greater municipal area

According to the population census of 31 March 2001, 99,938 workers and students travelled to Zagreb to their place of work or school. This number includes daily migrants from outlying areas within the administrative borders of the City of Zagreb. From outside the administrative borders of the City of Zagreb, i.e. from the 8 counties of central Croatia, 75,872 migrants travel to Zagreb every day. The greatest number of these daily migrants – 56,231 migrants, or 56.3 percent of the total figure – come from Zagreb County. In the structure of daily migrants travelling every day to Zagreb from Zagreb County, about 76 percent is accounted for by employees, 13 percent are primary and secondary students and 11 percent are post-secondary students.

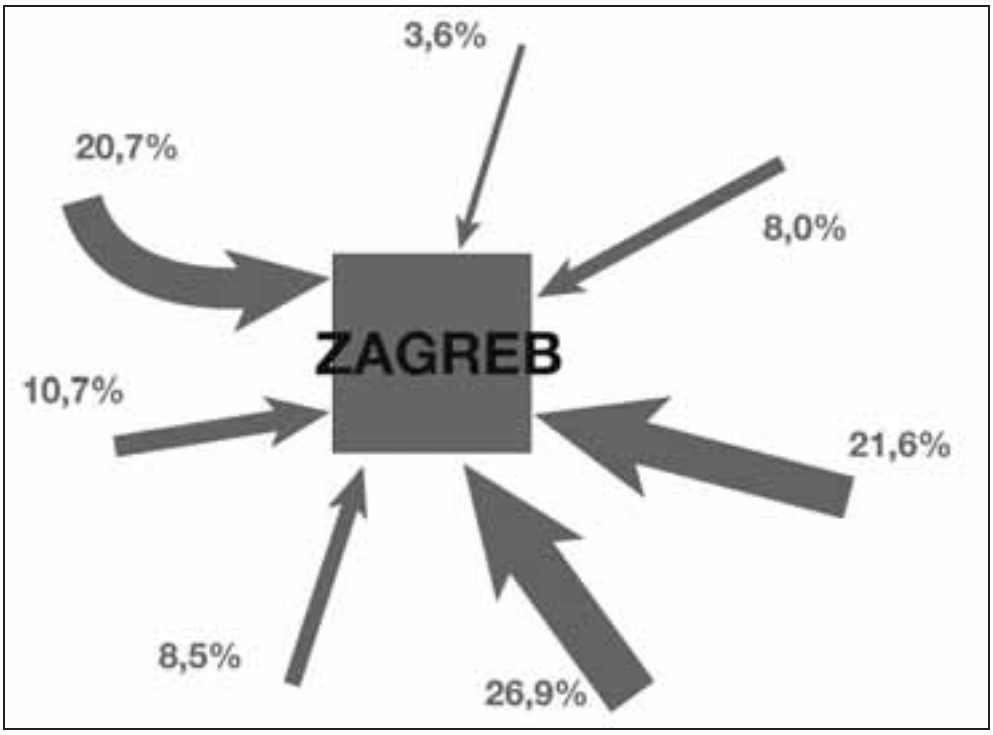

Fig.2: The basic directions of daily migration to Zagreb in 2001.

The volume of daily migration remains large, so this phenomenon has a powerful effect on the transformation of the geographic area of Zagreb's environs. In line with the phases of Zagreb's industrialisation and the strengthening of its tertiary and quaternary functions, the share of daily migrants in the number of persons employed was greatest in the 1970s – upwards of 200,000 migrants travelled daily to Zagreb at the time. The aspiration of daily migrants to relocate to their place of work as soon as possible is logical, so many move to Zagreb, contributing to its demographic growth. The 1980s saw a stagnation and significant reduction in daily migration and a slowing of Zagreb's demographic growth.

In relation to the situation thirty years ago, the spatial distribution of daily migrants in Zagreb's gravitational zone has changed. There is a drop in the number of daily migrants from distant settlements, and a proportional increase from nearer ones. Nowadays the greatest portion of daily migrants to Zagreb lives in a radius of up to 50 km from the city – about 90 percent.

Fig.3: The spatial distribution of daily migrants to Zagreb in 2001 (radius is indicated at every 25km from Zagreb).

The zone of daily migration spreads radially depending on the level of development of the transport network and extends to Novska in the east, Duga Resa and Petrinja in the south and southeast, Bregana in the west, Mura na Sutli in the northwest, Čakovec in the north and Koprivnica and Bjelovar in the northeast. To get to work or school, some daily migrants spend as much as four hours in total on transportation.

Daily migrations are also an appropriate indicator of changes in the process of urbanisation and suburbanisation in the Zagreb girdle. Daily migrants are a significant and influential factor in introducing change and innovation in the geographic space. Having become employees in Zagreb, daily migrants have altered the structure of the population in terms of area of activity. Non-agricultural professions have become the dominant source of earnings, while agriculture has become only an additional and increasingly less important line of work. Daily migrants are the quickest to accept innovation in their way of life and the agrarian, rural way of life is gradually replaced by a metropolitan, urban one. A higher, metropolitan standard of living is adopted, which alters the architectural and urban picture of the settlement. There is a speedier development of the overall municipal standard, primarily in the transport network. The processes of suburbanisation penetrate significantly quicker into settlements in which a proportionally greater number of daily migrants live.

This also means that the spatial distribution of daily migrants provides a credible picture of the differentiated spatial distribution of the processes of suburbanisation in Zagreb County. The greatest number of daily migrants live in settlements to the west of Zagreb – in the municipalities of Stupnik, Sveta Nedelja, a part of Samobor, Zapre i , Brdovec, Marija Gorica, Pu a and Bistra. The second larger concentration is to the east and southeast of Zagreb – in the settlements of the municipalities and cities of Velika Gorica, Dugo Selo, Ivani Grad, Brckovljani and Vrbovec. There is a significantly less intensive concentration of daily migrants from the south – towards Klin a Selo and Jastrebarsko, and the lowest concentration is from the northeast, i.e. from Sveti Ivan Zelina.

There are a very small number of daily migrants in the traditional, almost patriarchal settlements farther away from Zagreb and the main roads. This refers primarily to the settlements of Samoborsko gorje (Samobor highlands) and Žumberak, to the south along the Kupa River, and to the northeast – the municipalities of Bedenica, Preseka, Gradec, Farkaševac, Dubrava and others. The differences in the level of the development of daily migration are very pronounced – from the settlements of the municipality of Stupnik, for example, about 32 percent of the total population travel to Zagreb on a daily basis, about 25 percent from the municipality of Bistra, only 2 percent from the rural municipality of Preseka, and 3 percent from the municipality of Rakovec. There are also similar differences in the spatial distribution of the processes of suburbanisation, i.e. changes to the geographic space of the Zagreb girdle.

A developed transport network is significant to the intensity of the processes of suburbanisation, and especially to daily migration. Forty years ago, during the intensive industrialisation of Zagreb, most daily migrants used the train. Taking the "train to Zagreb" was a synonym for going to work in Zagreb. Now, this structure has changed entirely – the greatest number of daily migrants travel by car, then by bus and the least by train. The development and routes of the transport network,

roads in particular, have adapted to this new transport structure. The highest intensity in daily migration and in the processes of suburbanisation occur in settlements that are closest to Zagreb and which have organised public transport to exurban areas. The Zagreb public transport authority, ZET, has 54 lines with 467 bus stations serving out-of-town areas in the settlements of the cities and municipalities of Velika Gorica, Zaprešić, Bistra, Luka, Stupnik, Klinča Selo and Jakovlje. The Croatian railway authority, Hrvatske eljeznice, maintains lines on two out-of-town routes: Dugo Selo-Zagreb-Savski Marof and Zagreb-Velika Gorica.

Fig.4: The percentile participation of daily migrants to Zagreb (out of the total number of inhabitants) in cities and municipalities of Zagreb County in 2001.

3. The new spatial picture of inhabitation

As a result of the effect of Zagreb's central functions, the spatial picture of inhabitation has changed in the girdle area, i.e. Zagreb County, with greater speed than elsewhere in Croatia. The basic characteristic of this new picture of the spatial distribution of the population is the de-population of traditional rural settlements and the ever-greater concentration in the number of inhabitants in settlements closer to Zagreb and main roads. These changes are very intensive, have not been completed and correspond spatially with the differentiated spatial distribution of daily migrants.

There were 309,696 people living in Zagreb County in 2001 in 686 settlements (9 of which are cities). The average settlement, therefore, amounts to 452 inhabitants and 314 in the average rural settlement. When comparing the population censuses of 1948 and 2001, a drop in the number of inhabitants was recorded in as many as 494 settlements, i.e. in 72 percent of all settlements. Given that the total number of inhabitants in Zagreb County is continually growing, there is an ever-greater concentration of inhabitants in settlements that have seen demographic growth.

There are 192 of these settlements, or 28 percent of the total number. They are, of course, situated close to Zagreb and the main roads.

The differences in the spatial picture of inhabitation are very pronounced. While most of the settlements of Žumberak and the Samobor highlands have been affected by the process of demographic extinction (and some have disappeared from maps), the number of inhabitants in some of the settlements on main roads and close to Zagreb has grown more than sevenfold (from 1948 to 2001). The settlement of Bestovje near Sveta Nedelja, for example, has grown in population by 748 percent, and Novo Čiče near Velika Gorica by 560 percent, Puhovo near Dugo Selo by 611 percent, and so on, while the settlement of Sopote on Žumberak has lost 97 percent of its population, Brezovac Žumberački has seen a population drop of 82 percent, Čučići near Krašić 98 percent, Kladešćica near Sveti Ivan Zelina has dropped by 98 percent, Podgorje Jamničko near Pisarovina by 85 percent, and so on. Changes in the spatial picture of inhabitation of this magnitude have caused significant changes in the structure of the population, the way of life, urbanisation and other characteristics of the geographic space of the Zagreb girdle area.

It can be concluded from all that has been put forth here that Zagreb's central functions have played the most important role in the transformation of the girdle area, i.e. of Zagreb County. Once a typical, and even traditional, rural space, it has now adopted a new spatial picture of inhabitation and an altered population structure, and has undergone a pronounced process of suburbanisation. However, analysing all of the elements and intensity of suburbanisation and comparing them with the level of intensity in the environs of other European metropolises, we can conclude that the influence of Zagreb on the transformation of the surrounding area is less than what could be expected and possible.

The first phase of suburbanisation – the employment of the rural population in Zagreb – was and remains very intensive. This is evident from the level of development in daily migration. The second phase of suburbanisation, however, that being a new validation and a growth in the value of the surrounding area, has not achieved the level present in other European metropolises. The diversification or expansion of city-based companies to the surrounding area and a more massive level of employment in the settlements of the girdle area, has thus far given poor results. The more pronounced resettlement of wealthier and more educated inhabitants from the Zagreb core to the more valuable surrounding area was expected, as is the case in most European metropolises. We call this the process of de-metropolitisation, which, in the case of Zagreb, is only in the nascent phase.

In spite of these significant effects of Zagreb on the transformation of the girdle area, the third phase of suburbanisation is also continuing in the settlements of Zagreb County. This is the drawing, i.e. settlement, of people from distant parts of Croatia. They are relocating to the Zagreb girdle area less because of the offer of employment, but above all because of the lower cost of homebuilding and lower cost of living. Most of these people take advantage of the proximity of the city and the development of the transportation network, and find employment in Zagreb and its urban satellites.

5. Conclusion

When one summarises the effects Zagreb has on the girdle area, it can be concluded that the city has, thus far, taken more from its surroundings than it has contributed to them. However, the processes of transformation of rural areas continue. The Zagreb girdle area is entering new changes, with an increase in the value of its space. In 1948 only 8.5 percent of the total population of Zagreb County lived in its nine cities, while in 2001 the figure stood, by a conservative estimate, at 31.3 percent. That is still significantly less than the Croatian average (about 56 percent). The processes of suburbanisation are intensively penetrating the girdle area, and their quickening can be expected in the coming period.

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THE FUNCTION OF ZAGREB AS A FACTOR OF THE TRANSFORMATION OF THE GREATER ZAGREB GIRDLE – WITH A SEPARATE COMMENTARY ON DAILY MIGRATION

Summary

The greatest focus of expanding urbanisation and suburbanisation in Croatia is the capital city of Zagreb. With an almost monocentric development, the most powerful central functions in Croatia are concentrated in Zagreb. These processes occur in a very spatially differentiated way. The gravitational zone of Zagreb encompasses a large part of the country, with emphasis on Central Croatia. In the frame of this spatial differentiation, the greatest influence of Zagreb is precisely in the directly neighbouring rural environs. According to the population census of 31 March 2001, 99,938 workers and students travelled to Zagreb to their place of work or school. The volume of daily migration remains large, so this phenomenon has a powerful effect on the transformation of the geographic area of Zagreb's environs. The zone of daily migration spreads radially depending on the level of development of the transport network. Daily migrations are an appropriate indicator of changes in the process of urbanisation and suburbanisation in the Zagreb girdle. A developed transport network is significant to the intensity of the processes of suburbanisation and especially to daily migration. The basic characteristic of this new picture of the spatial distribution of the population is the de-population of traditional rural settlements and the ever-greater concentration in the number of inhabitants in settlements closer to Zagreb and the main roads. These changes are very intensive, have not been completed and correspond spatially with the differentiated spatial distribution of daily migrants. The processes of suburbanisation are intensively penetrating the girdle area and their quickening can be expected in the coming period.

THE SLOVENE COUNTRYSIDE IN TRANSITION FROM TRADITIONAL TO MARKET-ORIENTED AGRICULTURE

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Abstract
The Slovene Countryside in Transition from Traditional to Market-Oriented Agriculture
In the following paper the contemporary problems of the Slovene countryside will be discussed with special emphasis on the problems of image of the cultural landscape, which developed as a consequence of the rapid economic development of Slovenia.
The relationship among different individual land categories is changing fast and the remnants of the economic structure of classic agrarian and modern industrial society are intertwined in contemporary Slovenia. We will deal especially with the consequences of European market-oriented agrarian policy, which is applied towards large differences between individual regions of Slovenia.
Key words
farmland usage, harmonious development of cultural landscape, EU, Slovenia

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1. Introduction

During the period from the 1950s until the 1990s, the territory of the Republic of Slovenia, especially the Slovene countryside, underwent significant changes. Under the influence of fast urbanization and de-agrarianization, the sharp frontier between the city and countryside had already almost completely vanished before World War II. The processes of differentiation in the countryside started already a few years after World War II. At first, these processes differentiated Slovene agrarian countryside into three types: (1) areas of urbanization, (2) areas in transition, and (3) areas of depopulation.

After Slovenia became an independent state in 1991, there was a trend aiming towards the formation of two types of landscape. The reason for this is the further differentiation of so-called transitional areas into the two other above-mentioned types (Klemenčič V. 1987, 63–72). These dynamic regional spatial developments caused new problems that were the result of non-planned abandoning of usage of the land for agriculture and deepening of the differences in regional-spatial development (Benkovič 2003, Korošec 2002).

2. Tendencies of transformation of the cultural landscape in Slovenia

Today's image of the cultural landscape in the Slovene countryside is a result of more than four decades of the ongoing process of decomposition of classical static agrarian society and creation of the cultural landscape of modern society. This process took place in three periods that were co-dependent on specific forms of economic and political development.

During the first period, which took place until the end of the 1950s, the primary characteristics were agrarian overpopulation, unsatisfying land ownership structure and utilization of almost all available agricultural areas, which were—regardless of physical geographical facts—almost all dependent on handwork. In almost all cases, the frontier between city and countryside was very clear. In rural areas the peasant population prevailed. This population was dependent on self-supplying agriculture; market production was confined to very few larger farms.

In the second period, which lasted until Slovenia became an independent state in 1991, modern agricultural technology was slowly but surely introduced and thus Slovene agriculture began to transform itself into a phase of "optimal usage of the agricultural landscape." In less suitable agricultural areas, gradual abandoning of cultivation took place. People from smaller and medium-sized farms, which did not provide enough possibility for survival, started to seek employment in non-agrarian sectors more and more often. The percentage of agrarian population declined very quickly; most of the agricultural holdings transformed into half-agricultural or non-agricultural holdings, yet they still had land suitable for farming available (Klemenčič V. 1991b, 25–41). In spite of partial urbanization of the countryside, the land structure in the private sector remained almost unchanged. Unsuitable land structure and introduction of the 10-ha (24.75 acres) cap on ownership per agricultural holding (Land-maximum) for private farmers during the post World War II period of Socialism put a strong brake on development of market-oriented agriculture.

Changes in the land structure were only made in regions that were very suitable for agriculture, i.e. in Ljubljanska kotlina, Celjska kotlina, Podravje, Pomurje, and in fruit- and wine-growing regions in Slovenske gorice, Haloze, Goriška Brda, Slovenska Istra, and Vipavska dolina. In the above-mentioned regions, larger areas developed market-oriented state-led farms. They developed mostly on land that was nationalized after the Communists took over in 1945 (Belec 1992, 19–23).

The development of industrialization, especially in the beginning of the 1960s, deepened the already large gaps in the levels of economic development of Slovene regions even further. The then Socialist Republic of Slovenia tried to prevent the growing of the differences among Slovene regions with the introduction of the concept of polycentric economic and regional development. Due to the fact that the effects of this policy were limited only to then communal centers and some settlements with industry in the countryside, the Slovene landscape gradually divided into three types:

- The areas of urbanization, which developed in the wider surroundings of the cities and represented the regions of concentration of economy and population. Gradual dynamics of changes in the outer look of the landscape and widening of non-agrarian activities also took place in these regions;
- the transitional areas; and
- the areas of depopulation where the processes of emigration of population, demographic disappearing, and quick reduction of cultivated land took place. The agricultural areas were cultivated almost only in the village spaces; the grass and pasture-grounds were affected by spontaneous tree-growing. These areas could be also called the "threatened" areas or those of "dying countryside" (Klemenčič V. 1991, 29–31).

The independence of Slovenia marked the beginning of the third period in development of the Slovene countryside. This period was marked by large changes that were especially stimulated by the transition from a Socialist and social ownership-connected economy to a private and market-oriented economy and to the introduction of the agricultural order and laws and directives of the European Union in the accession process of Slovenia to the European Union. For this period, the large reduction of cultivated agricultural areas was accompanied by the very fast and unplanned growth of forest in abandoned agricultural areas, a decline in the number of farms and growth of the average size of utilized agricultural areas per farm (Klemenčič V. 2002, 7–21).

The consequences of the changes that took place in all three periods are evident from the changes in the landscape. Among them, the most significant was the blending of the elements of classic and more or less self-supplying agriculture with forms of modern market-oriented agriculture. This blend is shown especially in the land structure and in the social and economic structure of the population. In the countryside, the tendencies of reduction of utilized agricultural areas and the quick increase in non-agrarian land usage were especially evident in the building of residential complexes for people, industrial development, traffic infrastructure, etc.

3. Land-structure problems of Slovene agriculture

Even today, market orientation and adaptation of Slovene agriculture to the principles of agrarian policy in the European Union have to deal with a number of problems, which are mainly the consequence of physical geography and some historical factors in the spatial development of Slovenia. Among historical factors, we should mention the land structure of the classical agrarian society, which, until today, did not undergo any significant changes in the peripheral regions of Slovenia; among physical geographical facts, we should mention that 89 percent of the agricultural areas in Slovenia are situated in areas with limited possibilities for farming (Klemenčič V. 2005, 171–184).

Unsuitable land structure in Slovenia represents one of the largest problems for quick development of market-oriented agriculture. While the average size of a farm in Slovenia in the period from the end of World War II until the proclamation of independence of Slovenia in 1991 was reduced in most cases, the average increased very quickly in most of the Western European countries with market-oriented economies (Klemenčič V. 1987, 63–72).

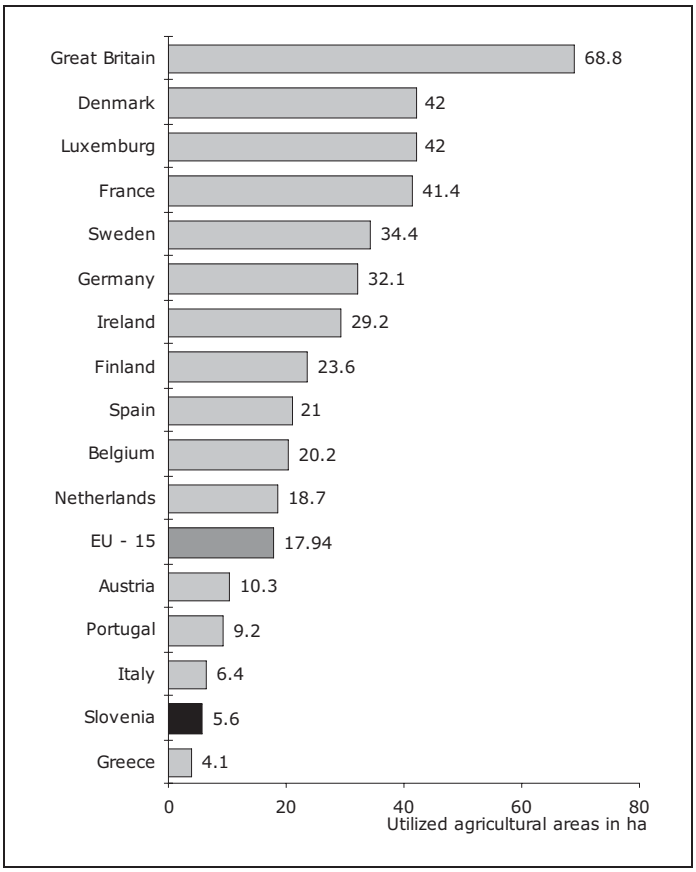

Fig. 1: Agricultural holdings by utilized agricultural area in EU Member States (1997) and in Slovenia (2000).
Source: PKG 2000.

The average size of farms in Slovenia is (with its 5.6 ha of utilized agricultural areas) on average 3.5 times smaller than the average of the "old" 15 EU members and 12 times smaller than the average of utilized agricultural areas per farm in Great Britain (PKG 2002, 58); therefore, it is very difficult for a Slovene farmer to be competitive in the European and world markets.

In Slovenia, land-crumbling also hinders rational agricultural production. According to the Census of Agricultural Households in 1991, there were a little more than 5.5 million lots in Slovenia, which averages to ca 0.299 ha in the private sector. These lots added up to around 955,000 divided utilized pieces of agricultural land, which meant that individual family farms had their land divided into more than 20 pieces. Additionally, farms that increased the size of their cultivated land, in principle, also increased the number of utilized pieces.

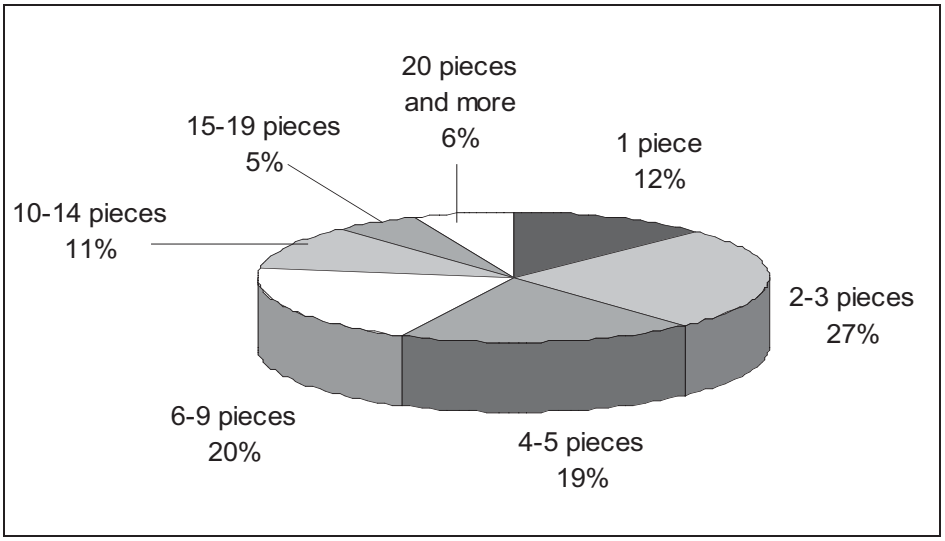

Fig. 2: Family farms by the number of utilized pieces of agricultural land (in 2000).
Source: PKG 2000.

Until the 1950s, the ratio among land categories did not change significantly in Slovenia. During the introduction of market agriculture, the process of abandoning land for utilized agriculture began along with the process of expansion of forests and vineyards. With the final introduction of market agriculture and the accession process of Slovenia to the European Union, the fast reduction in all categories of land for farm use can be seen (Vrišer 1992, 51–64; SURS 2004, 309).

The reduction of agricultural land also caused a faster decline in the number of farms. The number of farms declined from ca. 112,000 in 1991, to ca. 77,000 in 2003. The most to be reduced was the number of small farms with less then 5 ha of utilized agricultural areas. On the other hand, from 1991 onwards, the number of farms with more then 10 ha of utilized agricultural areas has been increasing. In 2003, only 3% of the amount of farms that were (according to EU criteria) suitable for market-oriented agriculture existed in Slovenia (i.e., farms with more then 20 ha of utilized agricultural areas).

Tab. 1: Changes in the land use categories, 1990–2003.

Land use categories	Year 1900		Year 1953		Year 1990		Year 2003	
	1000 ha	%	1000 ha	%	1000 ha	%	1000 ha	%
Cultivated fields and gardens	382.6	18.9	358.4	17.7	247.0	12.2	172.7	8.5
Vineyards	- -	- -	14.8	0.7	36.2	1.8	16.6	0.8
Orchards	45.9	2.3	31.4	1.5	21.5	1.1	12.1	0.6
Meadows and pastures	674.4	33.2	650.0	32.1	559.2	27.6	308.3	15.2
Woods	838.4	41.3	861.0	42.5	1,024.5	50.6	1,283.4	63.3
Infertile	66.3	4.4	112.2	5.4	134.5	6.6	234.2	11.6
Total	2,029.9	100.0	2,027.2	100.0	2,025.4	100.0	2,027.3	100.0

Source: Vrišer 1992: 51–64.

Tab. 2: Family farms by size categories of utilized agricultural areas (UAA), 1991–2003.

Utilized agricultural areas (UAA)	Year 1991		Year 1997		Year 2000		Year 2003	
	Number	%	Number	%	Number	%	Number	%
Without UAA	20	0.0	34	0.0	16	0.0	23	0.0
1.00 ha and less	15,576	13.9	8,111	9.0	7,998	9.3	5,375	7.0
1.01– 3.00 ha	41,062	36.7	30,940	34.1	27,251	31.6	22,220	28.8
3.01– 5.00 ha	22,868	20.4	20,070	22.2	18,128	21.0	16,777	21.7
5.01–10.00 ha	24,251	21.7	22,762	25.1	22,053	25.5	20,633	26.7
10.01–20.00 ha	7,251	6.5	7,759	8.6	9,158	10.6	9,695	12.6
20.01 ha and more	923	0.8	937	1.0	1,732	2.0	2,427	3.2
Total	111,961	100.0	90,613	100.0	86,336	100.0	77,149	100.0

Source: SURS 2001, 304; SURS 2004, 307.

At first, the process of abandoning land usage on small farms only took place in areas that were less suitable for agriculture or that would be defined today as "threatened" areas or those of "dying countryside." In most cases, the abandoned land remains uncultivated because, in those areas, there are very few market-oriented farms that are increasing their agricultural area. The abandoning of agricultural production shows most in the increasing of the areas of forest and uncultivated agricultural areas.

The abandoning of agricultural production by small farmers in recent years is also evident in some plain areas. In those areas suitable for agriculture, farmers rent or buy land to increase their utilized agricultural areas due to changes in market orientation. Some land, especially in the areas of urbanized suburbs, remains uncultivated because small farmers count on the fact that building houses will be allowed on this land and thus the value of the land will increase significantly.

The consequences of the intensive process of abandoning cultivated agriculture can also be seen in the landscape. To lessen the consequences of these processes, the EU secured funding intended for the maintenance of usage of agricultural land to retain the cultural landscape of the countryside. The arrangement of distribution of direct payments from these funds on the level of communes in Slovenia for 2004 shows significant differences between eastern and western regions of Slovenia. The regions near the Slovene-Italian border, in southern Slovenia, and the hilly regions near the Austrian-Slovene border were given the least financial support, i.e. €20.86 per ha. On the other hand, the value of this support from European funds amounted to more than €417 per ha in eastern Slovenia (Lampič 2005, 186–187).

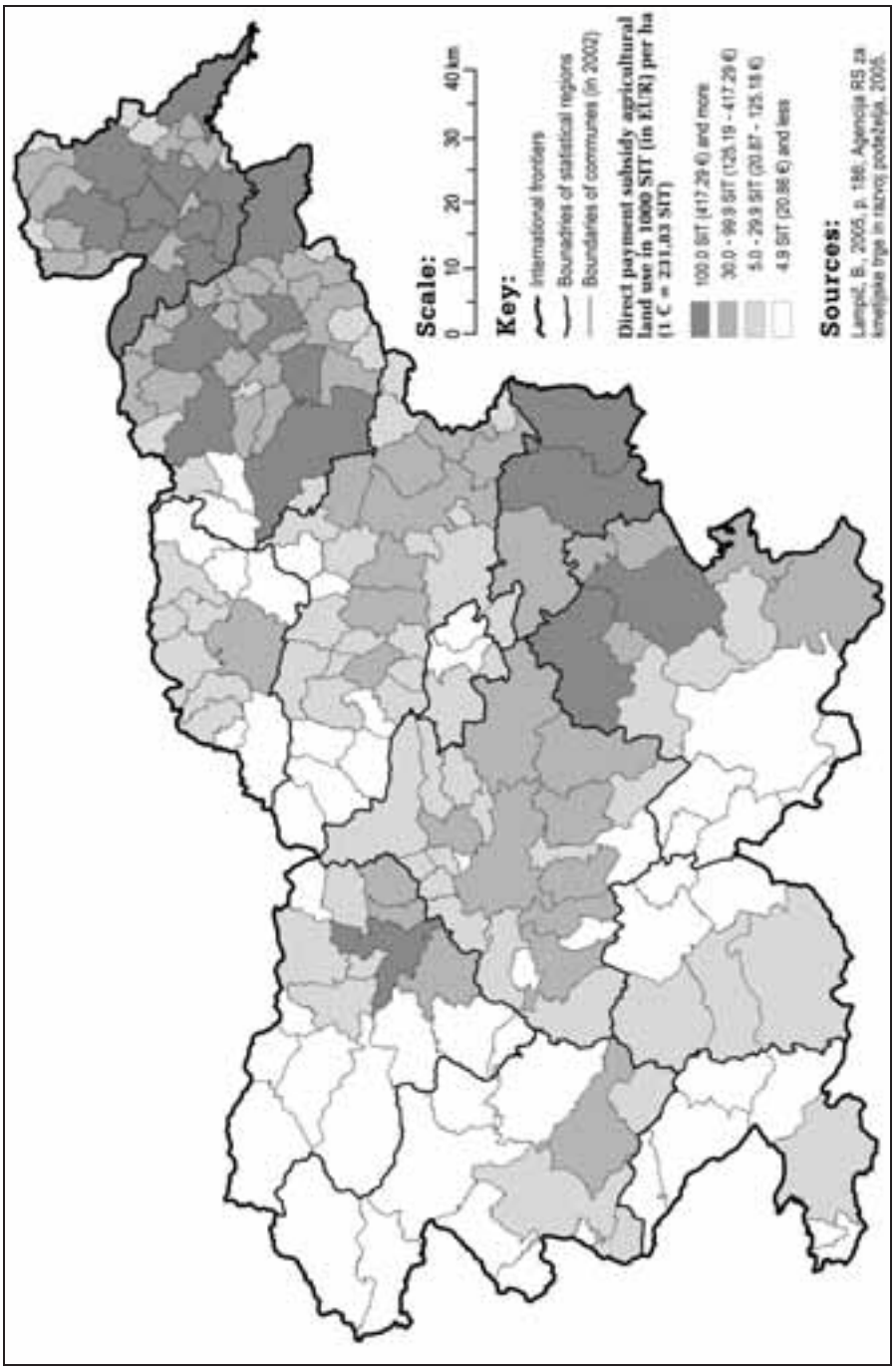

Fig.3: Direct payment subsidy per agricultural land use in Slovenian municipalities in 2004.
Source: Lampič B., 2005.

During the recent years, in Slovenia as well as in other countries of the EU, agricultural regulators put emphasis on those methods in agriculture that sustain the cultural landscape and people's settlements, while at the same time protecting agricultural land against ecological pollution. European agriculture politics also tries to sustain the cultural landscape by encouraging ecological farms and farms with additional activities. The introduction of the above-mentioned kinds of farms can easily be followed, especially in the mountainous and hilly areas. We should also mention that demographic exhaustion and the fact that many agricultural areas are overgrown with woods and shrubs are hindering factors in the introduction of ecological farms and farms with additional activities (Potočnik-Slavic 2002, 100–122). Because of additional payments for ecological measures, ecological agriculture is sparking more interest in plain areas, especially for the regions of urbanized suburbs, where agricultural land is subject to overuse of artificial fertilizers due to conventional agriculture.

There are also quite a few hindrances due to the socio-economic structure of agricultural households. A common characteristic is the dependence of many Slovene farmers on additional income from outside the field of agriculture, because small farms with their crumbled land structure cannot offer enough income for the survival of agrarian families. For this reason, it is not surprising that only one-sixth of all family farms (so-called "pure farms") are dependent solely on income from agriculture; most of them (63%) are mixed and farms with additional activities.

Tab. 3: Number of family farms by socio-economic type.

	Year 1991		Year 1997	
	Number	%	Number	%
Family farms - Total	111,546	100.0	90,613	100.0
Pure farms	23,765	21.3	13,849	15.3
Mixed farms	55,585	49.8	25,287	27.9
Farms with additional activities	21,412	19.2	41,782	46.1
Farms with old age holders	10,784	9.7	9,695	10.7

Source: SPK 1997.

A great problem of Slovenian agriculture is also the weak level of education of holders and successors of family farms. The level of education of older holders of family farms is significantly lower than the average level of education of other groups of active population in Slovenia in the same age category.

In 2000, age structure of the holders of family farms did not yet foretell any future trends in farming, because older holders prevailed. The holders of farms on most of those which had less then 20 ha of utilized agricultural areas were older than 55 years. For those farms that had more then 20 ha of utilized agricultural areas, the percentage of holders that were younger than 45 years was larger than the percentage of those of the family farms, who were older than 55 years (PKG 2002, 116).

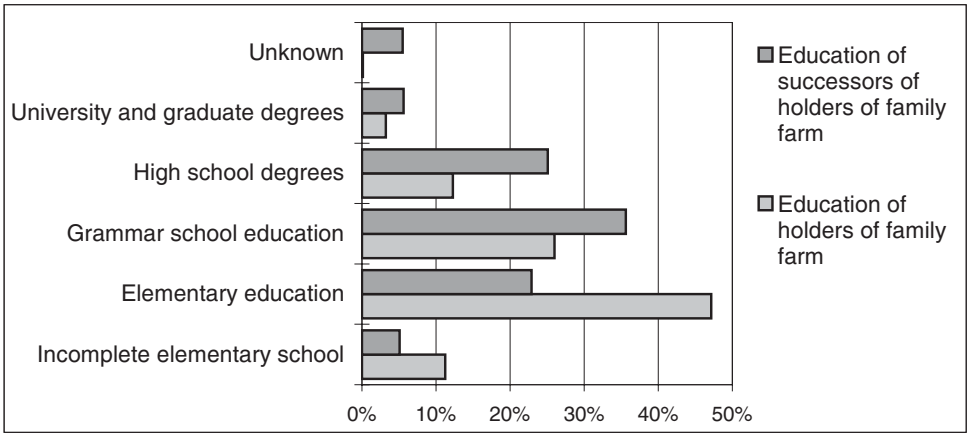

Fig 4: Education of holders and successors of family farms (in 2000)
Source: PKG 2000.

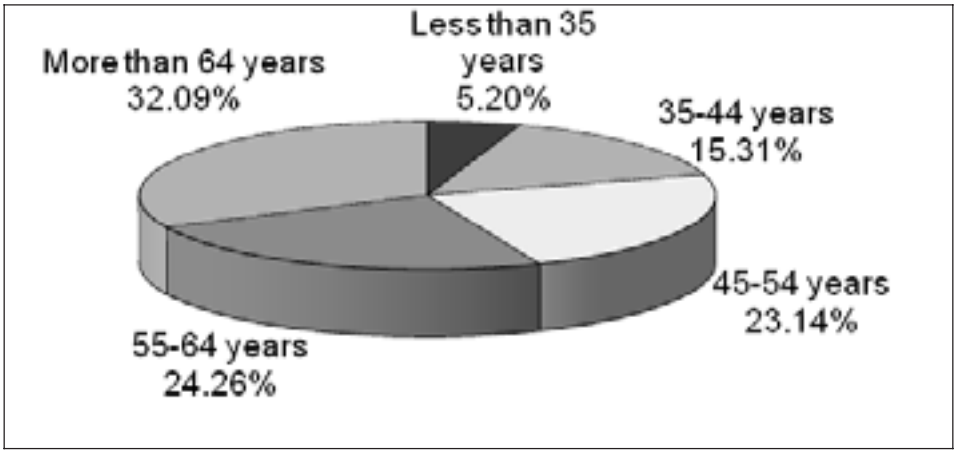

Fig. 5: Age of holders of family farms (in 2000).
Source: PKG 2000.

Due to emigration of the younger population, numerous farms were left without a work force or workers became too old. There were also many holders of family farms who were not married, so the farms were left without successors. Therefore, the decomposition of the agrarian structure of the population continues into the 21st century. In this process, however, there are great differences between economically developed and economically undeveloped regions.

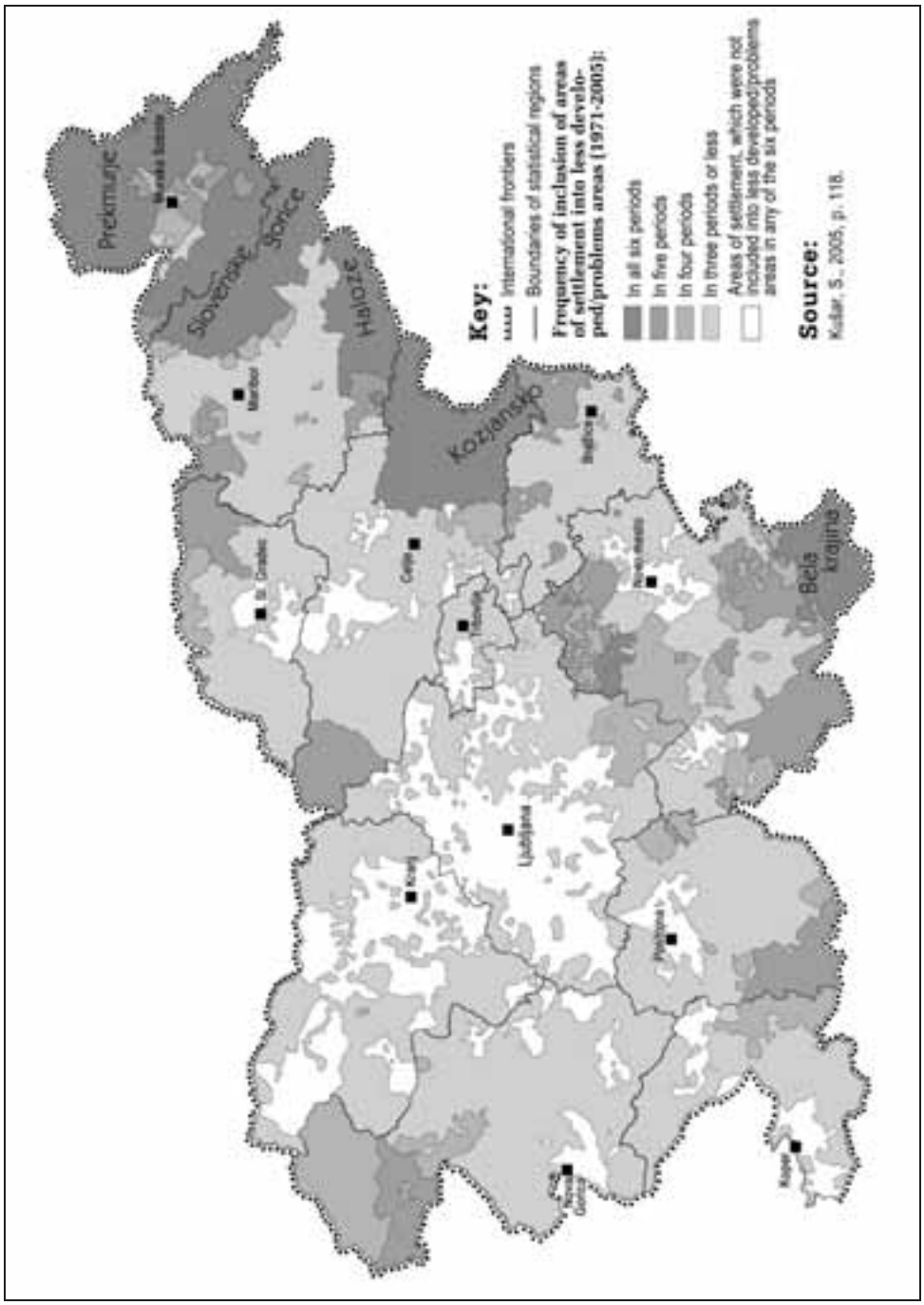

Fig.6: Less developed/problem areas in Slovenia (1971–2005).
Source: Kušar S., 2005.

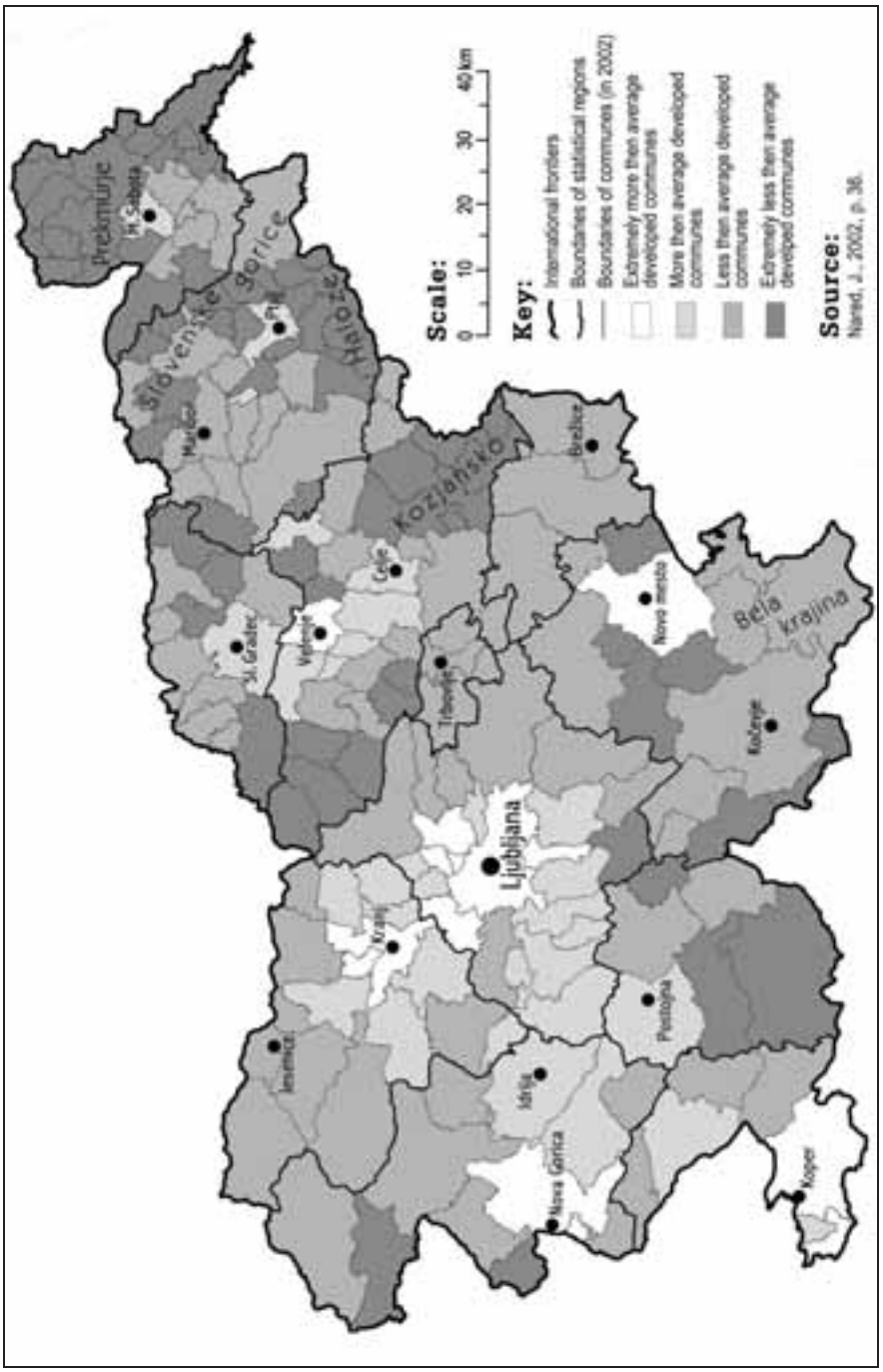

Fig. 7: The development level of Slovenian municipalities according to economic and demographic structures.
Source: Nared J., 2002.

4. Disharmony of regional development in Slovenia

Slovenia began seriously dealing with the problem of significant regional differentiation as early as the 1970s (Vrišer 1988, 66). The first measure for the elimination of these differences was the law on measures for acceleration of development of less developed regions, which was passed by the Slovenian parliament in 1971. Some other legal measures also followed in which they tried to define the less developed regions as accurately as possible and introduce measures that would result in their faster economic, social, and regional-spatial development. Slovene regional-spatial development policy, in accordance with its definitions of regionally less developed, problematic regions, can be divided into six periods: 1971–75, 1976–80, 1981–85, 1986–90, 1991–2000, and from 2000 onwards. Although methodology of defining less developed regions changed, many of the regions in Slovenia were categorized as less developed/problem areas during all six periods. These are certain regions in northeastern Slovenia and wide regions along the Slovene-Croatian border (Kušar 2005, 113–124).

Because attempts to introduce more harmonious regional development have not produced the expected results, the differences among individual regions of Slovenia continue to accelerate. This can be proven by numerous statistical data, especially regarding economic structure and market of the work force and settlement and demographic structure of the population. They show that the above-mentioned regions in northeastern Slovenia along with some regions on the Slovene-Croatian frontier are among the "less than average" or "extremely less than average" developed regions of Slovenia.

Analyses of the data on economic structure, market of the work force, and settlement and demographic patterns of population structure show that in most cases, especially in eastern Slovenia, the "extremely less than average" developed regions in Slovenia overlap with the regions characterized as "threatened" areas or those of "dying countryside." Therefore, it is not surprising that in these regions the most intensive processes of crumbling economic structure are taking place alongside the crumbling of cultural landscape and strong depopulation that represents a potential threat for complete demographic devastation of these regions.

5. Conclusion

The widening of differentiations in economic development of individual Slovene regions shows that, in Slovenia, we are putting too little emphasis on the problems of development of the Slovene countryside. We should be emphasizing other processes as well, for example, abandoning of cultivation of land, unplanned changing of land categories and intensive intrusion of forests, which are the consequence of fast transformation of the Slovene countryside during the last two decades. In Slovenia, we need to start solving the problem of land usage in mountainous areas as soon as possible, as they did in Western European countries some decades ago. In Western Europe, in the framework of their regional-spatial planning strategy, they started to encourage the system of renting or buying land from farmers who abandoned its cultivation and thus increased the widening of the farms and, consequently, initiated cheaper production.

In spite of all this, Slovenia will still have problems to overcome before it can reach its aims regarding the rational usage of the cultural landscape if we do not start to

deal with the problems of land-structural crumbling, because farming/agriculture does not assure complete independent economic existence even to larger farmers. Crumbling of the land in the future will also hinder economic production in the agricultural economy of farms regardless of their size. This means that underdevelopment with disintegration of cultural landscape in some less developed regions will increase. Slovenia will be able to avoid the consequences of the above-mentioned negative trends in the shaping of its cultural landscape only by using a suitable concept based on internationally verified theory and methodology along with proven application. Therefore, in Slovenia, as in the other members of the EU, agricultural planning will have to be based on team and interdisciplinary work; scholars and research groups from various disciplines who deal with spatial development along with other responsible experts in various administrative functions and ministries will have to cooperate.

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THE SLOVENE COUNTRYSIDE IN TRANSITION FROM TRADITIONAL TO MARKET-ORIENTED AGRICULTURE

Summary

Today's image of the cultural landscape of the Slovene countryside is a result of the long processes of change in agrarian society in Slovenia, lasting from the end of World War I until today. The whole process was hindered by the emotional attachment of Slovenian peasants to the land, which caused the transition from self-supplying to market-oriented agriculture to take a long time. Also, the introduction of modern technology into agricultural production was slow. In this process, Slovenia was divided into three regions according to the factors of socio-economic, political and social development: (1) urban and urbanized suburban areas; (2) urbanized and "stable" rural settlement areas; (3) endangered and dying rural areas. This division of Slovenia, which is the result of its uneven regional development, has caused numerous new problems, especially in the countryside.

The greatest of these problems are the slow abolishment of disadvantaged land structure, the limited natural conditions for modern agriculture, and the growing of regional differentiation of the level of economic development in Slovenia. These problems intensified the processes of a dying population and decay of the cultural landscape in the countryside on the periphery of Slovenia. Worries are caused by too little care for the environment as land usage for agriculture intensified, especially on the plains, where the main water sources in Slovenia can also be found. Protection of the environment should be sustained by movement toward eco-agriculture and new forms of sustainable development.

To hinder further processes of intensive depopulation and disintegration of the cultural landscape in the periphery, to protect the environment and to ensure settlement of the whole Slovene state landscape, the state should add strategies that deal with land use, regional development and renewal of the landscape. Because the concepts and directions of state organs are not satisfactorily meeting Slovenia's needs, the concepts should be re-examined on local, regional and state levels. Otherwise, development in Slovenia will go in the wrong directions; i.e., areas of settlement will be reduced, as will the amount of arable land—which will cause further disparities in the regional development of Slovenia and damage the image of the cultural landscape in urbanized regions as well as farming areas.

LARGE ENTERPRISES AS A FACTOR TRIGGERING SOCIAL AND ECONOMIC CHANGES IN THE POLISH COUNTRYSIDE OUTSIDE METROPOLITAN AREAS

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Abstract

Large Enterprises as a Factor Triggering Social and Economic Changes in the Polish Countryside outside Metropolitan Areas

This article focuses on the analysis of the distribution, characteristics and effects of large businesses in Poland located in rural areas outside the reach of the largest urban centres. The first part of this paper presents the distribution and characteristics of companies in which the level of employment reaches a minimum of 200 people located in non-metropolitan rural areas in Poland. The second part contains an analysis of the level of socio-economic development of rural communes[1], in which enterprises included in the study are located, against the background of all non-metropolitan communes. The last part presents selected aspects of the impact of large economic operators on the local environment using the example of a company with its headquarters in a rural, agricultural area.

Key words

non-metropolitan rural areas, large enterprises, Poland

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[1] Commune means the smallest municipal unit in Poland

1. Introduction

Today's reflections on the activation of rural areas focus mainly on issues of multifunctional development. In this development, the fundamental role is given to 'small' enterprises (Rosner 2002, Halamska 2002, Długokęcka 2002, Kłodziński 2006). Developing the sector of micro-, small and medium-sized enterprises is seen as an effective way of improving the situation of rural areas and their populations, mainly by increasing household incomes or with the elimination of redundant labour force from the agricultural sector. At the same time, very little attention is paid to large businesses located in rural areas, whose importance for their functioning is often fundamental, especially in areas of pure agricultural character.

The following research objectives were chosen prior to this study:

- Determination of the disposition and characteristics of large enterprises located in Polish rural areas that are beyond the reach of most metropolitan areas,
- the presentation of socio-economic characteristics of rural communes, in which enterprises included in the study are located, against the background of all non-metropolitan rural communes in Poland,
- presentation of several aspects of the impact of large enterprises on the local environment using the example of an operator located in a rural agricultural area.

1.1 Methodological and terminological remarks:
This study analyzes non-metropolitan rural areas. The term 'non-metropolitan rural area' describes rural communes, except those established in cities, situated outside the reach of a metropolis (including the delimitation of metropolitan areas by Smętkowski, Jałowiecki, Gorzelak 2008). In the remainder of this study, non-metropolitan rural areas will be referred to as: NMRA.

For the purpose of this study, the large enterprise is an economic entity in which level of employment reaches a minimum of 200 people. A lower limit of employment (compared to 250 people, as is used in Polish statistics) was motivated by the fact that companies employing from 200 to 249 people are often represented in the analyzed area presented later in the article.

For the implementation of the first objective, which is disposition and characteristics of the large enterprises, the largest commercial database containing information on companies and enterprises operating on Polish territory has been reviewed[2]. The second objective - analysis of communes with large enterprises against the background of other NMRAs was achieved using data for 1995, 2005 and 2007[3]. The third objective was realized as a result of field research conducted on the selected enterprise. Data was provided courtesy of Human Resources management (employee information) and the Technical Department (information on cooperating companies). Supplemental to these sources of information (particularly in relation to the third) were the surveys conducted in spring 2009 among all company employees. 113 of the surveys have been sent and 34 were returned (30%). The obtained sample of employees in terms of age and gender is very close to the actual structure of the average, but differs in terms of level of education (people with basic vocational education were underrepresented – only 30%, while their share of the entire company is nearly 60%).

[2] Database HBI Poland 2007
[3] Data from the Central Polish Regional Statistical Office Data Bank

2. Disposition and characteristics of large enterprises in non-metropolitan rural areas in Poland

2.1 Disposition of enterprises

In rural areas of Poland in 2007, there were 177 enterprises located in 142 rural communes (which weren't located in cities) outside metropolitan areas. There are several distinguished features that characterize disposition of enterprises. Apart from mining plants, whose locations are closely connected to the occurrence of raw materials, the most important feature for enterprises is their proximity to the important urban centres (Ba ski 2006), and not without significance is the level of socio-economic development of regions and their Entrepreneurship traditions (Kosiedowski 1984). Thus, we can speak of three kinds of investment attractiveness of rural areas: resources, localization (associated with the proximity of large cities or major transportation routes) and the benefits of a high level of endogenous development (Domanski, Gwosdz, Sobala-Gwosdz 2009).

An interesting category includes companies whose location on the peripheral areas is primarily dictated by the desire to reduce production costs through cheap labour. Besides the fact that they employ local workers, the enterprises have weak association with the community of their location, which makes them prone to relocation. It is believed that in the longer term, the impact on the local environment may be less positive than for other motives of business location.

Nationally, most enterprises are located in the vicinity of high rank municipal areas; particularly strong concentration is visible in the Śląskie Province, in a belt between the Śląskie and Łódzkie Provinces with high levels of industrialisation resulting from mineral resources. A relatively low number of enterprises is recorded in Northeastern Poland (Warmińsko-Mazurskie Province, Świętokrzyskie Province, Lubuskie and Opolskie Province) (Fig. 1).

Interesting conclusions provide comparison of the functional structure of all rural communes in NMRAs with communes where large enterprises are located. This comparison is possible using functional classification of rural areas (Bański, Stola 2002).

In all communes in NMRAs, the most common are those in which farming has a dominant role (first of all, non-commercial, but also intensive and commercial); the share of other functional types is smaller. In the group of communes with enterprises in non-metropolitan rural areas, the greatest participation has communes with mixed functions or non-agricultural functions. This means that large enterprises in analyzed areas are more often located in non-agricultural communes, which are very often observed in the vicinity of cities; however, they also are met in typically agricultural areas, but not as often (Fig. 2).

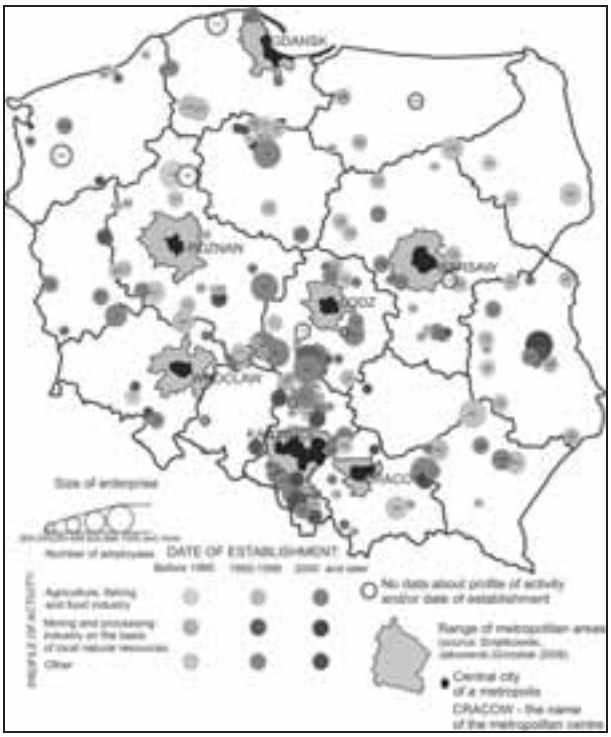

Fig. 1: Distribution of large enterprises in non-metropolitan rural areas in Poland.

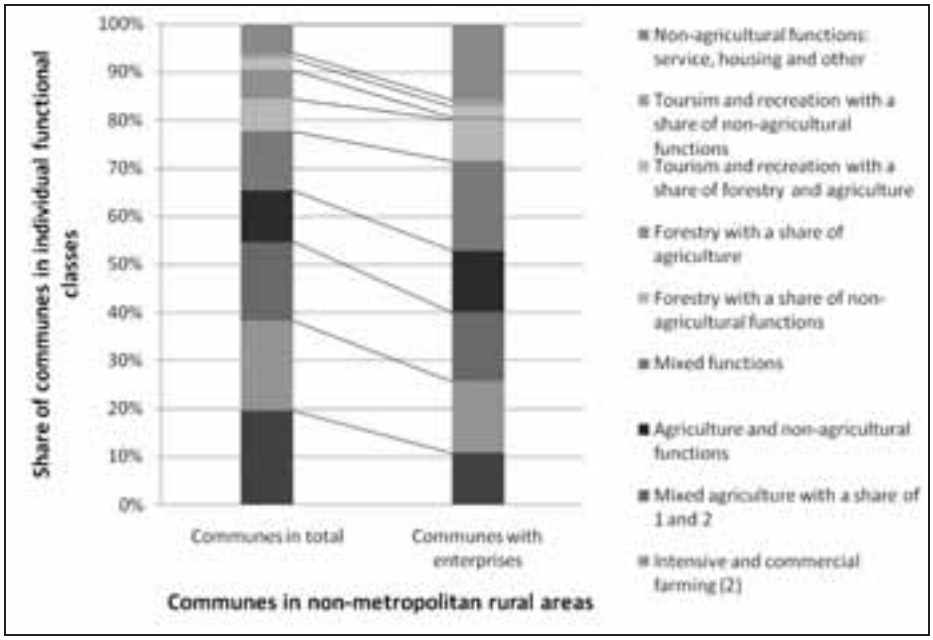

Fig. 2: Functional structure of communes with enterprises with respect to the functional structure of all communes in non-metropolitan rural areas.

2.1 Characteristics of enterprises

Enterprises located in NMRAs constitute a heterogeneous group. These differences are indicated in the level of employment, period of realization, business profile, origin of capital, etc. In terms of employment, the largest group includes companies whose number of employees in 2007 was 250 to 499 people (79 enterprises), and the second largest group were smaller companies with 200-249 people (over 60 companies). Such high abundance in this category was the reason for its above-mentioned extension. Larger companies were represented less often (21 companies with 500-999 employees and only 10 with the level of employment over of 1000 people).

The majority of existing companies (34.9% of the total) were founded before 1990 – before the period of systemic transformations in Poland. At the same time, the period from 1990-1995 is considered the most dynamic and was the time of the biggest changes and rapid development of the free economy market. The second part of the 90s was less dynamic; 23.5% of all analyzed enterprises were established. There has been a clear slowdown from the year 2000 on, when only 7.8% of NMRA enterprises began.

The profile of operators is very important in terms of characteristics of its connections with the local area. There are three categories to which chosen enterprises were assigned:

- companies operating on the basis of local agricultural products, engaged in agro-food processing,
- companies based on local natural raw materials, both mineral (mineral, mineral water) and other (wood),
- companies with profiles not related to local resources from the area in which they operate.

One of the most common motives for enterprise location from the last mentioned categories was desire to reduce production costs through the use of local cheap labour.

In NMRAs in 2007 (the analyzed year), the most numerous enterprises were operators in the agro-food processing sector, who, to a large extent, based their activities on local agricultural products (meat and dairy), as well as enterprises engaged in the manufacture of furniture and wood products. The existence of companies with business profiles associated with processing in the agro-food industry can be evaluated positively, since they do not distort the existing functions of agricultural areas in which they operate. What is more, these companies strengthen those functions and often help to increase the intensity of agricultural use of land, thereby positively affecting their performance. In turn, the least positive assessment should be given to operators who are located in areas with good natural agricultural conditions, do not take advantage of its value, and only take advantage of cheap labour.

Existence of an enterprise not connected with agricultural potential and traditions of the area distracts people from working on their farms, results in the appearance of binary professions and brings negative consequences for the agricultural use of land.

The share of companies with foreign capital in the whole analyzed group of companies is less than 20% (34 firms), while their distribution is fairly uniform on Polish territory. Only the Northeastern part of the rural marks their absence (Podlaskie and Warmi sko-Mazurskie Province), which is caused by very low levels of communication with other parts of the rural. It affects the lack of investors' interest, for whom location and accessibility are one of the most important factors.

Effects of large enterprises on the local environment can be considered both on the scale of the whole rural as well as by particular commune/place of their location. At the national level, this impact can be determined using statistical analysis of the level of socio-economic development with enterprises in NMRAs against other communes in the same area. When conducting statistical analysis, it is important to remember that the current level of socio-economic development might be a result of the enterprise's location, but it can also be a pull-factor for investment, therefore constituting one of the location factors.

To determine the exact consequences of this interaction, it is essential to carry out fieldwork in selected businesses and communes representing their local environment.

3. The development level of communes with large enterprises in the background of all communes in non-metropolitan rural areas in Poland

The level of socio-economic development can be performed using selected indicators. In the case of this study, for the purposes of evaluation of potential differences between communes with and without large enterprises, the following characteristics were taken into account: migration tendencies and population structure, education and educational aspirations, local initiative, local labour market, construction and building activity. These areas can be characterized using many indicators (Tab. 1); however, for the purpose of this study, because of the inability to present all values for all mentioned indicators, only the following will be presented:

-internal migration per 1000 inhabitants as the indicator of migration tendencies,
-number of people who benefit from the installation of sewer systems per 1000 inhabitants as the indicator of quality of life,
-number of economic entities per 1000 inhabitants as the indicator of local entrepreneurship.

In the cases of all discussed indicators, the following aspects will be presented: differences between the average value of the indicator in communes in NMRAs and the value in communes with large enterprises. Subsequently, making use of one-factor variance analysis – communes with enterprises will be compared to those without enterprises in NMRAs with respect to the average values of the analyzed indicator. Finally, identical comparison will be made, with a division into mono-functional agricultural communes and multi-functional ones.

Tab. 1: Chosen aspects of the impact and indicators that characterize the level of socio-economic development of communes.

Sample aspects of the impact	Selected indices
Migration tendencies and population structures	Internal migration per 1,000 inhabitants
	External migration per 1,000 inhabitants
	Index of feminization
	Demographic dependency rate
Education and educational aspirations	Percentage of people with higher education among inhabitants of working and retirement age
Level of life	Number of stores per 1,000 inhabitants
	Percentage of people using installations (water supply, sewage, gas) among total population
Style of life	Readers in public libraries per 1,000 inhabitants
	Percentage of children aged between 3 and 6 attending kindergarten
Social activity	Percentage of members of clubs and artistic groups among population in total
Local entrepreneurship	Economic entities per 1,000 inhabitants
Local labour market	Percentage of working people among population of working age
Construction activity	New apartments commissioned per 1,000 inhabitants

3.1. Internal migration per 1000 inhabitants

In most of the analyzed communes, the level of migration is higher than the average value of this indicator in all communes in NMRAs, so in general, the level of internal migration is higher in communes with large enterprises than in all communes in non-metropolitan rural areas. In communes with large enterprises, the analyzed indicator is higher in the vicinity of big cities, which is connected with the process of suburbanization and not only with the location of large enterprises. It is significant that those differences are observed not only in the division into communes with and without large enterprises, but also in the more detailed division into mono-functional and multi-functional communes (Fig. 3).

In every case, the level of internal migration is higher in communes with enterprises than in communes without enterprises. The influence of the proximity to big cities is not so important, because this dependence is observed in mono-functional agricultural communes as well, which are located far away from urban centres.

3.2 Number of economic entities per 1000 inhabitants

In the case of the analysed indicator, in communes with big enterprises, there is a visible division between eastern and western Poland, which is compatible with the general division between the better-developed western part of Poland and the more backward, poorer eastern part.

There are statistically important differences between communes with and without large enterprises. In the case of communes with large enterprises, the level of the analyzed factor is higher than in communes without enterprises, and this dependence is observed in the division of mono-functional (agricultural) areas and multi-functional ones (Fig. 4).

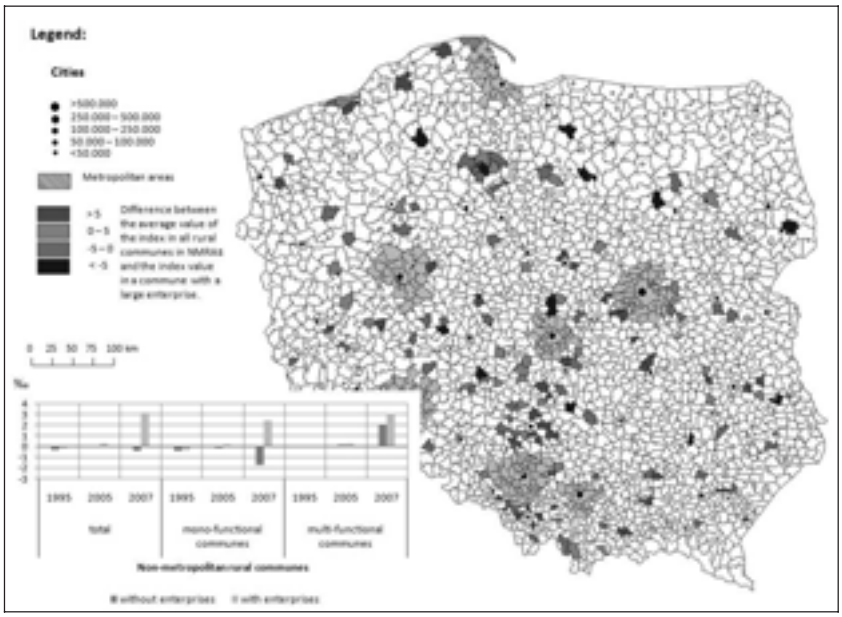

Fig. 3: Internal migration per 1,000 inhabitants in 2007 and its change from 1995-2007 in communes with large enterprises.
Source: Own study.

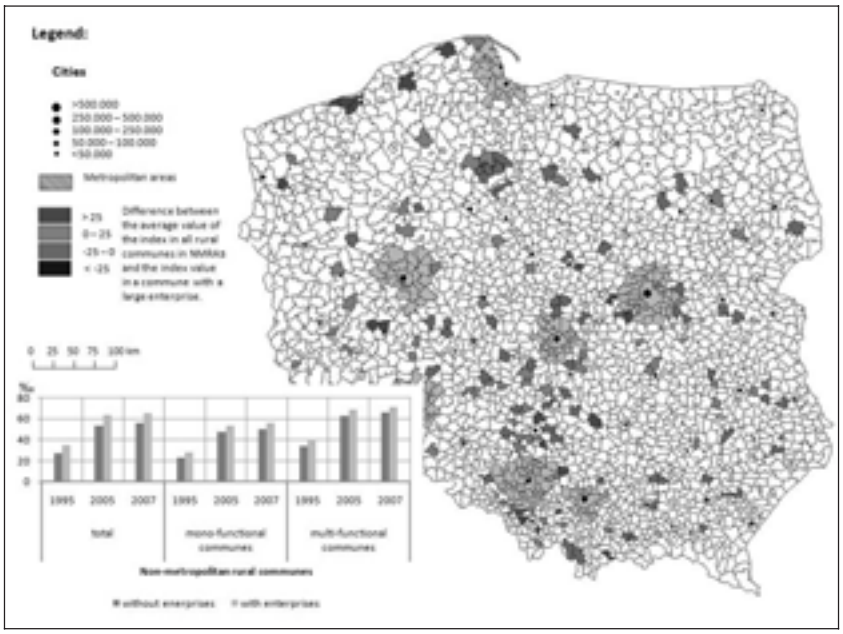

Fig. 4: Number of economic entities per 1,000 inhabitants in 2007 and its change from 1995-2007 in communes with large enterprises.
Source: Own study.

3.3 Number of people who benefit from installation of sewage system per 1000 inhabitants

As in the previous case, in communes with large enterprises, there is a visible division between eastern and western Poland, which is compatible with the general division between the better-developed western part of Poland and the more backward, poorer eastern part. But there are also statistically important differences between communes with and without big enterprises in this case. In communes with large enterprises, the level of the analyzed factor is higher than in communes without enterprises, and this dependence is also observed in the division between mono-functional (agricultural) areas and multi-functional ones (Fig. 5).

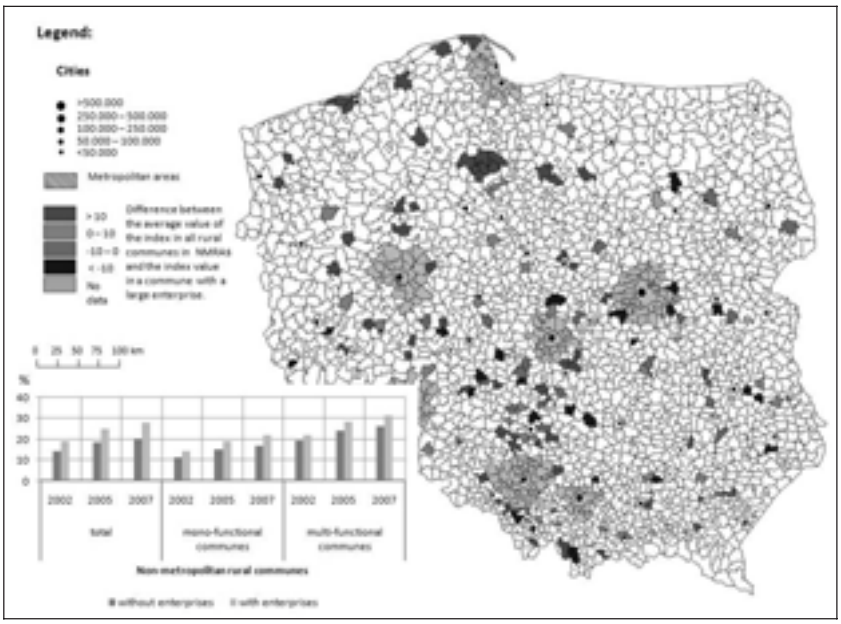

Fig. 5: Number of people who benefit from installation of sewage systems per 1,000 inhabitants in 2007 and its change from 2002-2007 2007 in communes with large enterprises.

Dependencies on better socio-economic situations of communes with large enterprises are confirmed in other analyzed indicators noted above, which will not be presented in detail in this study.

On the basis of the carried-out statistical analysis and the short summary presented here, some general conclusions can be drawn. First of all, communes with large enterprises located in NMRAs differ significantly in positive ways, in terms of socio-economics, from communes without enterprises, but these differences indicate both areas of mono-functional character (agricultural and agro-forestry) as well as those with multi-functional character. It must be admitted that localization of large enterprises in mono-functional areas cannot fully equalize the differences in socio-economic levels in relation to multi-functional areas. For development of communes located in NMRAs, the location close to urban centres of high importance is more significant than the existence of a large enterprise. The existence of enterprises in

communes located in the analyzed area certainly does not eliminate regional differences in the level of the commune's socio-economic development.

4. The impact of a selected large enterprise on its local environment – selected results of fieldwork

For the purpose of this study, the following example has been chosen: a production company (production of metal packaging) with foreign capital, located in a mono-functional rural area, which, until recently, has had 200 employees and has been operating in the analyzed area for 19 years. For this case, the following aspects were analyzed: changes in the structure of land use, the level of relations with local enterprises, types of work commuting, opinions of employees on the motivation to start work, the level of job satisfaction and its significance to the household's income, etc.

The company chosen in order to carry out this research is located in the Southern part of Poland (Małopolskie Province, Proszowicki District, Radziemice commune), about 30 km NE from Krakow. Radziemice commune is one of the smallest communes in Poland (58km²), consisting of 17 villages, inhabited by 3600 persons. Traditionally, a dominant occupation of inhabitants is farm work. Numerous indicators show the importance of farming for the inhabitants of Proszowicki District. The analysis of the share of employed people in the farming industry in relation to the total number of employed in the district shows clearly that the discussed area is dominant in the whole province (74.5%), leaving behind the other farming districts (Miechowski District – 66.8%, Dąbrowski District – 62.4%). This is due to advantageous natural conditions, especially in the soil, as well as the proximity to Krakow – which is a big market for agricultural products.

The structure of land use also reflects the importance of agriculture for the functioning of the district; the share of agricultural area consists of 88%. As far as the intensity of the usage of soil is concerned, in 2005 it was remarkably lower in the Northwest of the district, where the share of plough land was over 80% of the agricultural area. In the remaining four communes, this intensity was much lower, which, to a certain extent, can be connected with the better level of communication with Krakow and, in consequence, more frequent cases of finding employment in the city.

The analyzed company is part of an international capital group; its relations with foreign companies including other companies in the group are strong. On a regional scale, these relations are the strongest with respect to Krakow and the district city, which results from the rank of these centres. Relations with local companies are not too strong, yet they are perceptible; existence of at least several local companies is determined by the provision of services to the large company.

The company takes advantage of the goods and services offered by numerous enterprises located abroad, especially from Germany (22 enterprises), Holland (6 enterprises) and from the United Kingdom and France (5 enterprises each). Those are mainly companies that deliver raw materials for production (steel) or specialized companies cooperating with the Technical Department for maintenance of machines. At the same time, we need to draw our attention to the fact that the importance of the foreign companies is very little in relation to the market share of the Polish companies (altogether 259). The analysis of the distribution of companies connected

with this enterprise, on a domestic basis, shows very strong connection to the economic units of the Małopolskie Province (117 units), followed by the Mazowieckie Province (79 units) and Śląskie (16 units). It seems to be very characteristic that despite the close vicinity to Świętokrzyskie Province, only 3 enterprises from this area that cooperate with the analyzed company are observed. In Małopolskie Province, itself, most of the companies are tied to companies from Krakow (73 enterprises), second according to its importance centre is Proszowice (9 companies), which is a reflection of the rank of those centres. At the same time, in the whole area of Proszowicki District, there are only 13 identified companies that offer services to the analyzed company. The most important local partners of the company are units offering forwarding services as well as connected with warehouse business activities, designing and maintaining electrical installations, delivering fuels and building materials.

In 2007 in the analyzed company, there were 200 employees. During the two years that followed, the number of workers decreased to 113. The range of commuting to work is very typical. All employees come from the Małopolskie Province; most of them (a half) come from the area of one commune – where the enterprise is located. It is possible to notice a visibly lower number of employees from areas that are well-connected with Krakow, on account of its proximity and availability of means of public transport. The employees mainly come from communes located close to the company and not from the communes peripherally neighbouring the region's metropolis.

The employees are usually people characterized by a low level of education (57% with basic vocational education) who, until the moment of commencement of work at the enterprise, were usually only involved in working on their own agricultural farms.

No less than 43% of employees combine working for the enterprise with working at their own farm. However, for almost all the polled people, working for the enterprise was the basic source of revenue in their households. The respondents expressed their satisfaction with earnings, which is not surprising since the average wage in the enterprise is higher than the national average. The analysis of motivation for commencement of work in the company provides interesting conclusions. For 78% of respondents, the vicinity of the place of work was the main motive for commencement of work for the company; for another 17%, selection of the place of work was dictated by lack of possibilities of finding employment in other companies. Employees working for the analyzed company primarily selected it on account of shortage of workplaces at other companies. Furthermore, relatively bad connection with the main city centre and agricultural character of the area are factors that had been determining professional activities of the inhabitants until the appearance of the company; this activity was largely limited to work at the residents' own farms.

The level of satisfaction with work for the company is quite high; the most highly-rated were: work conditions, possibilities of increasing professional qualifications, wages, and possibilities of promotion. On the other hand, the least positive assessment was given to the rapport with colleagues. It is not surprising though, since employees know each other mainly because of being neighbours and not because they work for the same company. Neighbourly relations are transferred to the professional area. This is also evident in the managerial team, which lowers its authority.

5. Recapitulation

Communes where large enterprises are located in NMRAs are positively distinguished on the social and economic level, from companies with no enterprises; these differences are visible both in areas with mono-functional character (agricultural or agricultural and forestry), as well as multi-functional areas.

Field research is indispensable in order to evaluate the impact of a company on the local environment. The presented example of such research shows that existence of a large company in a mono-functional rural area undoubtedly has an impact on the local environment, transforming it on both social and economic levels.

In the case of the analyzed company, it is necessary to state that its influence is stronger on the social plane than on the economic one. The lower level of connection with the local enterprises results from – on one hand – the demand for higher-quality goods and service, which are only realized in the urban areas and on the other hand, from the low level of enterprise in the district. Undoubtedly though, the existence of the company stimulates local enterprise, which is proved by some of the economic units located in the neighbourhood close-by, for which business activity is strongly conditioned by the orders placed by the analyzed company.

A much stronger influence of the enterprise was observed on a social level, which is a result of the fact that the great majority of employees of the factory, including office clerks, are recruited from the district inhabitants. It is very distinctive that the range of the influence is greater towards North and East than in the Southwest, which is a consequence of the location of the company in relation to Krakow – the leading job market in the region. The enterprise very positively influences the limited local job market. For many inhabitants of the district, its localization constituted a motivation to start gainful employment, which they would never have had in other circumstances, due to possibilities of gaining profits from farm activities and a very limited number of positions in the areas neighbouring their home place.

Increasing outside-agricultural activity of the inhabitants who previously dealt with working on their own farms, can be connected with the lowering of the intensity of ground exploitation, especially in Radziemice commune, from where more than half of the employees of the enterprise are recruited.

At the same time, this phenomenon should be judged as negative. People starting work in a big company do not resign from running their own farm. The commune workers instead decide to have two professions simultaneously, which influences greater extension of the usage of the soil, which, in this area, is characterized by very high aerosanitary values.

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LARGE ENTERPRISES AS A FACTOR TRIGGERING SOCIAL AND ECONOMIC CHANGES IN THE POLISH COUNTRYSIDE OUTSIDE METROPOLITAN AREAS

Summary

Rural areas in Poland, in spite of considerable changes that have taken place for the last 20 years, still present lower levels of social and economic development in comparison with urban areas. Therefore, literature widely discusses ways of activating those areas. The most frequently mentioned as the best method of improving the life conditions of the inhabitants of rural areas is multifunctional development of the rural areas, which is mostly related to development of micro-, small and medium-sized enterprises (Rosner 2002, Halamska 2002, Długokęcka 2002, Kłodziński 2006). At the same time, too little attention is focused on big economic units that appear in the rural areas of Poland and that are crucial for the local surrounding area, especially in the case of a village with mono-functional agricultural character. The analyses carried out, allowed the identification of enterprises where the number of employed amounts to at least 200 people and which are located in rural communes (with the residence office in a village), outside metropolitan areas (in accordance with classification made by Smętkowski, Jałowiecki and Gorzelak 2008).

In 2007 in the highlighted area, over 170 above-mentioned companies existed in 142 communes. In spite of the fact that the observed tendency was to be located near city areas and raw materials supplies (in cases of companies whose business activities were based on raw materials), some of them were located in typically agricultural areas. In such areas, two kinds of enterprises were observed to appear. The first kind of enterprise was the food processing company, whose production is based on agricultural products; the second characteristic group included companies whose business activity profile had nothing to do with the natural resources of the area and who only established enterprise in such an area in order to lower expenses.

The analyzed enterprises differ from each other by size, date of establishment, business profile and origin of capital.

The largest group included companies employing between 250-499 people (79 companies), followed, with respect to size, by 200 and 249 employees (over 60 companies). With respect to the date of establishment, most (34.9%) companies were established before 1990, yet the most dynamic period was the first stage of transformation in Poland, between 1990 and 1995, which complied with the general trend of development of entrepreneurship in Poland. As far as the profile of business activity is concerned, the largest group included companies dealing with food production and food processing; however, many companies manufacturing furniture and wooden products also exist.

On the basis of statistical analysis of the communes with the enterprises in NMRAs in relation to the all communes in this category of areas, we can conclude that communes where big business units are located differ in a distinctive way from the compared category of communes. Differences were observed among many, including the tendency of migration, level of enterprise or even investments into technical infrastructure. In any case, a more advantageous situation was noticed in communes where such investments had taken place. The above-mentioned situation might be a consequence of the positive influence of enterprises, which stimulate

development of local enterprise, encourage new inhabitants, and influence life conditions. On the other hand, better condition of these communities were noticeable at the moment when the companies were established, which should be perceived as an important localization factor. With no in-depth studies of motives of localization of particular companies, as well as with no field research, there is no possible way to unambiguously settle this issue.

Interesting data is provided by the company mentioned in this study, which is located in a rural area. The analyses of the relation between large companies with local economic units, range of commuting as well as employees' attitudes and opinions concerning job satisfaction at the company, allow us to draw more specific conclusions.

It may be concluded from the research carried out that the company influences local environment in an essential way; moreover, the influence is stronger when it comes to the local job market than to the level of local enterprise. A much stronger impact on the social level results from the fact that most of employees, including managing officers, are recruited from the inhabitants of the nearest areas to the company. For many inhabitants of the district, the location of the company constituted the motivation for deciding to start gainful employment, which, in different circumstances, they never would have started because of the agricultural incomes their farm brought them and the very limited number of vacancies at companies in close proximity to the place of their residence.

The increase in the out-farming professional activity of the inhabitants who dealt with farming until the establishment of the nearby company can be connected with the decrease of land use intensity in the district, especially in the Radziemice commune, from where half of the employees of the company were recruited. The work conditions in the analyzed company, taking into consideration both salary and possibilities of promotion and developing professional skills, are positively assessed by employees. This is reflected by an objective assessment of the salary and real actions taken by the management of the company, while relations among workers are assessed negatively, which results from transferring relations among neighbours to the professional area.

THE INFLUENCE OF WAR ON THE DYNAMICS OF UNEMPLOYMENT IN BANOVINA (CROATIA)

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Abstract
The Influence of War on the Dynamics of Unemployment in Banovina (Croatia)
This paper deals with the effects of economic transition and the Croatian war for independence (the Homeland War) on the stagnation and decline of economic activities, which resulted in mass unemployment. This problem is analysed in the case of Banovina, a traditionally underdeveloped region that was occupied during the war by Serb aggressor forces. A comparison of the dynamics of unemployment in Banovina, and its structural characteristics, with average trends and traits in Croatia provides insight into some of the developmental problems that burden this region.

Key words
Banovina, war devastation, economic stagnation, unemployment, structural traits

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1. Introduction

A common characteristic of Croatia and other countries in transition has been a reduction in the number of employed persons and a growth of unemployment relative to the pre-transitional years. First, there was a significant reduction in employment in the social/state sector, which was then followed by the creation of fewer new jobs in the private sector. Mass unemployment was the worst social consequence of the transitional crisis. Dujšin (1999) notes that the main cause for unemployment in countries in transition was the reaction of firms to changes in business conditions during the transitional process. Although unemployment in Croatia had traits that were very similar to those in most countries in transition, its appearance and characteristics were significantly affected by the war and war's destruction (1991-1995). The period from 1990 to 1993 stands out as especially drastic, since the number of persons who lost their jobs in that short period was the same number as in the period of the previous ten years.

In Croatia, however, regional differences exist in unemployment, which reflect differences in the economic structures and levels of development of specific regions, various effects of the Homeland war, etc. Direct exposure to war operations, as well as proximity to the war area, or else an isolated position within the encirclement of enemy military forces, had a negative effect on employment, for such simple reasons as the destruction and plundering of firms, out-migration of the population and the loss of any attractiveness for investments. The war was not the only cause of regional differences on the level of employment or unemployment. Namely, another significant factor of regional differences was the degree to which traditions of the market economy were present in various regions, or else the opposite, in a sense, – the degree to which traditions of the real socialist economy were present. Individual elements of the market economy existed in the period before 1990. They were present primarily in privately-owned trades with a limited number of employees, yet some state-owned industrial firms also showed a surprisingly strong market orientation. On the other hand, during the Socialist period, the state sometimes favoured certain firms or regions, thus creating a tradition of dependency or parasitism. Firms of this type did not depend on the market, but rather on such forms as state favouritism. State firms, trades and regions were not all in the same position, or rather, did not equally enjoy state support or accept market rules. Our region of analysis, Banovina, is marked by greater unemployment and less employment than the Croatian average, which was the result of war operations, but is also the effect of less ingrained traditions of market economic behaviour. The population of Banovina expected help from the state and did not encourage entrepreneurism or self-reliance. During the period of the Real-Socialist economy, the state would support the planned development of industrial and other firms in order to hasten the development of underdeveloped areas of Croatia. Yet, such attempts did not result in significant shifts or development of a healthy economy. Once the state could no longer financially back such attempts, or, for economic-ideological reasons it did not want to do so, underdeveloped areas such as Banovina were left to fend for themselves. Successful Croatian entrepreneurs generally concentrate their efforts in a number of cities and regions attractive for business and avoid economically backward areas such as Banovina. Thus, an important problem – how to attract entrepreneurs to underdeveloped areas – remains unsolved.

Banovina can serve as an example of a region devastated by war, as well as a previously underdeveloped region of Croatia. Today, it is part of the area of Croatia designated for special state support. This paper will present a comparative analysis of unemployment and its structural characteristics in Banovina and in Croatia as a whole. The analysis will include more details and present more traits for the pre-transitional year, 1989, and for the transitional year, 2008, i.e. two points in time divided by a period of practically twenty years.

Banovina includes the southern parts of Sisak-Moslavina County, between the Kupa and Sava rivers to the north, and the border with Bosnia and Herzegovina to the south and southwest. Although its territory is often defined based on historical criteria, according to which Banovina covers the part of the former Military Frontier that was under the direct authority of the Croatian ban (i.e. Banovina in the broader sense), in this paper we shall deal with a more limited part of the area of Banovina, which, according to the present administrative-political division, includes the cities of Petrinja, Glina and Hrvatska Kostajnica, and the municipalities of Dvor, Hrvatska Dubica, Donji Kukuruzari and Majur.

Banovina represents a traditionally underdeveloped or "passive" region. During the period of Socialist Croatia, all the mentioned territorial units (except Petinja) were categorised as insufficiently developed communes (the former communes of Glina, Kostajnica and Dvor entered into this category). During the Homeland War, Banovina was occupied by Serb aggressor forces, and the results of this occupation are largely evident, even today. Many surfaces that still have not been cleared of land mines make the revitalisation and economic activity of this region difficult. A cartographic illustration of suspected mine areas reveals zones in which the most intense war conflicts took place (Fig. 1). Areas with the greatest amount of land mines can be found around settlements, forests and on agricultural land around Petrinja and Sunja. A significant threat from land mines exists in the hilly forested parts of Trgovska gora along the border with Bosnia and Herzegovina. The total extent of war destruction in Banovina has been estimated to be about €940 million.

2. The Dynamics of Unemployment

In 1990, a total of about 1,558,000 people were employed in Croatia. By 1993, this number fell to 1,235,00, and in 1997 to 1,187,000, after which there was some improvement. It was expected that, with the lay-offs of workers and the drop in employment, there would also be a simultaneous increase in unemployment of similar dimensions. However, an unusual social phenomenon took place, the causes of which can be found outside the economic sphere. Fig. 2 clearly shows the relative development of unemployment from 1988 to 2008. As can be noticed, at the beginning of the transition, in other words, until 1992, unemployment in Croatia increased, followed by several years during which the number of unemployed persons fell (despite a large drop in the number of employed), and only in the second half of the 1990's did it begin to grow again. It is clear that, apart from the transitional restructuring of the economy, war events also contributed considerably to the trend in unemployment. Since practically a third of Croatia's territory was occupied by enemy forces, many unemployed persons entered into the defence of the homeland and were erased from the registers of the Croatian employment agency; a part of the workforce was "forcibly" retired (and so was not even registered on the lists of the unemployed), and a part of the (potentially unemployed) members of the Serb national minority left Croatia.

Fig. 1: Suspected mined area in the region of Banovina and in surrounding regions.
Source: HCR, March 2009.

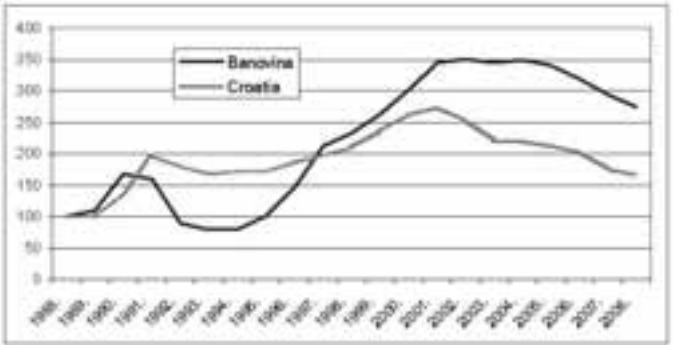

Fig. 2: Relative changes in the number of unemployed persons in Croatia and Banovina from 1988 to 2008 (1988 = 100).
Source: Godišnjak za zapošljavanje, Zagreb, various years.

Therefore, in regions of Croatia that had been occupied, unemployment could not be recorded with much accuracy. The Croatian employment agency carried out its activities on the free territory of Croatia, but very few expelled persons dispersed throughout the country registered among the unemployed. Due to deficient registries of unemployed persons, an incorrect impression resulted indicating that the number of unemployed during the several years of war was even lower than in the 1980's. After the end of war, operations and the return of expelled persons to their homes, correction of the unemployment registry provided insight into the

actual situation. This was also the case in Banovina, where in the second half of the 1990's unemployment increased faster than the average in Croatia. The largest number of unemployed in Croatia was recorded in 2001, and in Banovina, two years later, after which unemployment began to fall.

Tab. 1: The number of unemployed persons by city/municipality and total, in Banovina and Croatia in 1989 and 2008.

City/Municipality	1989		2008		Increase in unemployment in %
	Total	%	Total	%	
Dvor	364	16,0	821	14,5	125,5
Glina	641	28,2	1194	21,1	86,3
Petrinja	907	40,0	2572	45,4	183,6
Hrvatska Kostajnica, Hrvatska Dubica, D. Kukuruzari, Majur*	358	15,8	1079	19,0	201,4
Banovina total	2270	100,0	5666	100,0	149,6
Hrvatska	144810		240455		66,0

* Data for these four territorial units has been grouped, since previously, they made up one common commune, Hrvatska Kostajnica.
Source: Zaposlenost, zapošljavanje i djelatnost samoupravnih interesnih zajednica za zapošljavanje u 1989. godini, Savez samoupravnih interesnih zajednica za zapošljavanje Hrvatske, Zagreb, 1990.; Table: Nezaposlene osobe po opŠinama i gradovima stanovanja, razini obrazovanja i spolu od 1996. do 2008. (http:// www.hzz.hr).

The most recent data, pertaining to the year 2008 and hence reflecting the situation 13 years after the end of the war, when compared to the data for the pre-war (and pre-transitional) year of 1989 (see Tab. 1), leads to the following conclusion: whereas in Croatia as a whole, unemployment in 2008 was 66% higher than before the war, in Banovina, unemployment had more than doubled. The most unfavourable situation in this regard was on the territory of the former commune Hrvatska Kostajnica (along the border with Bosnia and Herzegovina), where unemployment increased by 200%.

Figures on the number of unemployed persons become even more serious when they are compared to data indicating demographic conditions (Fig. 3). In the most recent inter-census period, Banovina experienced its greatest fall in population since censuses were first conducted in Croatia. The main reason for this was forced migration during the Homeland War. As a result of aggression against Croatia, in 1991 most of the population of Croat nationality left Banovina. Their return was made possible by the liberation of Banovina in the military-police operation "Storm" in 1995; however, on that occasion, many members of the Serb national minority left this region, migrating mainly to parts of neighbouring Bosnia and Herzegovina (MišetiŠ 2002, 310). In the following years, the return of previously expelled Croats (natives of Banovina) continued. There was also an immigration of Croats who had fled from Bosnia and Herzegovina (due to war conflicts in that country), and who were often directed to settle in abandoned "Serb" villages. Yet the effects of all this were that the latest census recorded a population half the size of the population recorded by the previous census (in 1991 Banovina had 87,598 inhabitants and in 2001 only 47,647), and the number of unemployed persons doubled in the same period (in 1991 there were 3,291 unemployed persons and in 2001, this number was 7,118). Therefore, whereas just before the beginning of the war there were 4 unemployed persons for every 100 inhabitants, several years after the end of the war, this ratio became 15 to 100.

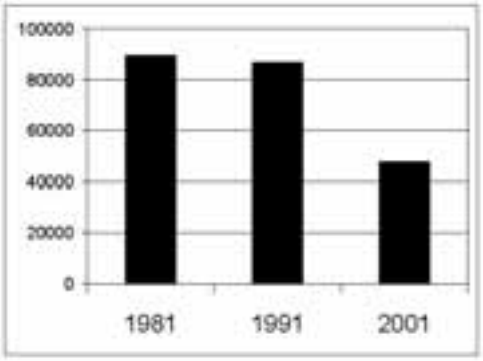

Fig. 3: The population of Banovina in 1981, 1991 and 2001.
Source: Population censuses, DZS, Zagreb.

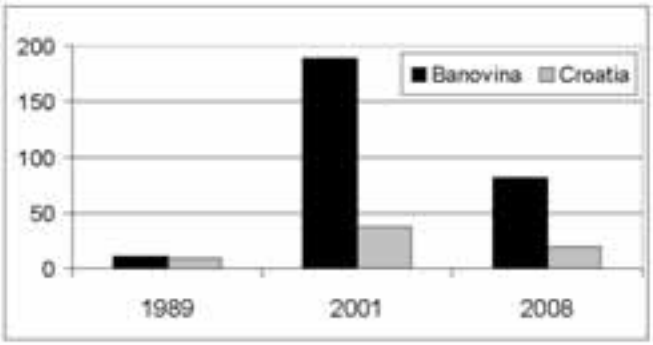

Fig. 4: The number of unemployed persons for every 100 employed in Banovina and Croatia.
Source: Nezaposlene osobe po op inama i gradovima stanovanja, dobi i spolu 31. prosinca 2008. godine (http:// www.hzz.hr), Izvještaj o realizaciji programa rada SIZ-a za zapošljavanje Sisak i radne zajednice stručne slu be u 1989. godini, Sisak, 1990.

Furthermore, if the relative number of unemployed to employed persons is calculated, the result is that, in 2001, for every 100 employed persons in Banovina, there were 189 unemployed, or over five times more than the average ratio for Croatia as a whole in that year. This reflects general socio-economic conditions in the years following the war, when a significant number of formerly expelled persons returned to their homes, but could not find jobs, since only a small portion of the economic structures that had been destroyed or pillaged during the war had been renewed. However, in the period from 2001 to 2008, the number of available jobs in Banovina practically doubled, and therefore the ratio of unemployed to employed persons changed: for every 100 employed there were 82 unemployed (2008), although this was still several times greater than the average ratio for Croatia (Fig. 4).

3. Structural traits of unemployment

Apart from the fact that unemployment was low during the period of Real Socialism and firms were virtually "forced" to employ people, significant differences existed in the structure of unemployed persons in that period as compared to the structure of

the unemployed in the period of economic transition. Structural differences pertained mainly to the age, gender and level of education of persons seeking employment. In the 1980's, the majority of unemployed persons were young people who, for the most part, had just finished secondary school or university and were looking for their first job. In contrast, there were practically no unemployed persons over 40 years of age. Moreover, there were also no significant differences between the structure of the unemployed in Croatia as a whole and in the underdeveloped region of Banovina. At the beginning of the 1990's, many firms stopped doing business, closing down either due to bankruptcy or liquidation, with the consequence that many mature workers also started to register in the lists of the unemployed; thus, nowadays, people in the age group of 40 and older account for more than half of the unemployed in Croatia (based on data for 2008). In Banovina, the age structure of the unemployed is even more unfavourable: 57.3% of people seeking employment are older than 40, and only 13.3% are younger than 25. Before the war, younger people made up two thirds of the unemployed, and the ratio between younger and older employment seekers was, at that time, 8:1, whereas today it is 1:4 (see Tab. 2).

Tab. 2: Unemployed persons in the Republic of Croatia and in Banovina according to age in 1989 and 2008.

Age group	1989				2008			
	Republic of Croatia		Banovina		Republic of Croatia		Banovina	
	Total	%	Total	%	Total	%	Total	%
under 24	88,764	61.3	1,411	62.2	42,095	17.5	754	13.3
25– 29	20,277	14.0	377	16.6	29,132	12.1	499	8.8
30– 39	23, 123	16.0	309	13.6	47,361	19.7	1,165	20.6
40–49	8,025	5.5	98	4.3	51,164	21.3	1,475	26.0
over 50	4,621	3.2	75	3.3	70,703	29.4	1,773	31.3
Total	144,810	100.0	2,270	100.0	240,455	100.0	5,666	100.0

Source: Nezaposlene osobe po op inama i gradovima stanovanja, dobi i spolu 31. prosinca 2008. godine (http:// www.hzz.hr), Izvještaj o realizaciji programa rada SIZ-a za zapošljavanje Sisak i radne zajednice stručne slu be u 1989. godini, Sisak, 1990.

Tab. 3: The structure of unemployed persons by age in cities/municipalities in Banovina in 2008.

City/municipality \ Age		Under 24	25–29	30–39	40–49	Over 50	Total
Dvor	Total	87	66	152	220	296	821
	%	10.6	8.0	18.5	26.8	36.1	100.0
Glina	Total	160	103	243	322	366	1194
	%	13.4	8.6	20.3	27.0	30.7	100.0
Petrinja	Total	378	235	560	665	734	2572
	%	14.7	9.1	21.8	25.9	28.5	100.0
Majur	Total	20	10	29	30	47	136
	%	14.7	7.4	21.3	22.1	34.6	100.0
Donji Kukuruzari	Total	27	31	67	98	114	337
	%	8.0	9.2	19.9	29.1	33.8	100.0
Hrvatska Dubica	Total	30	17	56	64	83	249
	%	12.0	6.8	22.5	25.7	33.3	100.0
Hrvatska Kostajnica	Total	52	37	58	77	133	357
	%	14.6	10.4	16.2	21.6	37.3	100.0
Banovina	Total	754	499	1165	1475	1773	5666
	%	13.3	8.8	20.6	26.0	31.3	100.0

Source: *Nezaposlene osobe po općinama i gradovima stanovanja, dobi i spolu 31. prosinca 2008. godine* (http://www.hzz.hr).

The unfavourable age structure of the unemployed in Banovina in comparison to the Croatian average reflects the age structure of the region's population to a significant degree. Whereas, in the years prior to the Homeland War, the population of Banovina included more young than older inhabitants, the census of 2001 recorded that older inhabitants made up 29% of the population and younger people, 21%. The age structure of the population of Banovina resulted from the age structure of the returnee flow, in which older persons predominated. A significant proportion of younger and more mature previously expelled persons from Banovina continued to live in other (more prosperous) parts of Croatia, where they had found refugee in the period when Banovina had been occupied by enemy forces. A more detailed overview of the age structure of the unemployed in Banovina by city and municipality is presented in Tab. 3. Unemployment can also be analysed by the level of education of employment seekers (Tab. 4).

Tab. 4: The structure of unemployed persons by professional qualification/level of education* in the Republic of Croatia and in Banovina in 1989 and in 2009 – in percentages.

Professional qualification	1989		Level of education	2008	
	Republic of Croatia	Banovina		Republic of Croatia	Banovina
Low-skilled qualification (NKV)	20.7	24.1	No schooling or incomplete elementary school	7.0	7.8
Minimal schooling, partially-skilled work qualification (NSS, PKV)	14.8	20.1	Elementary school	25.1	41.6
Qualified worker, highly-skilled work qualification (KV, VKV)	30.1	28.5	Three years of secondary school, or school for qualified and highly-qualified workers	34.4	28.9
Secondary school qualification (SSS)	24.4	22.0	Secondary school and more years of education, or else gymnasium	26.2	18.5
Higher school qualification (VŠS)	4.4	4.0	Higher education, first university level	3.3	2.3
Highest school qualification (VSS)	5.5	1.3	University education, academies, master's and doctoral degrees	4.0	0.9
Total	100.0	100.0	Total	100.0	100.0

* The classification of persons by education was not the same in 1989 as in 2008. The classification by levels of professional qualification (NKV, NSS, PKV, KV, VKV, SSS, VŠS, VSS) was abandoned in 2004, when a new method of registering the unemployed according to levels of education was introduced. The new method enabled international comparisons of the data on occupations.
Source: Zaposlenost, zapošljavanje i djelatnost samoupravnih interesnih zajednica za zapošljavanje u 1989. godini, Savez samoupravnih interesnih zajednica za zapošljavanje Hrvatske, Zagreb, 1990.; Table: Nezaposlene osobe po općinama i gradovima stanovanja, razini obrazovanja i spolu od 1996. do 2008. (http:// www.hzz.hr)..

Among all the unemployed in Croatia, the largest segment is made up of qualified workers (2008), whereas in Banovina, there is a larger proportion of persons with only elementary school education, mainly low-qualified and partially-qualified workers. The fact that better educated people in Banovina can find jobs more easily than in Croatia on average is shown by data on the share of persons with completed higher education or university in the total body of the unemployed – in Banovina, such people make up 3.2% of the unemployed and in all of Croatia, this share is 7.3%. Banovina does not have a sufficient highly educated labour force, because, due to the war – but also in earlier periods – highly educated people left this "passive" region and migrated to other parts of the country (e.g. to Zagreb and

Sisak). Older and less educated persons prevail among returnee migrants, although it is precisely qualified workers and individuals with a university education that can become the driving force in the economic development of this underdeveloped region.

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THE INFLUENCE OF WAR ON THE DYNAMICS OF UNEMPLOYMENT IN BANOVINA (CROATIA)

Summary

In 1990, there were a total of 1,558,99 unemployed persons in Croatia. By 1997, this number decreased to 1,187,000. The largest number of unemployed during the transitional period was registered in Banovina in 2002, and on the level of all of Croatia, one year earlier. If figures for the year 2008 are compared to data for the pre-transitional year of 1989, than unemployment in Croatia in 2008 was 66% higher than in 1989, while in Banovina it more than doubled. The marked increase in employment in Croatia was the result of various factors typically present in periods of economic transition in other parts of Eastern Europe, but the Homeland War (1991–1995) additionally increased unemployment, although only after the war. It is interesting to note that during the Homeland War (1991–1995), unemployment appeared even lower – for several reasons: the participation of unemployed persons in military and police units, out-migration, retirement of the unemployed, and inaccurate management of the unemployment lists. Regional differences in Croatia are the result of past exposures to war operations and different levels of accepting elements of a market economy. Banovina was especially exposed to war operations and burdened by elements mostly deriving from the Real Socialist economy, which made it an exceptional Croatian regional example, with a strong drop in employment and increase in unemployment.

During the most recent intercensus period, Banovina experienced its greatest population drop from the time of the first censuses in Croatia. Involuntary (i.e. forced) out-migration during the Homeland War was the main cause of this demographic reduction. In 1991, Banovina had 87,598 inhabitants, and in 2001, half of this number – 47,647. In the same time period, the number of employed persons doubled from 3,291 to 7,118. In other words, just before the war, there were 4 unemployed persons per 100 inhabitants, and several years after the war this ratio became 15 per 100.

In addition to the fact that during the period of Real Socialism unemployment was exceptionally low, important differences existed in the structure of the unemployed at that time in comparison to structure of the unemployed later on, i.e. during the period of economic transition. In the 1980's, the majority of all unemployed persons were young people, mostly persons who had completed secondary school or university and who were seeking their first employment. On the other hand, in 2008, persons 40 years of age or more made up half of the unemployed in Croatia. In Banovina, the age structure of the unemployed was even more unfavourable, if we take into consideration the fact that 57.3% of all persons seeking employment were over the age of 40.

FARMS AND MINES: A CONFLICTING OR COMPLIMENTARY LAND USE DILEMMA IN WESTERN AUSTRALIA?

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Abstract
Farms and Mines: A conflicting or complimentary land use dilemma in Western Australia?
The Western Australian economy has always been underpinned by farming and mining. Over the last five years the economy has experienced phenomenal growth due to unprecedented global demand for resources and increasingly, agricultural land is being given up for mining. Changing land uses challenge industry and community leaders; some communities are overwhelmed by a new population connected with mining, bringing with it a range of social and economic tensions that small communities struggle to cope with. This paper will discuss the conflicting issues regarding land use planning, local and environmental governance and sense of place while also canvassing positive developments that have enhanced community and regional economic development, thus building a resilient future.

Keywords
regional economic development, mining and energy sector, agricultural production

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1. Introduction

The Western Australian economy has experienced phenomenal growth on the back of unprecedented demand for resources by the developing Chinese and Indian economies. The Australian mining and energy sector has been important to the Australian economy since colonial times and has been particularly important for the development of the Western Australian economy since the 1960s. By the end of the twentieth century, Western Australia was one of the most productive and diversified mineral regions in the world with about 50 different minerals in commercial production (Storey 2001). Since the 1970s, mining has consolidated its position as the major generator of export income for Western Australia, currently comprising approximately 70% of the States' total exports revenue and 34% of the nations' exports (Department of Local Government and Regional Development 2007a; Department of Treasury and Finance 2009). The majority of mining activities are significant distances from the State's capital city, Perth. Figure 1 shows the population distribution of Western Australia and the major mineral and petroleum activity centres in the State. It is evident that most mining activity occurs long distances from established communities.

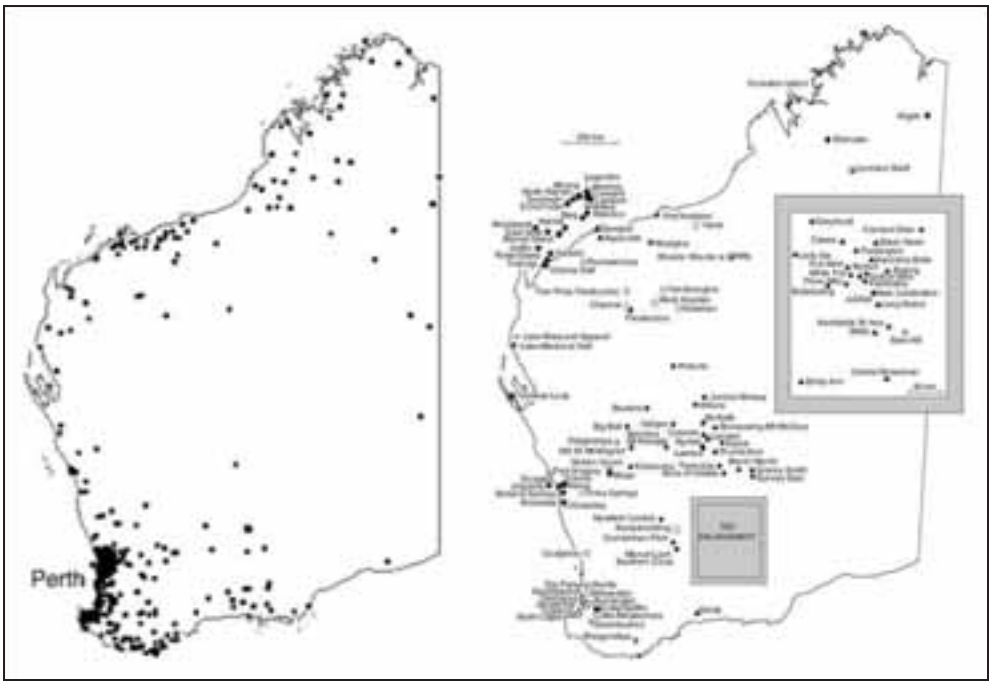

Fig. 1: (a) Population densities in Western Australian. (b) Location of active resource developments. Source: Australian Bureau of Statistics (a) and Western Australian Department of Mines and Petroleum (b), (Reproduced with permission).

Until very recently, mining was not a dominant industry in the Midwest and South West regions (see Fig. 2) where agricultural production has always predominated. However, with increased returns from mining and diminishing profit margins from agriculture, traditional agricultural communities have been challenged by land-use changes which, as will be discussed further in this paper, have confronted long-

term residents and the governance structures of some communities as mining has overtaken agriculture.

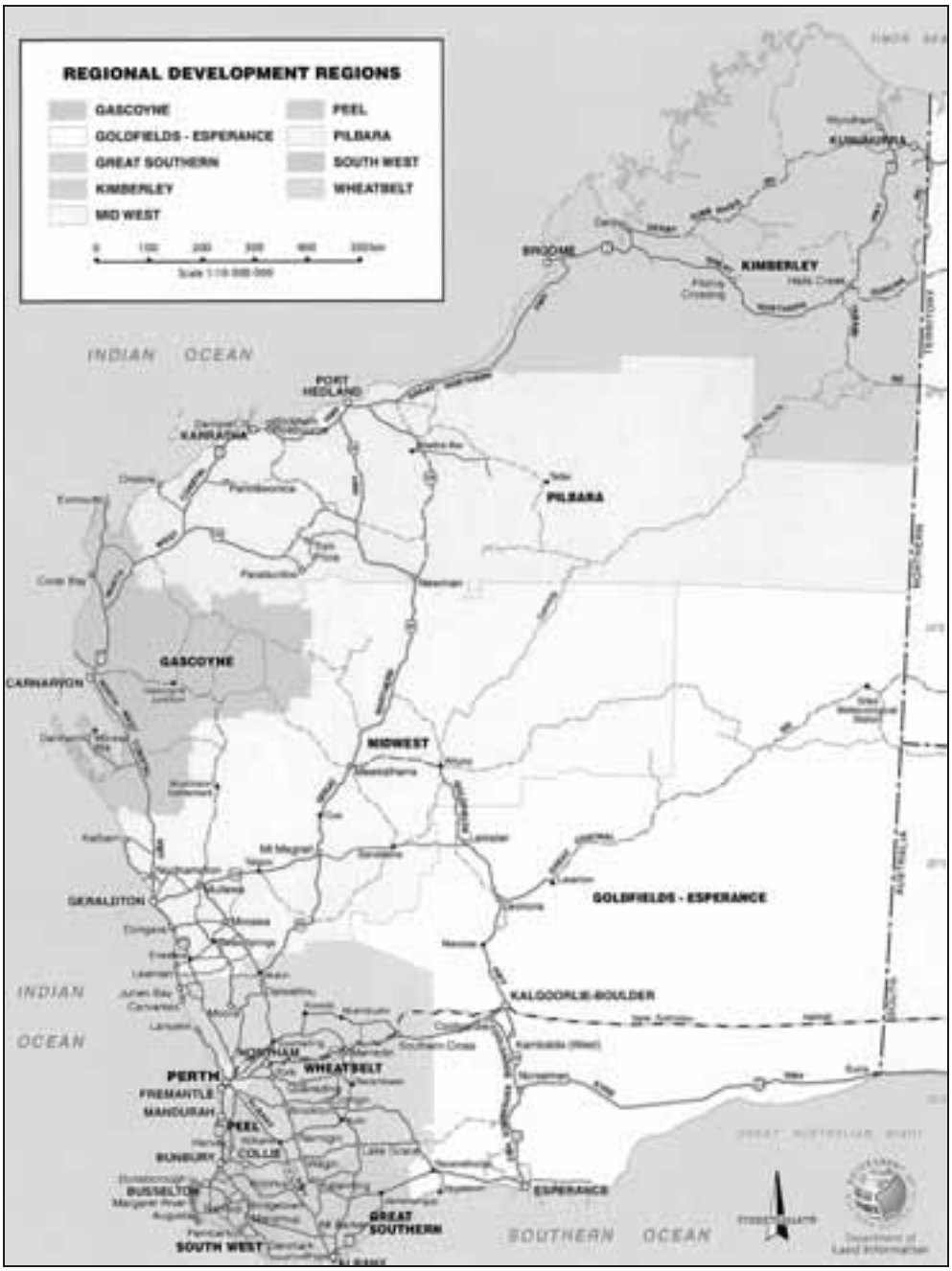

Fig. 2: Regional Development Regions of Western Australia.
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According to the Australian Bureau of Statistics (Australian Bureau of Statistics 2007a; Australian Bureau of Statistics 2007b; Australian Bureau of Statistics 2008) the Western Australian economy has doubled in size over the past sixteen years, with Gross State Product (GSP) in chain volume terms rising 107% between 1990 and 2006. The contribution of mining to GSP has doubled (15% to 30%) to $53.4 billion (Au) in production value, while the sectors of property and business services (9% to 11%) and construction (8%) have remained fairly steady contributors.

The heightened economic activity in the State has impacted on Western Australia's population and local communities (Australian Bureau of Statistics 2007a; Australian Bureau of Statistics 2008a). There have been changes to patterns of migration and internal mobility, (the rate of interstate immigration is currently higher than it has been for more than one hundred years (Australian Bureau of Statistics 2009a)), as well as family and household composition. Until now, this type of demographic change and its effect, particularly on small communities such as rural areas, has been largely overlooked.

Focusing on two small rural communities, the Shire of Ravensthorpe on the Southern Coast and the Shire of Boddington in the Peel region of Western Australia, this paper will examine the impact of land use change. Both communities have, until recently, been dominated by agricultural activities, but with rising global resource prices, multi-national mining companies have moved in and established large mines with concomitant opportunities and adverse pressures. Drawing on in-depth, semi-structured interviews and focus groups with local community members in both locations, this paper will document the socio-economic changes that have been experienced by the communities and the people who live in them and the inevitable challenges these bring. The provision of infrastructure and the management of people and resources in frenetic economic boom conditions have tested policy makers and local governance structures. These challenges will be discussed and the inevitable opportunities that arise from such circumstances will also be considered.

2. The Shifting Industry Bases in Western Australia

Until the latter half of the twentieth century, agriculture had been dominant in Western Australian macro and micro economies. However, as noted earlier, their overall contribution to GDP has been contracting. In 1970, agriculture contributed 70% of total exports revenue but by 1999 agriculture contributed only 15% of the State's export earnings (Australian Bureau of Statistics 2001). This has now declined to about 7 per cent (Department of Agriculture and Food 2009). While the agriculture, forestry and fishing sectors have grown in absolute terms, they have declined in relative terms compared to the mining sector. Further, despite significant increases in productivity over the last two decades (in excess of 12%), the active labour force has decreased by 18% (Australian Bureau of Agricultural Resource Economics 2008). The area under agricultural cultivation is approximately the same as it was 50 years ago but the number of farms has decreased 27% since 1961 (Department of Agriculture and Food 2009). Like other developed countries, farming in Western Australia is highly technical and economies of scale are critical for viability (Bureau of Rural Sciences 2008). It also has the same social issues too; rural populations and consequently, communities are shrinking, there is an ageing trend and men outnumber women.

By contrast, mining communities are also highly technical but they employ vastly more people in Western Australia than do the agricultural industries. In 2007, the sector directly employed 54,330 people, (105% increase in a decade), many of whom were in the 25-45 year age cohort and a growing number of women. However, many of those mining jobs are city-based and mining communities are often relatively temporary, with many only surviving as long as the ore body. For a variety of economic reasons, company towns have disappeared as the local resource has run out. The philosophies of neo-liberalism and free market mechanisms have guided governments since the late-1970s, with a central aim being the efficient allocation of resources, including government services and infrastructure. Government investment in small towns and communities has consequently been significantly curtailed with almost no government financial support for new town development (Storey 2001). A mining company will now only establish a residentially based operation where there is already a pre-existing community nearby with at least basic services, and the location is considered 'liveable', meaning that there are services such as retail services, a school and medical post suitable for families to take up permanent residence if so desired.

3. Western Australian Case Studies

Two such communities are Boddington in the Peel region, 120 kilometres from the capital city, Perth and Ravensthorpe and Hopetoun in the Shire of Ravensthorpe on the Southern Coast, 600 kilometres south east of Perth (see Fig. 4).

Boddington was established in 1912 to service an area of broad acre mixed cereal crop and sheep farming. Boddington town is small but very liveable, surrounded by picturesque landscapes and within easy access of three large regional centres. In the 1980s and 1990s the community struggled to survive as wool prices dropped and returns on broadacre cropping were variable. Many of the younger generation moved away and did not return to take over the family farm (Tonts 2000, Haslam McKenzie 2000). A gold mine was established in the 1990s but it closed in 1999 due to variable prices and unstable demand. Businesses in the town struggled and houses and land were sold off cheaply. A bauxite mine has operated for nearly two decades but it is relatively small in scale employing approximately 150 people. Community development minded people in town were constantly looking for new opportunities to bring people back to the town but until 2006, with limited success. However, as gold prices have increased in recent years, a decision to re-open the Boddington Gold Mine, operated by Newmont, was made in early 2006. The operation involves open-cut mining from two large pits and is expected to produce an average 850,000 ounces of gold and 30,000 tonne of copper a year for more than 20 years. During operation, expected to commence in the latter quarter of 2009, the project is expected to contribute an estimated $550 million to the Peel region's economy and $770 million to the Western Australian economy per year (Peel Development Commission 2008). Immediately after the decision to re-open the mine, house prices and land in and adjacent to, the town escalated in value. Housing stock increased in value by 275% in the decade 1998-2008, the greatest rise in value occurring between 2004 and 2008 (220%) (Rowley and Haslam McKenzie 2009). Boddington could not cope with the influx and the unmet demand for accommodation so the company encouraged employees to drive-in/drive-out (DIDO) from the urban fringe or from nearby rural communities, particularly during the construction phase which peaked at a workforce of 2000. The operational workforce is projected to be between 650 and 800 workers and Newmont is encouraging employees to live 'local' (within 50 kilometres of the town). An

'accommodation village' has been built in the town to provide additional accommodation and during the construction phase this has been at capacity (approximately 2,400 workers). Inevitably, there are impacts on the established social networks of the town and community (Storey and Jones 2003) and the services and infrastructure, creating tensions which will be discussed in more detail in the next Section.

The second case study, the Shire of Ravensthorpe, incorporates two small towns; Hopetoun, a quiet coastal town where, mostly, farmers chose to recreate in the summer or retire and Ravensthorpe 50 kilometres inland, which was the local service centre and the bigger of the two towns (see Fig. 4). After a large corporation, BHP Billiton announced in 2004 that it would develop a large nickel mine, the Ravensthorpe Nickel Operation (RNO), the Shire was transformed from being a small, marginal farming community to busy places with a local population dominated by an entirely different demographic, most of whom wanted to live in Hopetoun. It was anticipated that the mine, projected to be Australia's largest nickel laterite mine and processing plant, would be operational for about 25 years and that the returns to the State and the nation through royalties would be substantial. Like Boddington, previously inexpensive housing became highly sought after. House prices increased 588% between 1998 and 2008 (Rowley and Haslam McKenzie 2009).

Fig. 4: Map of Shire of Ravensthorpe on Southern Coast of Western Australia.
Source: www.ravensthorpe.wa.gov.au/maps/maprac/view (Retrieved 6th March 2009).

However, unlike Boddington where the impact of an increased population was shared across neighbouring communities, Ravensthorpe and Hopetoun are isolated with the next town more than 100 kilometres distant and local services and

infrastructure ill-prepared for such an increase in a residential local population. Sewage and other water services were inadequate and the power supply was so poor that businesses frequently went without electricity for hours at a time. RNO, government and the local government authority spent considerable funds upgrading and building new infrastructure, including roads, a primary school, airport, wind-generated energy, water and sewage services to cope with the influx of people for the construction phase of the mine.

4. Land-use Changes: Stresses and Strains

Both communities welcomed the mining companies to town; residents were pleased when their housing and land values increased and business owners were optimistic that the new population would strengthen their enterprises. Both mining companies are large, international corporations and residents were buoyed that these ventures were not going to be 'fly-by-night' operations but rather, well researched and resourced initiatives. The farming sector was particularly keen for the opportunity to boost their often variable incomes with off-farm earnings either through working on the mine or with businesses providing ancillary services.

However, the stresses and strains of new land uses soon created some concerns. Large mines are noisy, capital intensive and often incorporate cooling ponds and other physical processes that are potentially environmentally vulnerable. Consequently they require significant environmental buffers and in the case of Boddington, the mine boundary is adjacent to the town site. There were immediate concerns that if there was an environmental mishap, the township and its residents were vulnerable. At both sites, farmers were concerned that water courses and land could be poisoned by mining activity and were unsure that the authorities properly understood their business and health vulnerabilities. Both mines had a projected mine life of about 25 years. Environmental approvals have been given by the government which require the physical rehabilitation of the mine sites but there is uncertainty regarding what level of rehabilitation was required, although in Boddington, land has been successfully rehabilitated back to farm production standards as bauxite has run out. In Ravensthorpe however, there is an ongoing argument as to whether the land will be suitable for safe and productive farming once the nickel ore bodies have been exhausted. Both mining companies initiated community reference groups but the environmental and health concerns have not been fully allayed.

The lack of suitable housing and accommodation for the new labour force has been an enduring problem in both communities. Demand for accommodation from the mining companies and mine employees as well as investor demand attracted by the escalating rental returns had inevitable price effects and affordability consequences, especially for those on non-mining incomes.

Despite claims that the RNO workforce would be based at either of the two nearby towns, it became apparent that some workers would be housed in Esperance, 180 kilometres east of the mine and transported by bus on a daily basis (DIDO). As the commuting workforce increased, farmers were competing for road space, especially during the busy harvest period when they were transporting grain to the central collection points. Parents of country-based school children also complained, claiming that the increased traffic on the road endangered their children as they waited for the school bus on remote roadsides. Another accommodation alternative

offered by RNO in response to the shortage of local houses was a fly-in/fly-out (FIFO) work arrangement whereby some workers chose to be resident in Perth (the capital city, 600 kilometres north west) and FIFO on a weekly or ten day rotation, living in single person's quarters four kilometres outside Hopetoun. This caused real concern, mostly because of the negative connotations of FIFO work arrangements for both the workers and the *host* community. Because of their compressed work schedules and where they live while on site, many FIFO workers do not develop a sense of place and have limited sense of connection to the mining community (Haslam McKenzie, 2010 (forthcoming)). Workers stay in employer-provided or subsidised accommodation with close proximity to the mine site with meals and recreational services provided and consequently, their "marginal propensity to consume within the region" (Maxwell 2001, 9) means that there are considerable income leakages (Johnson 2009). Inevitably, wages paid to FIFO workers living elsewhere flow outside of the region and thus, local investment and micro-economic benefits in the *host* community are compromised at the local level.

Another significant concern, especially for the local government authorities and local Chambers of Commerce, is the use of services and infrastructure by FIFO and DIDO workers. As they are not residents and therefore ratepayers, these employees do not contribute directly to local government rates and thus local infrastructure. This has significant implications for local government and the distribution of Commonwealth and State government grants. It means that local governments with mining activity and transient workforces are providing infrastructure and services for which they are not given resources commensurate with the resident population. Host communities, and certainly those in small rural communities, generally believe that DIDO and FIFO workers do not contribute to local community organisations, they do not participate in community building activities such as sporting groups or volunteering, and take from the community with minimum return. Further, while the mining companies and government have combined to provide new infrastructure and services in both the case study communities, the local government authority is responsible for the maintenance of these not insubstantial assets. In the case of the Shire of Ravensthorpe which is spatially large but with relatively few ratepayers spread over large distances, the cost of long term maintenance of newly bituminised roads and the new airport is of particular concern if the rate of population growth recently experienced is not maintained.

Local businesses in Boddington, Ravensthorpe and Hopetoun have benefitted from the increased patronage and turnover, the mining companies do not source large scale supplies in the region or have local procurement policies of any kind; the regional economies simply do not have the capacity or a sufficiently diversified economy to supply large scale mining operations, except for minor supply goods. The companies have head offices outside of the region and the skilled workforce is usually recruited elsewhere so there is minimum investment by the large companies locally (Storey, 2001). Nonetheless, RNO claimed that between July 2000 and March 2004 it spent $11.6 million in the Shire of Ravensthorpe (Ravensthorpe Nickel Operation 2004) and businesses have been purchased in Boddington in the hope that Newmont will honour their commitment to provide permanent contracts to local businesses (Spencer 2009).

Small towns with relatively stable populations, such as Boddington, Ravensthorpe and Hopetoun, have felt the impact of a large number of 'strangers' moving into the town en masse. As noted by Zandvliet, Bertolini and Djist (2008, 1469) "the social

homogeneity among residential populations is greater than the heterogeneity among mobile populations" and local residents, particularly in Hopetoun and Ravensthorpe, have found the transient population challenging because many of the newcomers do not value the town and community the same way as the long-term residents. This has put unplanned and unresourced pressure on the community leaders, most particularly the local government authority required to manage community development. Some residents value the economic opportunities a new mine and DIDO and FIFO workforce represent, but others put a higher value on other less tangible things such as knowing everyone when they go shopping or not having to queue at the bank. One of the arguments posed against DIDO and FIFO workers is that they essentially 'sit outside' the residential community and do not positively contribute to the functioning of the town.

Not surprisingly, employment for many local residents in both communities has changed as people are lured to high paying jobs associated with the mine. Agricultural work, by comparison, is poorly paid and often highly seasonal. This shift in local labour force participation has had a particularly adverse effect on the farming sector in the Shire of Ravensthorpe because, due to its remoteness, access to a casual labour force in particular is limited. The local farmers struggled to hire labour for shearing teams and the problem became so acute that some farmers reduced their flocks or focused exclusively on cropping. Even though the workers remained local, the compressed 12 hour shifts were exhausting, hence limiting their willingness to offer their time for community volunteering and locally-based activities. In the Peel and adjacent Wheatbelt region, the community leaders, not only in Boddington but also from surrounding towns, are concerned that the gold mine is attracting the most able cohorts of the population away to DIDO jobs in the mining industry. The non-mining communities fear that local productivity, profitability and/or the quality of service delivery will be undermined for lack of an available and willing labour force. A further problem has been that some workers returning to the resident community with inflated pay packets and increased spending money have had detrimental impacts when the money is spent on alcohol and drugs or sets up resentment and conflict with those in the community who do not have the same spending capacity (Lambert 2001).

Without warning, on 21st January 2009, BHP Billiton placed the RNO on indefinite suspension after only eight months in operation. The employees and the community were shocked and devastated. The reasons for the suspension were not clearly stated by the Company but it was broadly accepted that the price of nickel on the global market had dropped during the global financial contraction and the mine was no longer viable. The suspension of mining coincided with a global downturn in almost all sectors of the economy, including the housing market. It was clear that without RNO the local housing market would be directly impacted by the suspension of operations at RNO as a significant part of the residential population had lost their local employment and would move from the region. Over the subsequent months, company employees withdrew their children from the local school, packed up their homes and moved away. It was generally considered that the employees of the company were the 'lucky ones'; it was small business owners who had set up businesses locally who were the most vulnerable, although after considerable media exposure and local anger the Company negotiated some payments to local businesses. Within six months the new school was struggling to remain viable with less than 50 enrolments and some local businesses closed.

Long standing residents of the Ravensthorpe and Hopetoun communities had a sense of bewilderment and betrayal when they reviewed all that had happened over the previous six years and they were concerned about the future of the communities. Some thought that the Shire of Ravensthorpe and Hopetoun in particular, would simply revert to the Shire and town it was prior to BHP Billiton coming to town. It was clear however, the Shire and town were not the same as they were six years before. There was now an established mine and entirely new infrastructure, not to mention the experience of dealing with a large corporate stakeholder. The impact of the sudden suspension had reverberations around the nation. The buoyancy and sense of optimism for communities such as Boddington was dampened; there was a concern that "if this should happen to a BHP Billiton mine then it could happen to any mine". There was further general unease, not only at the local levels but within broader Western Australian and business communities when it was announced in June 2009 that despite the economic downturn, the BHP Billiton profit for the year was above expectations and that the net operating cash flow was a record. At the same time, the company paid down debt and invested nearly US$11 billion in growing the business, despite the 'exceptional items' being US$4.84, the bulk of which was for the suspension of the Ravensthorpe mine and he associated investment in the Yabalu nickel refinery in Townsville (FitzGerald 2009). The message was clear; mining is big business and even governments can do little to change corporate actions once the company is established in the community. Family owned farm enterprises and local government authorities have limited, if any, power.

5. Conclusion

The export data (Australian Bureau of Statistics 2009b) show that the resources sector is very important for Australia's foreign exchange as well as for domestic revenue, with earnings being directed to company profits, tax revenues and input costs including transport, business services, fuels, construction and construction materials. Incomes generated in the mining industry are dispersed into the rest of the economy through the multiplier effect (Richardson 2009) and the development of the mining industry has prompted associated need for public and private infrastructure. This paper, focusing on two small rural communities in Western Australia which, until recently, had limited industry diversity and were almost wholly dependent on agricultural business, have now experienced significant land use changes since large mining companies established substantial mines in their localities. Unlike farming, which in Australia is still dominated by family ownership, mining companies are multinational corporations with hardnosed decision-makers directing local operations based on economic and financial parameters rather than social capital and sense of place.

As shown in this paper, the establishment of a mine requires significant capital investment and upgrading of infrastructure such as the local school, the medical facilities, roads, and in the case of Ravensthorpe, the airport, all of which are of significant benefit to the local community. This has been especially the case in broadacre agricultural areas such as Boddington and Ravensthorpe where global competition has depressed agricultural returns and government investment in infrastructure and services has been significantly rationalised over two decades causing an ongoing depopulation and ageing trend in rural areas throughout Australia (Gray and Lawrence 2001, Australian Bureau of Statistics 2007a, Bureau of Rural Sciences 2008). The influx of people to the towns boosted local businesses

and diversified the local economy. In both cases, the average age of the local communities decreased and individual spending capacities also increased.

However, there were also challenges which the local authorities and community had to confront. Negotiating with a powerful multinational with strong links to both State and Federal government meant that decisions were made with only cursory inclusion of the local stakeholders. In the case of Boddington, the mine is the largest rate payer but there is no local representation. The mine manager does not live locally and most negotiations are conducted at a level beyond the Shire. As evidenced in this paper, the cost of land and housing increased dramatically in both locations, pushing up the local cost of living (Department of Local Government and Regional Development 2007b) and marginalising those who weren't already home owners and who are not employed in high paying jobs. In Ravensthorpe, the local government authority employees could not compete for accommodation and the Shire was forced to provide rental assistance for all employees to ensure equity; a very expensive outcome. In Ravensthorpe, even though farming struggled to maintain its outputs it continued to be an important industry but in Boddington, mining has now overtaken the town's raison d'etre.

As was the case in Ravensthorpe, global prices for nickel slumped during the 2008 global financial crisis and BHP Billiton decision-makers responded by suspending operations at the Ravensthorpe mine indefinitely. As noted by Pick, et al., and others (Pick et al. 2008, Humphreys et al. 2007, Stiglitz, 2007), the 'resource curse' thesis is not restricted to economic performance, whereby those places with a resource advantage are often left at a disadvantage after the resource has been extracted. The experience of a large multi-national company establishing a mine in a small remote Western Australian community was a direct link to global forces and hence a vulnerability to the 'resource roller coaster' (Wilson 2004). This is no different to the vulnerabilities of the agricultural global market forces but it would appear that farmers have stronger links to their community and a greater commitment to local social capital. The communities of Hopetoun and Ravensthorpe, which had experienced significant industry and social disruption when BHP Billiton announced the commencement of construction of the mine in 2002, were again in a state of flux. As this paper goes to press, the Boddington Gold Mine is going into full production and while world gold prices remain buoyant it is likely that agriculture will not be the once important industry it once was in Boddington. In the Shire of Ravensthorpe however, the communities are looking to attract a new population to town to replace the young, vibrant people who came with the nickel mine and the farmers and their families have returned to full-time farming or moved on.

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FARMS AND MINES: A CONFLICTING OR COMPLIMENTARY LAND USE DILEMMA IN WESTERN AUSTRALIA?

Summary

The value of mining to the Australian, and particularly the Western Australian, economy has escalated in the last decade. Exploration and development of previously unviable mining operations has meant that mines are now operational in what have previously been well established and highly productive agricultural lands. This paper draws on in-depth, semi-structured interviews and focus groups in two traditional rural communities where large mines have been established. The socio-economic impact of mining on the communities was examined.

Neo-liberal government policies have meant that services to small rural towns have been rationalised over the last thirty years and the onus has been on community and industry self-sufficiency. As a result, towns and communities became smaller and smaller as farmers pursued economies of scale and invested in highly technical machinery thus reducing the labour force. The arrival of large scale mining promised new jobs and increased patronage of local business but it has also put considerable strain on the available infrastructure including power, water, sewage, building materials and housing, particularly in the construction phase of the mine. As a result, there has been a tightening on housing and local labour markets and considerable inflation of accommodation, construction and materials costs. This has meant that many who did not own homes or those who were the most vulnerable in the community have struggled to stay as prices have escalated and some have been squeezed out. The pressure on housing has meant that many workers either fly-in and fly-out (FIFO) or drive-in and drive-out (DIDO) from the mine, living at the mine site in mining camps for up to six days at a time before returning to their home community. This practice reduces local expenditure because all services are provided by the mining companies and hence, the local community struggles to benefit from the increased population. Similarly, the transient, non-resident workforce use local services and infrastructure but because they are not ratepayers, these employees do not contribute directly to local government rates and thus local infrastructure. This has significant implications for local government and the distribution of Commonwealth and State government grants. It means that local governments with mining activity and transient workforces are providing infrastructure and services for which they are not given resources commensurate with the resident population.

The establishment of large scale mines has also impacted on rural industry. Many of the farms depend on seasonal and transient labour for planting and harvesting of crops and for casual labour during shearing. This labour cohort has been lured to mining by the high paying jobs offered by the mining companies and local businesses servicing the mine, to the extent that in one community, sheep farming has contracted considerably. On the other hand, the mines offer jobs to many who previously had to leave rural communities because the work was no longer there.

The mines have also affected many of the social activities. For example, rolling twelve hour shifts mean that many people can no longer participate in team sports and community leaders report that community group participation has dropped off because people are either too tired or their shifts preclude their attendance at meetings and activities. Many local residents report that the sense of community,

commitment to local activities and quality of life has been undermined by the presence of the mines.

In summary, the increasing presence of mining in rural communities has wrought considerable change which has challenged long term residents and community leaders to presciently manage the changes. Certainly mines do bring with them job opportunities and community expansion, but the changes inevitably put pressure on local community groups, infrastructure and local services. Our research also showed the impact on a community when mining activity ceases and this too created considerable broader community hardship. The peripatetic traditions of mining meant that the miners moved out almost as quickly as they moved into the community. The lessons to be learned from this is that there is much to gained from the presence of a mine but the activities and impact of a mine need to be very carefully managed if the benefits are to be enjoyed for the long term.

AGROPOLITANA: COUNTRYSIDE AND URBAN SPRAWL IN THE VENETO REGION (ITALY)

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Abstract
Agropolitana: countryside and urban sprawl in the Veneto region (Italy)
In the Veneto central plane, historically shaped by agriculture, the countryside is being taken over by a particular form of urban sprawl, called città diffusa (dispersed city), where cities, villages, single houses and industries live alongside agriculture. This phenomenon is generally analyzed mainly as a typical urban/rural conflict, and the sprawl gets criticized as a countryside destroyer.
By observing some paradoxical situations in the città diffusa in Veneto, the contrary is apparent – urban sprawl seems to have been rather a conservation factor for the ecological and cultural richness of the agricultural space. Agricultural space itself plays an important multifunctional role in this territory. If seen from this point of view, dispersed urbanization in the Veneto region can be seen as a sort of prototype of a new contemporary form - neither urban nor rural – of cultural landscape, where farming spaces can have a public role strictly linked to the urban population's needs.
Can this character be preserved through the metropolization process now envisaged by regional policy and planning, and already happening? Can the "Agropolitana" concept introduced by the new Regional Spatial Plan help to imagine and obtain a resilient metropolis, while maintaining a strong agricultural layer inside it?

Key words
urban sprawl, città diffusa, agricultural landscape, agropolitan development

The editor received the article on 7.2.2010.

1. Introduction

In the northeast of Italy, in the rich and densely populated Veneto central plane, the countryside among the main cities is being taken over by a strong urbanization process, where towns, villages, single houses, single industries and industrial areas live alongside agriculture. Called città diffusa (dispersed city), in the 1990s (Indovina 1990), it was, and still is, strongly criticized as a form of sprawl (Gibelli and Salzano eds. 2007, among others). Nevertheless, it has been defined in many different ways (Bianchetti 2003), exciting various opinions about it; for example, as an embryonic status of the new European contemporary city of the 21st century (Secchi 1996). Seen in this way, the città diffusa is not an enemy to fight, but rather, a territory needing to be (re)designed (Munarin and Tosi 2001), starting from the "materials" with which it is built.

In this perspective, this paper will analyze one of these materials, too often forgotten in the studies dedicated to the città diffusa. Simply considered either as a natural urbanization background or instead its victim, agricultural space has had great importance in how the città diffusa was born, in how it works nowadays, and maybe, in how it can help facing sustainability challenges in the future.

This paper moves from some conclusions drawn from a PhD research study discussed in 2007 at the IUAV University of Venice, about the most relevant transformations the agricultural landscape has undergone in the Veneto region and how it is transforming now, due to Common Agricultural Policy and urbanization processes. A better understanding of the uncommon relationship between urban/urbanized spaces and agricultural spaces in the central Veneto plane is the main point of this new research, whose starting hypothesis I will present here. The new regional spatial plan, some regional data and some observations in the field are the starting materials for the reflections presented in the paragraphs that follow.

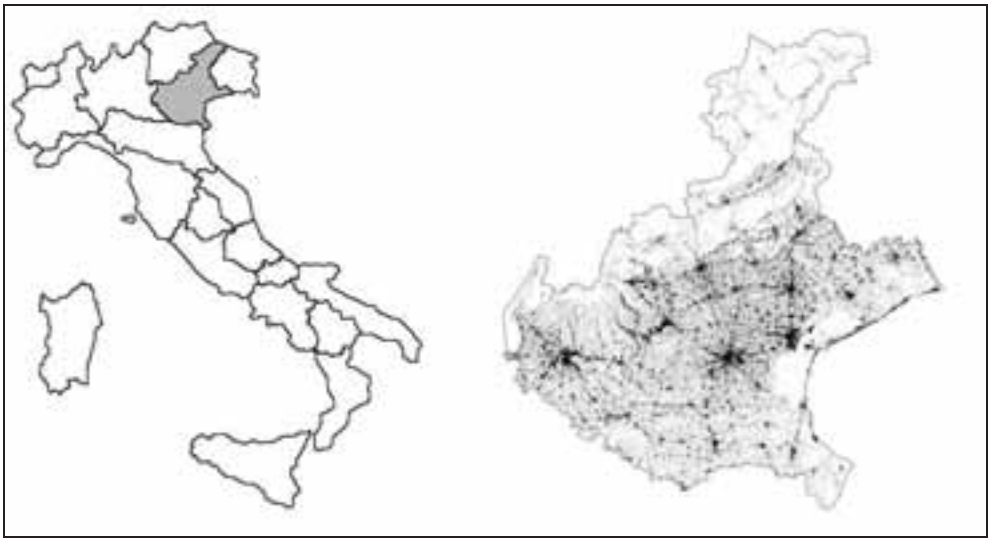

Fig. 1: The Veneto region in the Northeast of Italy (left) and the dispersed and polycentric urban structure (right) of the central plain (Veneto Land Cover, GSE-Land - Urban Atlas 2007).

2. Urbanization as a countryside destroyer? "Land consumption" studies in Italy in the second half of the 20th century

Sprawl is surely one of the most discussed spatial phenomena at the dawn of the 21st century. Considered as a degeneration of city growth, the sprawl has been largely criticized since at least the 1920s (Bruegemann 2005, also for a vast bibliography in the English language) and generally considered as a form of land misuse (Stamp 1948), even if recognizable as one of the most common urban forms in contemporary western countries (Sieverst 1997, Ingersoll 2003). This largely negative judgment is generally based on its private-car-based mobility and high public social and environmental costs (Burchell et al. 1998), and as a problem regarding the "protection of the countryside", for example in the town and country planning system in England (Hall 1973). In this last approach, the mix between urban space and agriculture (Bauer and Roux 1976) is seen as a waste of agricultural land, a degeneration of rural landscapes and as an obliteration of the countryside by the technical progress of the town (Juillard 1973).

In Italy, the problem of urbanization as land consumption and misuse (in Italian "consumo di suolo") was studied by G. Astengo (Astengo 1982). With the It.Urb.80 project, Astengo, who, in the 1970s, was the Italian referent at the Urban Affairs Committee of the OCSE, wanted the Italian researchers and administrations to reflect about land consumption as a consequence of increasing urbanization, which was strongly hitting Italy in the Sixties and Seventies. The "consumo di suolo" became a popular concept thanks to a slight change in its meaning due to its double-meaning in Italian, where "suolo" means both "land" and "soil" in the pedological sense.

These are equally limited resources, both in danger from the changes towards urban use. The It.Urb.80 research study, which involved the major Italian schools under the guidance of Astengo between 1983 and 1990, was centred on the idea of measuring, even quantitatively, land misuse. This was especially intended in terms of consumption of agricultural land: the economic crises that hit Italy in that period made the problem of protecting agriculture activity a primary issue in national policy, which tried to reduce Italian dependence on food from abroad with the "piano verde" (green plan).

In this political climate, it became important to understand the interferences between urbanization processes and agricultural activities: in the same years, another national research study that involved many Italian universities: "Interaction and Competition between Urban Systems and Agriculture for Land Use Purposes" aimed at identifying and describing the conflicts and the positive or negative interaction between urbanization and agriculture, due mostly to two factors: abandonment of areas waiting to be urbanized and the difficulty in rational cultivation of areas included within the urbanized territory (CNR-IPRA, 1988). Nevertheless, it became clearer and clearer that the reality was a little bit different.

First of all, the Italian food deficit in the late 1980s was over, and the CAP was now facing a problem of overproduction instead. Other functions of farmland besides production were then "discovered". "Instead of focusing exclusively on the shortage of land as a productive factor capable of meeting food requirements […] the problem of land use/abuse [must be considered] from the point of view of the transformation

of farmland in relation to the consequent problems determined in the satisfaction of needs associated with the quality of life" (CNR-IPRA 1988, XXV).
Moreover, in certain areas, particularly those where agriculture was accompanied by industrial activity, the interaction between agriculture and urbanization was not necessarily negative; actually, agricultural activities in urbanized areas often received more of an impulse to better themselves in terms of production techniques. Even if it was true that urban growth did not take into account any of the natural needs of the farm and had instead promoted the fragmentation of farms and fields and favoured precarious jobs, urbanized areas did not necessarily create the conditions for abandoning farming activities.

This was particularly true in Veneto, one of the regions studied by the CNR-IPRA research, where a particular kind of interaction between farmland and urbanization could be observed.

3. The central Veneto città diffusa

In the last thirty years of the twentieth century, the Veneto central plain (and in particular, the area among the cities of Padova, Mestre, Treviso and Castelfranco), within the more general context of the Northeast of Italy, underwent a strong development characterized by the rapid transformation of the rural economy into an industrial one, based on small and medium enterprises. The whole society was enriched sensibly, and this growth was called the Northeast miracle. The development was accompanied by a strong increase in population not only in the consolidated cities but also within the countryside and by a strong urbanization process that exploited the traditional polycentric structure of the territory, based on a repeated micro-hierarchy of cities, towns, villages and isolated houses that were directly linked with the farmland.

The widespread construction of disparate, yet highly urban elements into a predominantly rural social fabric (Fig. 2) has deeply transformed the Veneto landscape, confusing the traditional categories of town and countryside.

People living in the città diffusa don't come from cities, as victims of gentrifications. On the contrary, they normally move from one village to another, maintaining strong relationships with the original family and previous friends; they use the territory as a large village, whose "squares" are shopping malls and historical centres to be travelled over by car. Normally, these people have chosen to live here, "in the countryside", or in this "urban-rural structure" (as some of them call it), because they consider the city to be the place of traffic, chaos and conflicts – "an extraneous dwelling place, not beloved, not desired" (Dolcetta, 2005). They appreciate the possibility of having a private garden, keeping pets and other animals, travelling by car and parking without too much effort, knowing all their neighbours, being free and keeping close to "nature" and connected with the countryside (Castiglioni and Ferrario, 2007), where they keep a lot of informal relationships. Nearly everyone has a grandfather, an uncle or a friend who owns a piece of farmland. That is why it is so important to look at the territorial layer shaped by agriculture if one wants to know the città diffusa better.

Fig. 2: The typical pattern of the first central Veneto sprawl with urbanization along the roads and industrial buildings spread around, on well-maintained and still diverse farmland (By courtesy of D. Longhi).

4. The "agricultural layer" and its paradoxes

The observation of the agricultural layer in the città diffusa is not evident. Unlike urbanization processes, easily reconstructed by cartography comparison, transformations in farming space could be more appreciated by personally visiting the città diffusa, rather than with cartographic help. Only recently, with the large diffusion of new instruments such as Google Maps, with the liberalization of the regional ortophotography, and finally with the fulfillment of the new land-cover map of the entire region (which now also covers the exurban territory with data up to the V level of the Corine Land Cover system; Regione del Veneto, 2009b), one can have a more precise idea of the consistence and form of the agricultural space all over the region.

Combining zenithal glance with necessary contact with the people who live in this space and have opinions on it and observation of agricultural space within the città diffusa can give us an unexpected view. This happens especially if we compare it to the territory outside the mostly urbanized area, in the rural parts of the region, where agriculture has no strong economic competitor and land ownership is much less fragmented. That is where agricultural activity can be more "rational". We can then spot these three paradoxes.

Firstly, agriculture as an economic activity inside the città diffusa is still rentable. The economic value of agriculture per hectare is high, so the small and smallest land tenures are still cultivated (Fig. 3). This happens most likely because of the soil being highly fertile, allowing for the production of very high income (for example, from the red "radicchio" of Treviso), and finally, maybe because of the quick and easy exchange with city markets.

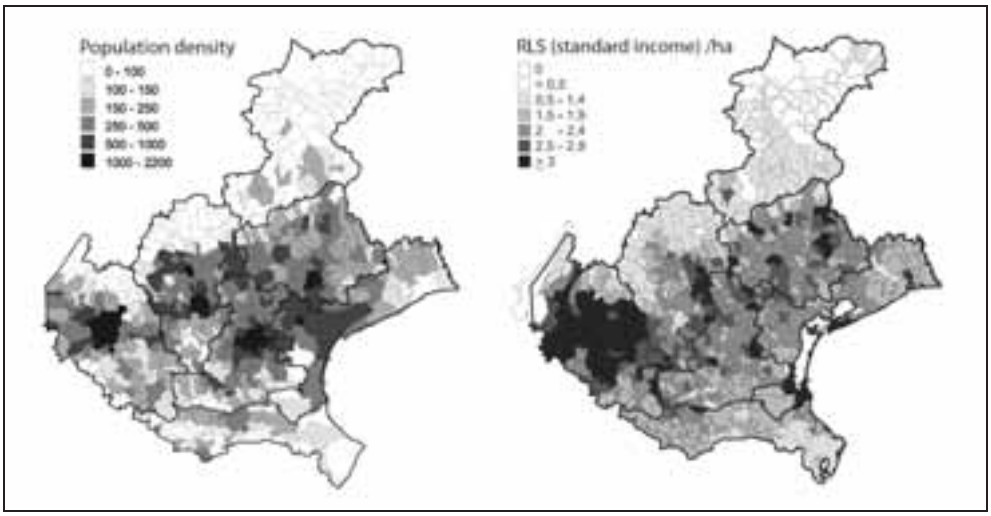

Fig. 3: Agriculture as an economic activity inside the città diffusa has the highest income per hectare. Population density (left) and RLS (agriculture gross standard income)/ha (Elaborated from Atlante dell'agricoltura veneta official data, 2003).

Secondly, agricultural space has a better ecological value inside the urbanized territory than outside. A strongly fragmented ownership of the farmland inside the città diffusa territory has prevented those rationalizations and simplifications that have caused the complex hedges and trees system on the field borders elsewhere to be lost (Fig. 4). This does not mean that we do not find the usual problems of pollution by chemical fertilizers and disinfectants and reduction of the fertility of soils here, but at least "fragmented" farmland prevents fragmentation of its ecosystem (Romano, Paolinelli 2007).

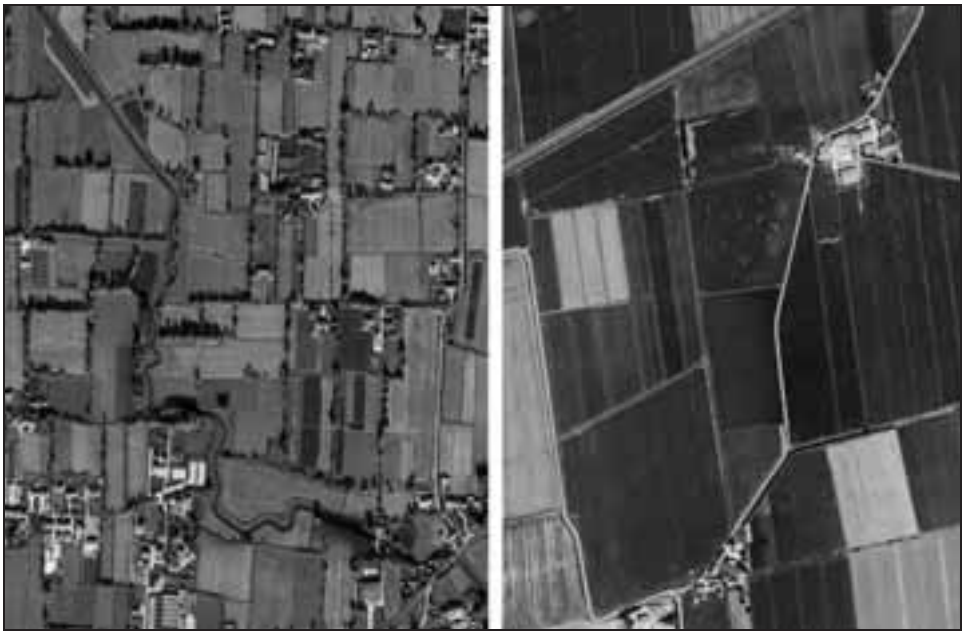

Fig. 4: Two farmland patterns in comparison. The highly urbanized agricultural landscape in the centre of the plane (left) preserved hedges and paths; the low urbanized agro-industrial landscape in the south of the Veneto region is instead very simplified (right). They contribute differently to the ecological network (Reven fly 2006, by courtesy of Veneto Region).

Fig. 5: Sunday afternoon in the città diffusa. Behind the main roads where urbanization is denser, between an industrial settlement and an ancient countryside path, people use agricultural territory as a park.

Thirdly, historical agricultural landscape is better preserved within the città diffusa than in the "rural" territory. Even if, due to the mechanization of the 1970s, only a few examples of the famous mixed farming landscapes (with the cultivation of grape-vines "married" to the trees in the "piantata" system, dated from the Roman Empire, as in Desplanques 1959) remain and are preserved, the agricultural landscape within the urbanized areas is still very typical, and is often used by people who live nearby as a sort of territorial park (fig. 5) (Ferrario 2007).

These paradoxes highlight something only very recently acknowledged to agricultural space: multifunctionality. Not just multifunctional production (food, energy and ecological network), but multifunctional use: farmland within the città diffusa has a role as space for leisure, and in a certain way, it is a living space. In this sense, it can be explained as a contemporary cultural landscape. Nevertheless, nowadays the situation is changing, and the città diffusa is going to face a new situation.

5. Metropolization processes

In the last few years, the global economy has brought our "Veneto way" in question, shaking the principles of "small is cool" and "do it yourself" from their very foundations. If, in the economic field, a selection seems to have taken place in which the bigger companies prevail, the regional policies follow the same direction. It is now time for "big" things: the passage of the European V corridor in the centre of the plane, the new motorway bypassing Mestre, the highway at the foot of the Alps arch, the Valdastico South motorway, Veneto City (a large real estate operation of private initiative that will take place in a 500,000 square meter area at the junction between the A4 motorway and the new Mestre bypass motorway) and, for population density issues in urban planning, some skyscrapers will be built. These operations move in the opposite direction with respect to how the middle Veneto system of living and working goes. They might radically change the functioning of this region, while, as were the intentions of the regional administration, they guarantee that a new Veneto metropolis is under way.

The urban materials that make up the città diffusa nowadays are very different from the ones employed up until the Nineties: no more self-built single houses and small roads quickly paved in between private gardens, no housing scheme to build series' of similar semidetached or detached houses, but instead wide spaces with blocks of flats promoted and built directly by the building trade (fig.6), and large roads for travelling around quickly by car. No more small company sheds next to old farms, but unifying and rationalizing large and small companies' areas. All of this, along with the population's increasing environmental awareness, can explain the growing territorial conflicts observed in this area (Vallerani and Varotto 2005).

Agricultural space, too, is facing some new transformations that are not always leading towards higher sustainability. The growing surface occupied by industrial greenhouses, for example, can become a problem because of the loss of natural ingredients in the soil under cultivation. In this case, agriculture itself is endangering the quality of agricultural space. A similar risk comes from the expanding surfaces dedicated to biomass for energy production. Despite the fact that wood has good ecological performances, biomass cultivations are not so environmentally friendly and the risk is, again, in the simplification of agricultural landscape. In this

simplifying, polarizing and densifying scenario, if the central Veneto must become a metropolis, what space will be left for good-quality agricultural space?

Fig. 6: Different urban materials make up the first and the second città diffusa. Next to the self-built small villas (above) we have real estate operations of a much bigger scale (below). This is happening to industry buildings and infrastructures as well, albeit with different timing (Graphics and photos V. Ferrario).

6. The regional spatial plan and the idea of Agropolitana

The New Regional Spatial Plan recently adopted by the Veneto administration (Regione Veneto 2009) tried to give an answer to the question of efficient spatial planning including space for agricultural activities.

The agricultural space problem is not new for Veneto regional planning: the first (but never adopted) regional plan began at the end of the 1960s, with the idea of "campagna urbanizzata" (urbanized countryside), coming from the coordinator, G. Samonà, as a "system of technologically and culturally advanced service locations

that make living in the rural area similar to living in a town" (Samonà 1968)..

Fifteen years later, the second regional plan, divides agricultural space into four categories based on its "integrity" – whether it will be more or less compromised by the urbanization process. The concepts of land consumption and ecological problems that are thought to be resolved with protected areas now appear in light of this idea. The newly adopted regional plan has new issues nowadays. The first one is surely the landscape, highlighted by the European Landscape Convention, where the spatial planners are asked to consider not only the outstanding landscapes, but also the everyday or degraded landscapes, among which we can include the città diffusa. The second issue is the construction of the European ecological network, involving the Veneto region in a new systemic reflection regarding biodiversity and diversity in agriculture – far from the idea of protected areas.

The third problem is climate change. In this region, in fact, climate change could have a strong impact owing to the fact that the plain is just above sea level and there is a high demand for water for industry and agriculture.

Agricultural space is strongly affected by all these issues, as well as by the new Veneto metropolis. It can offer multifunctional services and performances that have yet to be completely explored.

Aware of its importance, the new plan tries to observe Veneto agricultural space in its characteristics, considering both real and potential contributions to biodiversity, relationships with urbanization, conservation of the landscape and services to people and the environment. Four kind of agricultural areas were acknowledged, covering the entire plain.

Aree ad elevata utilizzazione agricola (areas with high rate of farmland use), in which the prevalence of agricultural land use is desirable and needs protection, for economic, environmental and landscape reasons.

Aree ad agricoltura mista a naturalità diffusa (areas with mixed rural land use and high natural gradient) are those areas, mostly situated on the hills and mountains, in which extensive agricultural activity is conducted among a vast quantity of meadows and prairies.

Aree ad agricoltura periubana (areas with peri-urban agriculture) are close to the main urban areas, where the function of farming space is mainly maintaining the "green" in the urban fabric and giving direct services to urban dwellers.

Aree "agropolitane" ("agropolitan" areas) are those areas where agriculture is (forecasted or envisaged to be) mixed with stronger urbanization in buildings and infrastructure, while still producing food and preserving their economic, environmental and social value.

Such distinctions, quite clearly defined and designed on a 1:50,000 map along with an ecological network (Fig. 7), is unfortunately not followed by such clearly defined norms: in the end, it doesn't make much of a difference if a certain territory falls within one or the other of these categories.

This weakness is probably due not simply to a lack of political will, but perhaps to a real difficulty in imagining how this territory could change in the future, growing without losing its specific "agro/urban" character. That is, there is a lack of territorial projects.

Agropolitana - the name was suggested in the very beginning of the new regional plan process (Bernardi, 2004, probably quoting Friedmann 1987) as a way to explain città diffusa agro/urban structure - could also be a way to imagine a possible future. The Veneto central plane is not an urbanized countryside: it is a metropolis with a lot of agriculture inside it.

7. Agropolitana: an idea for the future?

Since their beginnings, urbanization processes have been interpreted not only as countryside destroyers, but also as a potential form of cooperation of rural and urban inhabitants, resulting in the disappearance of the town/country dichotomy (Juillard 1973). In the past, this long-lasting idea inspired several famous urban theories - from Howard's garden-city (1902), to Schwartz's stadtlandschaft (1946) - and fascinating predictions - from Wells' diffusion of cities (1902) to Sorokin and Zimmermann's rurbanisation (1929).

The present debate will stress the need for a new relationship between cities and open territory, giving agriculture a new centrality in our territories' future. If we should "delegate to nature" many of our cities' needs (Sassen, 2009), urbanization should become "awake", learning not by industry processes, as it did in the 20th century, but by agriculture, capable of gently manipulating nature (Branzi, 2005). The presence of agricultural space in urban structures is extremely important since it may improve their resilience (Garnett 1999, Mougeot 2005, Urban Agriculture 2009).
Could the Veneto città diffusa be considered to be a sort of prototype for this integration? This model is maybe not the best possible one, but has some positive aspects, despite the land consumption issue. Land consumption must be considered not only in a quantitative way, but also as a problem of territorial form, having a better or worse performance in the face of new challenges, the first being sustainability.

Agriculture space, in fact, has the capacity to host contemporarily different functions like food production, energy production, environmental values, leisure and other social services. Its permeability performs well in cases of heavy rain and, under certain conditions, it can be used as an emergency flooding area. The chains of production (for example the corn cultivation - cattle breeding - beef to export chain) can be shortened to increase sustainability. When needed, food for inhabitants can be produced by their own territory. We should also acknowledge the role of small scale and part-time agriculture in landscape and environment conservation.

In this sense, the presence of agricultural space inside the upcoming Veneto metropolis must be considered as a warranty for a sustainable future. The agropolitana concept, however, must be explored in order to better integrate agricultural space into the design of urban development. Devising a concrete project for this space – a project for its multifunctionality – is what still needs to be done.

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AGROPOLITANA: COUNTRYSIDE AND URBAN SPRAWL IN THE VENETO REGION (ITALY)

Summary

In the Veneto central plane, historically shaped by agriculture, the countryside is being taken over by a particular form of urban sprawl, called città diffusa (dispersed city), where cities, villages, single houses and industries live alongside agriculture. This phenomenon is generally analyzed mainly as a typical urban/rural conflict, and the sprawl gets criticized as a countryside destroyer and a land consumer. As observed since the Eighties by some researches about land consumption, in the areas where agriculture was accompanied by industrial activity, the interaction between agriculture and urbanization was not necessarily negative; actually, agricultural activities in urbanized areas often received more of an impulse to better themselves in terms of production techniques. Even if it was true that urban growth did not take into account any of the natural needs of the farm and had instead promoted the fragmentation of farms and fields and favoured precarious jobs, urbanized areas did not necessarily create the conditions for abandoning farming activities. On the contrary agriculture landscape was in a certain way "protected" by urban sprawl and agriculture marginalization. This was particularly true in the Veneto central plane. If we compare it to the territory outside the mostly urbanized area, in the rural parts of the region, where agriculture has no strong economic competitor and land ownership is much less fragmented, where agricultural activity can be more "rational", we can then spot these three paradoxes. Firstly, agriculture as an economic activity inside the città diffusa is still rentable, with production values per hectare higher than in the rural territory. Secondly, agricultural space has a better ecological value inside the urbanized territory than outside. Thirdly, historical agricultural landscape is better preserved within the città diffusa than in the rural territory, and it is often used by people who live nearby as a sort of territorial park. If seen from this point of view, dispersed urbanization in the Veneto region can be seen as a sort of prototype of a new contemporary form - neither urban nor rural – of cultural landscape, where farming spaces can have a public role strictly linked to the urban population's needs. In the last years Veneto region is facing a metropolization process. The new simplifying, polarizing and densifying scenario asks to reconsider the place that agriculture and agriculture space has. If in the past urban sprawl seems to have been rather a conservation factor for the ecological and cultural richness of the agricultural space, we now must say that agricultural space itself plays an important multifunctional role in this urbanized territory. Agriculture space, in fact, has the capacity to host contemporarily different functions like food production, energy production, environmental values, leisure and other social services. Its permeability performs well in cases of heavy rain and, under certain conditions, it can be used as an emergency flooding area. Agriculture space will probably be obliged in future to reply to increasing and conflicting requests.

Agropolitana - the name was suggested in the very beginning of the new regional plan process as a way to explain città diffusa agro/urban structure - could also be a way to imagine a possible future. The Veneto central plane is not simply an urbanized countryside: it is a metropolis with a lot of agriculture inside it. In this sense, the presence of agricultural space inside the upcoming Veneto metropolis must be considered as a warranty for a sustainable future. The agropolitana concept, however, must be better explored in order to integrate agricultural space into the design of urban development. Devising a concrete project for this space – a project for its multifunctionality – is what still needs to be done.

PROBLEMS AND PERSPECTIVES OF ORGANIC FARMING IN SLOVENE ISTRIA

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Abstract
Problems and Perspectives of Organic Farming in Slovene Istria
In Slovene Istria, natural conditions for the development of organic farming are good, though we have only witnessed the rise of organic farming over the last few years. Due to the lack of data related to organic farming in Slovene Istria, field-work was conducted in spring 2008 with some additional research in 2009. Questionnaires and interviews with organic farmers include various aspects: characteristics of their farming activities, demographic and socio-economic features, and others. The prevailing branches of organic farms in Slovene Istria are olive-growing and mixed production. We can also mention a very high educational level of farmers and positive age-structure of households on organic farms. Possible perspectives related to organic farming in the studied area have been discussed in the conclusion of the paper.

Key words
Slovene Istria, Slovenia, rural areas, sustainable development, organic farming

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1. Introduction

Farming is, besides industry, traffic and the energy sector of the economy, perceived as one of the major environmental polluters for its negative effects on the entire biosphere. Questionable, at the same time, is the quality of goods and products grown by using artificial fertilizers and phytopharmaceutical means or, on the other hand, quality of products that can be categorized as genetically modified organisms (GMO's). More and more widespread among laics and experts is the perception that links many illnesses of the 'new age' to the mode of production and to the use of various (potentially) dangerous chemical ingredients in farming.

Organic farming, perceived as a people- and nature-friendly form of farming, is included in the farming-environmental programs. Unlike conventional (intensive) farming, known for its many negative effects, organic farming only exerts a minimal degree of negative effects.[1] This is mainly because of the prohibited use of artificial mineral fertilizers, pesticides, herbicides and limited use of fungicides (Table 1).

Tab. 1: Basic differentiation between ecological and conventional farming.

	Organic	Conventional
Improvement of fertile ground	proper procedures of tilling the land, organic fertilization, rotation of crops	the use of mineral fertilizers
Plant nutrition	indirect (nutrition release from the ground)	direct (the use of liquid mineral fertilizers)
Plant protection	Abolition of causes, prevention of new illnesses, pests and the growth of weed	abolition of symptoms by the use of phytopharmaceutical means
Cattle-breeding	proper living conditions (outdoor, space, light)	battery breeding of poultry (indoor)
Cattle nutrition	optimal quality of home grown nutritive substances	optimal supplement nutrition (protein and other additives)
Animal treatment	increasing resistance	treatment of (illness) symptoms

Source: Bavec, 2001, 22.

Bavec defines organic farming as the mode of sustainable farming that is, regarding food cultivation, characterised by a systemic balance between ground-plant-animal-human and joined circulation of nutritive substances in the system (Bavec 2001, 9). The basic premise of organic farming, according to Lampkin (1994), is sustainability that, apart from maintaining renewable sources, includes environmental and social sustainability. In Europe, terms like organic, biological, i.e. organic farming are being used, whereas in Slovenia, we use the term organic farming. The prefix bio- is used for products and foods (Kocjan Ačko 2002).

The primary aim of organic farming is therefore the production of healthy, quality vegetable and animal products, i.e. products that are congruent with nature and its laws (Bavec 2001). Other goals in pursuit of organic farming can be included under the following points (Štancar Poprask 2008):

[1] Several studies investigate the effects of organic farming on the environment and compare these effects to conventional farming. Most authors agree that negative effects are smaller with organic farming. However, the analyses differ in the assessment of to what degree the negative effects are smaller with organic farming. We believe these incongruities appear due to differing methodological approaches. See also the complex interdisciplinary study 'The Environmental Impacts of Organic Farming in Europe' (Stolze et al., 2000).

- maintaining fertile ground,
- circulation of nutrients,
- proper breeding and feeding of animals,
- protection of nature life-sources (water-ground-air),
- minimum loading of environment,
- active protection of environment and biotic diversity,
- protection of energy and resources and
- ensuring jobs in farming.

Basic prohibitions in organic farming are (Bavec 2001):

- use of chemo-synthetic means for the protection of plants,
- use of disinfected seed,
- use of liquid fertilizers,
- use of synthetic additives in nutrition,
- use of animal derivatives in nutrition,
- use of genetically modified organisms (GMO's) and
- preventive healing of animals by using chemotherapeutics (kokcidyostatics, antibiotics).

According to Lampkin (1994), organic farming owns the potential of ensuring various benefits, like: environmental protection, maintenance of non-renewable sources, better food quality, reduction of over-production and redirection of farming towards market demands.[2] Besides farming-environmental aspects, organic farming also has a socio-economic side, since it is an economic discipline that provides earnings and better life conditions to an increasing number of people and is, therefore, a »market niche«.

Even though the situation regarding organic farming is relatively well-known in Slovenia in general, this is not true for the area of Slovene Istria. This presentation of the research results (based on research among organic farmers) in Slovene Istria is, in this respect, one of the first academic contributions of its kind.

2. Methodology

An overview of relevant sources and literature pointed out a definition of the role of organic farming according to developmental plans of Slovene Istria. We therefore examined several existing developmental documents: Regionalni razvojni program Južne Primorske / 'Južna Primorska' regional developmental programme (RRP 2006), Razvojni program podeželja / Countryside developmental programme (RPP 2006) and Program varstva okolja za Slovensko Istro / Environmental protection programme in Slovene Istria (PVO 2006). For acquiring additional information regarding the implementation of the programmes related to organic farming and views on the developmental role of organic farming in this region, we referred (via email) directly to the Regional Developmental Centre, Koper (RRC).

Due to lack of empirical evidence on organic farming in Slovene Istria, in June and July 2008, a field research study (Survey 2008) was applied with the intention to catalogue and lead a discussion with all organic farmers included in one of the control organisations. We designed a survey questionnaire containing twenty-six

[2] 'Redirection into organic farming, together with simultaneous modification of marketing, could possibly mean the exit from the bewitched circle of increasing amounts of production. Besides that, it could also mean a real opportunity for preservation of many farms and respective jobs' (Bavec 2001, 21).

questions and tried to encompass a wide spectrum of specifics and aspects of economic farming in Slovene Istria. The survey sample represents organic farmers from Slovene Istria that are included in control mechanisms of organic farming. From the total of thirty-seven organic farmers included in control organisations, we managed to perform the survey with the cooperation of thirty-three. We interpreted and mapped (showed on a map) the results with the help of Geographical information systems (GIS), namely Arc map software. We also conducted interviews with Boris Fras, an organic farmer from Ankaran and the president of the Slovene Association of Organic Farmers (Fras 2008).

3. Some geographical features of Slovene Istria

Slovene Istria is neither a historical region nor did it have its contemporary name until the solution of political problems and accession to Slovenia in 1954. By the end of the 19th Century and during the 2nd World War, the name Slovene Istria began to spread. After the war, several names appeared relating to this area (Obala – The Coast, Obalna pokrajina – Coastal region, Koprsko, Koprsko primorje, Koprska pokrajina, Primorje, Slovenska Istra, Istrska Slovenija, Šavrini, Šavrinska Brda, Šavrinsko gričevje, Obmorska regija, Koprska regija) and yet none of them ever came into general use (Ogrin 1995).

Slovene Istria encompasses areas of the municipalities of Koper, Izola and Piran. Geographically, it can be divided into Kraški rob (The Karst edge), Šavrinsko gričevje (The Šavrini hills), and oz. zaledje in na obalni pas (The Coastal belt). The area of three coastal municipalities reaches from the slopes of Slavnik and Podgorski Kras above Kraški rob on the East towards the Croatian border, above the Dragonja valley on the South and the Adriatic Sea on the West. The Northern border of the region is the State border to Italy. The middle part of the region consists of the Šavrini Hills rising to approximately 500 meters above sea level.

The region is one of the smallest Slovene regions, while at the same time, among the most developed. Within the region, significant socio-economic and physical-geographic differences appear. The entire area of Slovene Istria (the municipalities of Koper, Izola and Piran) has around 80,000 inhabitants or approximately 4% of Slovene residents. Approximately 54,000 people live in urban areas that are placed near the coast and show a high level of urbanization. The coastal area is perceived as an economically highly developed area with strong and successful enterprise and tourism, a high level of urbanization, developed infrastructure and positive demographic and economic indicators (proven also by indicators like enterprise profitability and population purchasing power), (RRP 2006, 31):

- the net profit per employed person exceeds the Slovene average and
- population purchasing power (PPP), measured by the height of gross basis for income-tax per capita exceeds the Slovene average.

On the other hand, in recent years, the regional countryside has been dealing with many problems and thus remains demographically, socially and economically underdeveloped. The most problematic issues of the (Slovene) Istrian country-side are: emigration to cities, high levels of aged population, low educational level, low infrastructure, deagrarianisation, growing over of the land, decay of natural and cultural heritage, decay of building assemblage (RRP 2006, 31).

The decrease in population began (mostly in the Southern and Southeastern parts) at the beginning of the 19th century and has been continually rising since then. The migration trajectory was pointed towards lowlands, namely cities on the coast. The majority of population firstly emigrated to Trieste and later on (along with economic prosperity and urbanization) to other Slovene coastal cities as well. Because there was no economic development that would lead to better employment options in the countryside, the area is characterized by strong deagrarianisation. This consequentially led to a high level of daily migration into coastal cities. The most endangered are distant and higher placed villages with poor traffic connections and other infrastructure (Komat 1999).

It still needs to be emphasized that these negative trends have been levelling out in recent years, i.e. have been changing, which especially applies to bigger settlements closer and more accessible to the cities on the coast. Also, recently, many young families have decided to stay in the countryside (RRP 2006, 31).

4. Estimation of natural conditions for (organic) farming in Slovene Istria

In Slovene Istria, natural conditions are generally favourable for organic farming. This is evident from the data on tilling areas that, in (Slovene) Istria, represent a higher percent of all agricultural areas than the Slovene average. However, it needs to be emphasized that the intensity of agriculture in Slovene Istria varies greatly (due to large physical-geographic differences) within the region. A large part of the countryside (hinterland) is perceived as less appropriate for agriculture, therefore agriculture in these parts is less intensive in comparison to in the southwest, which is much more appropriate for tilling (Rejec Brancelj 1995).

Due to the above-mentioned physical-geographic differences, it is difficult to give a common assessment of favourable, less favourable and unfavourable natural farming conditions for the entire region, yet we have decided (on the basis of the collected data and gathered information on physical-geographical characteristics of Slovene Istria and our own (expert) views to provide a common estimation, whereby we mostly emphasize favourable and less favourable attributes of natural conditions for farming in Slovene Istria (in comparison to Slovenia).

Very favourable conditions:
- temperatures,
- amount of solar radiation,
- length of vegetation period and
- phenological conditions.

Mediocre favourable conditions:
- relief and
- pedological conditions.

Less favourable conditions:
- distribution of rainfall,
- potential danger for drought,
- danger of white frost and frost and
- winds.

According to natural conditions, the most favourable discipline is wine-growing – wine-leaves can grow on poorer and less fertile soil and are more resilient to lower temperatures and deficit of water. The best areas for wine growing are The Sečovlje

valley, the hilly hinterland of Izola and the upper Rižanska valley in Miljski polotok (the semi-island of Milje). Potentially favourable areas for wine growing are also the accumulation flats of water streams (Dragonja, Drnica) and joined areas on the ridge in the hinterland – from Šmarje across Merezige to Topolovec and Pregare. Less appropriate areas are steep, north-facing and Karst areas 500 meters and higher above sea level.

Potential fruit-growing areas mainly correspond with the above-mentioned wine-growing areas, but are only half the size (in comparison to wine-growing) due to higher sensitivity of fruit types (mostly early season types like cherries, apricots, peaches, etc.) to lower temperatures (frost). At the same time, fruit-growing is mostly associated with the irrigation of growing areas. For the growth of fruit, the most favourable areas are those of accumulation flats of water streams (Dragonja, Drnica, Rižana) and areas and ridges facing the sun and up to about 300 meters above sea level. Regarding the potentials and perspectives for development, the growth of vegetables (early season types) is the discipline in which the differences between coastal and inner hinterland areas become the most evident. Potentially favourable areas for the growth of early season types of vegetables in inner hinterland areas are practically non-existent, since this agricultural discipline is conditioned by characteristics of the Mediterranean climate,
i.e. higher winter and spring temperatures. Therefore, only the areas of accumulation flats without erosion and with watering potential are suitable for early season types of vegetable (Plut 1976).

Tab. 2: Division of Slovene Istria according to the natural potential for farming (wine-growing, fruit-growing, vegetable-growing) in groups (1 – lowest potential, 5 - highest potential).

Group / Range	Number of (cadastral) municipalities	Proportion of the entire area in %
1.	4	9.1
2.	13	25
3.	19	43.2
4.	9	18,2
5.	2	4.5

Source: Plut, 1976.

According to the indicated data, practically the entire costal region (with the exception of the towns of Koper, Izola and Piran) has a high natural potential for farming. The natural conditions for farming are also favourable in the nearer (inner) hinterland and in the hearts of the Šavrini hills (with the exception of the cadastral municipalities of Nova vas and Truške). The areas with the lowest natural potential are in the eastern part of the hinterland. These areas can also be perceived as appropriate for the development of organic farming. This claim can be supported by the fact that organic farming in Slovenia developed primarily in the most distant areas where the natural conditions for (intensive) agriculture are more difficult. We estimate that natural conditions in the hinterland are suitable mostly for organic cattle-breeding, breeding of sheep, some field cultures (grain, potatoes, etc.) and fruit-growing (figs, kakis, etc.). A significant advantage of the hinterland is that, in the past, extensive cultivation exerted only modest (negative) effects on the

environment and there are potentials for larger organic farms. Our estimation is that a significant part of Slovene Istria is suitable for organic farming.

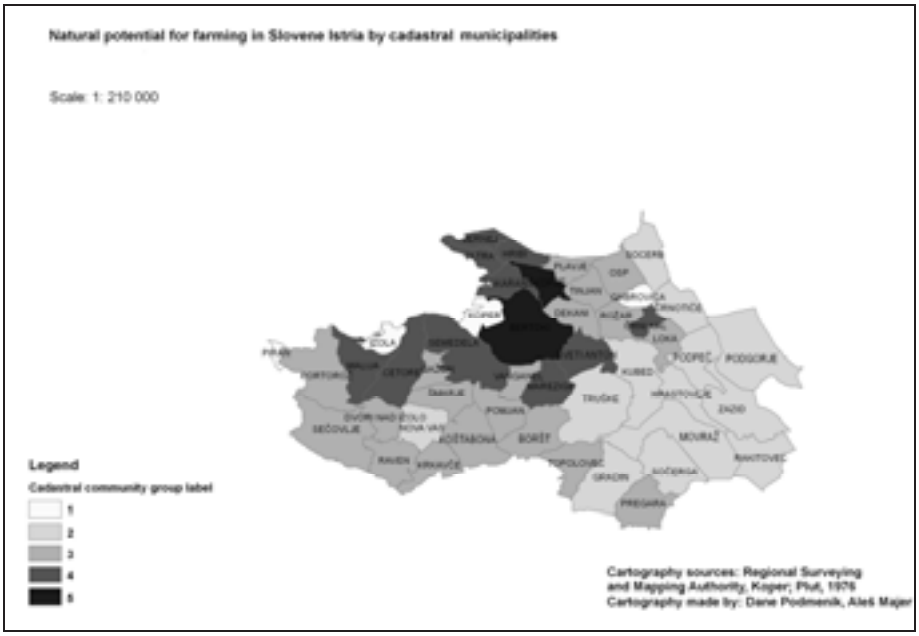

Fig. 1: Natural potential for farming (wine-growing, fruit-growing and vegetable-growing) in Slovene Istria by cadastral municipalities (Survey 2008).

5. Organic farming in Slovene Istria: (current) situation and perspectives

According to data from the three Slovene operational control organisations there were thirty-seven organic farms in Slovene Istria in 2008, of which thirty-four were 'family farms'. Five (family) farms have a portion of their land included in integral cultivation and another portion in organic cultivation[3]. The share of family organic farms in comparison to all family farms in Slovene Istria is only 1.6% and is almost equally divided among the three coastal municipalities (Bureau Veritas 2008, IKC 2008, KON-CERT 2008, PKG 2002).

Organic farms in Slovene Istria are relatively small[4], since over half of them reach up to the size of 5 ha of farm land in use, while only one fifth of them spread over 10 ha. The average size of all organic farms is 6.96 ha, while the average for family organic farms is still lower: 5.66 ha. By far the largest, with over 40 ha (mostly vineyards) is the estate of the Brič corp., while the largest family farm is situated in Lukini and reaches 26 ha of tilling areas (mostly fields). The smallest family farm is only 0.47 ha in size (Fig. 2).

[3] Even though these are 'mixed' farms, in our analysis, they are included as pure organic farms. Yet, we hereby considered only surfaces under organic control.
[4] This can be attributed mostly to the heritage of former (Italian) hereditary law and specific natural conditions.

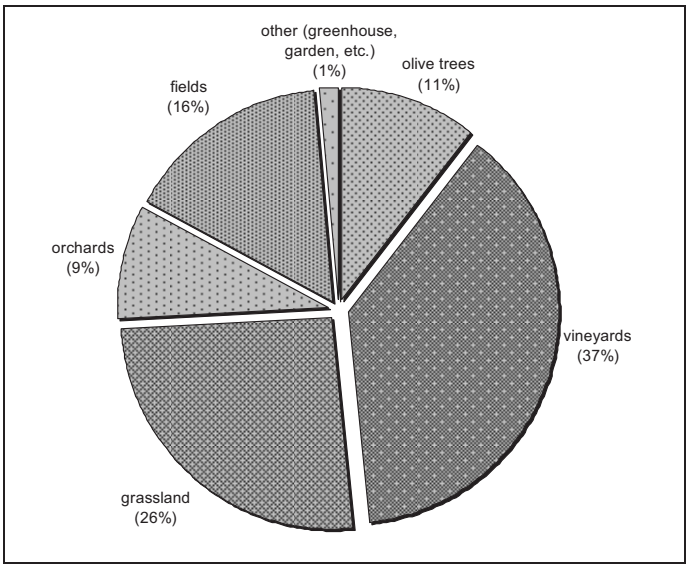

Fig. 2: Organic land by land use in Slovene Istria (Survey 2008).

According to the survey data (Survey 2008), there are approximately 231 ha of farming surfaces under organic supervision[5]. Supervised farming areas in the possession of family farms reach up to about 170 ha or 4% of all farming surfaces in use in the possession of family farms in Slovene Istria. They are mostly vineyards (87 ha), of which almost 83 ha are in the municipality of Koper. We need to emphasize that 37 ha, i.e. almost half of organic vineyards, belong to the Brič corp. estate (Tab. 3).

Tab. 3: Organic land by land use by municipalities in Slovene Istria (ha).

Municipality	Olives	Vineyards	Grass	Fruits	Fields	Gardens	Green-houses	Other (decorative plants)	Total
Koper	14.6	82.7	36.8	6.4	29.8	0.42	0.11	2.5	173.3
Izola	2.8	4.2	1	13.6	2.9	/	/	/	24.5
Piran	7	0.15	22	/	3.8	0.11	0.05	/	33.1
Total	24.4	87	59.8	20	36.5	0.53	0.16	2.5	230.9

Source: Survey, 2008.

The prevailing farming disciplines are olive-growing (however, olives take over only about 10% of all organic surfaces) and mixed types. Five farms are purely wine-growing farms, one farm is agriculture oriented, one farm is vegetable-growing oriented, whereas purely fruit-growing and cattle-growing oriented farms do not exist. There are almost no farm animals on the organic farms. Altogether, there are only 60 chickens, 20 horses, two goats, one pig and one donkey, and no cattle (Survey 2008).

[5] Since our survey did not encompass all organic farms in Slovene Istria, we assume that the range of organic surfaces is slightly larger than our data shows.

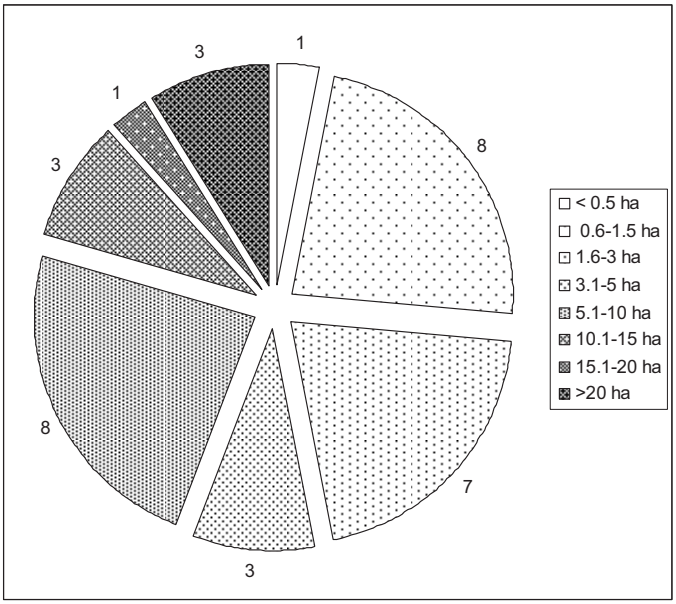

Fig. 3: Sizes of organic farms in Slovene Istria (ha) (Survey 2008).

Minimum presence of farm animals triggers the question of fertilization of grounds. In organic farming, farmers should strive towards the use of manure and compost produced on the farm. Over half of the surveyed organic farmers fertilize their surfaces exclusively with purchased fertilizers, as prescribed by the rules of organic farming. Approximately one fifth of farmers fertilize their surfaces exclusively or mostly with domestic (home produced) manure and/or compost. Somehow surprising is the fact that over 25% of farmers do not fertilize tilling grounds at all. Among these, the (new) olive- and wine-growing farmers prevail. In regard to this, we must emphasize that olive- and wine-growing is practiced on surfaces that do not need to be fertilized every year; besides, some tilling land (with some farmers only recently having started organic farming) was intensively fertilized in previous years.

There are not many full-time farmers, since organic farming is the main source of earning to only five surveyed farmers. However, a vast majority (27) of the surveyed farmers are market oriented and – what is most important – do not experience difficulties regarding sales. In some cases, even excessive demand for certain products exists. Almost half of the respondents market their products and goods exclusively at homes. One third, however, market their goods in several ways: at home, (organic) markets, various events and fairs, in shops, supermarkets, abroad, restaurants, hotels and wine-houses (Survey 2008).

In the end, we can only point to very favourable socio-demographic indicators of organic farming in Slovene Istria. Hereby, we mostly refer to favourable age composition of families and education of masters of organic farms. High educational average of farmers (masters) – over half of the respondents have college or university education – is in this respect, very positive (Survey 2008).

Tab. 4: Valuation of organic farming in Slovene Istria.

Positive	Negative
Composition of organic farm surfaces	Development (proportion of organic farm surfaces and organic farms)
Educational level of owners of organic farms	Small number of livestock
Age composition of families on organic farms	Low level of surfaces dedicated to (early) growing of vegetables and fruits
Vast majority of organic farmers are market-oriented	Geographic distribution (presence) of organic farming
Majority of organic farmers do not have difficulties with product sales	Fertilization mode
	Low proportion of farmers with farming as main income
	Low cohesion between organic farmers

5.1 Issue of unequal spatial distribution of organic farming in Slovene Istria

Geographically speaking, there are significant differences in the distribution of organic farming in Slovene Istria, especially between Eastern (hinterland) and other parts (Figure 4 and Figure 5). With the exception of one organic farm, which is located in the cadastral municipality of Sočerga, there are no organic farms in the entire Eastern part of the region.

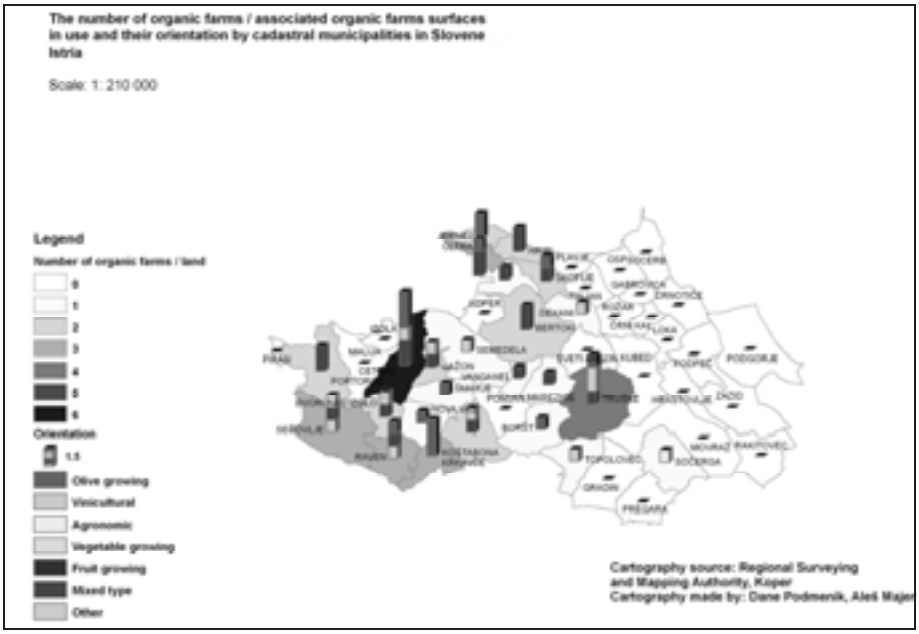

Fig. 4: The number of organic farms / associated organic farm surfaces in use and their orientation by cadastral municipalities in Slovene Istria (Survey, 2008).

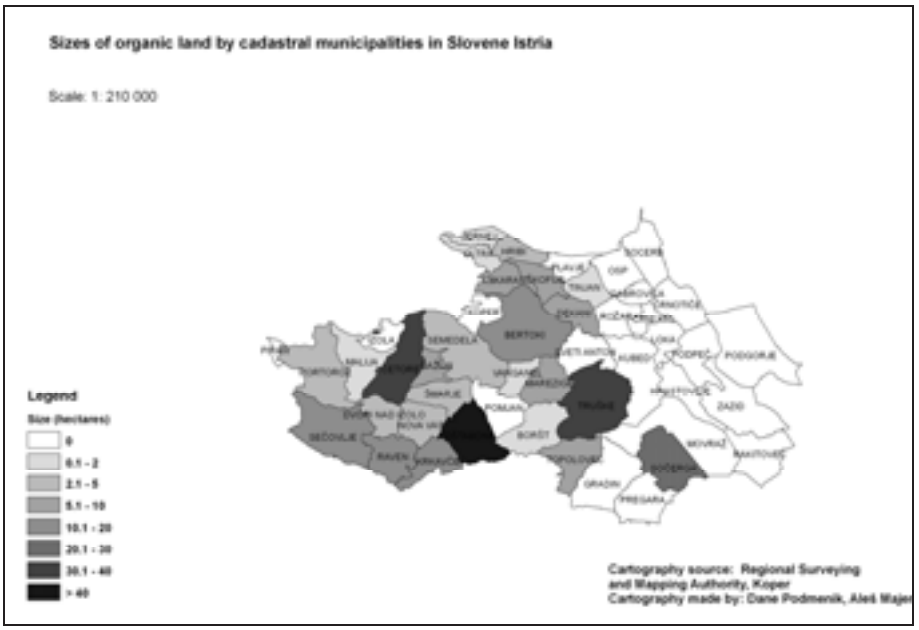

Fig. 5: Sizes of organic land by cadastral municipalities in Slovene Istria (Survey, 2008).

Reasons for this situation should be investigated in future research. In our opinion, organic farming is an important developmental opportunity for the most under-developed parts (hinterland) of Slovene Istria.

6. Conclusion

Considering the situation in Slovenia, we estimate that organic farming in Slovene Istria is underdeveloped and, at the same time, very specific. These specifics or differences (in comparison to Slovene organic farming) are transparent mainly in the size of organic farms, their orientation and the composition of farming surfaces. Organic farming in this region has only developed significantly in recent years, which can be proven by the data on inclusion of farmers in the control system over time. Almost half of the surveyed farmers have been included in the organic farming control for between one and three years, while (only) one fifth of farmers, for over five years.

The analysis of developmental programmes for Slovene Istria has shown that organic farming takes no priority in developmental plans. It is true that some projects (directly or indirectly related to organic farming) appear, but without specific declaration and therefore their implementation is questionable.

We estimate that the entire hinterland of Slovene Istria is an area with high natural and cultural value and we believe it has high potential for the development of protected areas and environmental-friendly activities (organic farming, eco-tourism, various types of 'green' tourism, etc.) that can also be market-oriented and with the potential for creating new jobs and higher added value. The combination of the above-mentioned activities, namely, forms of sustainable development, could be a

valued contribution to proper (sustainable) development of the hinterland and its establishment as a 'natural' alternative to the development of the coastal part of Slovene Istria.

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PROBLEMS AND PERSPECTIVES OF ORGANIC FARMING IN SLOVENE ISTRIA

Summary

In Slovene Istria, the natural conditions for organic farming are favourable in spite of significant differences within the region. According to the indicated data, practically the entire coastal part of the region (with the exception of littoral urbanised area) has a high natural potential for farming. Favourable natural conditions for farming can also be found in the nearer (inner) hinterland and the Šavrini hills. The areas with the lowest natural potential are in the eastern part of the hinterland, but can be perceived as appropriate for the development of organic farming. Namely, organic farming in Slovenia developed mostly in the most remote areas where the natural conditions for (intensive) agriculture are more difficult. We estimate that natural conditions in the hinterland are suitable primarily for organic cattle-breeding, breeding of sheep, some field cultures (grain potatoes, etc.) and fruit-growing (figs, kakis, etc.). A significant advantage of the hinterland is also the fact that, in the past, extensive cultivation exerted only modest (negative) effects on the environment and there are potentials for larger organic farms.

Even though the majority of surveyed organic farmers, among them Boris Fras (Chair of the Slovene Association of Organic Farmers), believe in the potential of organic farming in Slovene Istria, they are facing a lack of stronger engagement, namely support from regional acceleration services and from local politicians, who could – with proper orientation and vision – contribute to its development.

An important part of the field research conducted in June and July 2008 are questionnaires that provide empirical data for the majority of the organic farms in Slovene Istria. The survey included 37 farms with around 231 hectares of organic land. The prevailing branches of organic farms in Slovene Istria are olive-growing and mixed production, while the prevailing land use is wine growing (37% of all organic land). The average size of organic farms is 6.96 ha, while 5.66 ha is the average for family organic farms.

In the end, we can only point out the very favourable socio-demographic indicators of organic farming in Slovene Istria, namely the favourable age composition of families and high educational average of owners of organic farms – over half of the respondents have college or university education.

CULTURAL LANDSCAPE AND TOURISM ON HISTORIC RANCHES OF THE PANTANAL WETLANDS OF BRAZIL

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Abstract
Cultural Landscape and Tourism on Historic Ranches of the Pantanal Wetlands of Brazil
The rise of eco-tourism and rural tourism as new complementary activities which add value to traditional stock-raising functions on historic ranches located in the Pantanal Wetlands of Central-West Brazil is analyzed. Differently from other rural enterprises of the booming Central-West, which produce the majority of Brazilian export commodities, the specific environmental conditions of seasonal wetlands and perennial swamp of the Pantanal restrict the viable options for gaining access to global markets. Consequently, after 1990 ranchers of the Pantanal have developed tourist activities based on the spectacular natural beauty of the wetlands as well as the distinct ranching culture. The ranches have modernized with amenities to attract domestic and foreign tourists and tourism has assumed an importance source of their income.

Key words
eco-tourism, rural tourism, cultural landscape, Pantanal wetlands, Central-West Brazil

The editor received the article on 19.3.2010.

1. Introduction

The Pantanal is a broad sedimentary basin dating from the Quaternary which is seasonally flooded. The region is spectacularly beautiful and possesses a complex ecosystem with exuberant flora and fauna attuned to the seasonal pluvial and fluvial floods, which advance over vast open wetlands during the rainy season.

The floodplain is located in the far west of Brazil between 17º to 22º latitudes South and 55º to 59 º longitudes West. The Pantanal occupies a total area of 192,600 km^2, of which about 150 thousand square kilometres are located in Brazil, divided between the states of Mato Grosso (40%) and Mato Grosso do Sul (60%).

Defined by internal variation in flooding, of relief and of soil types, the Pantanal is divided into eleven sub-regions: Barão do Megalaço, Cáceres and Poconé in Mato Grosso state and Abobral, Miranda, Aquidauana, Porto Murtinho, Nabileque, Paraguai, Paiaguás and Nhecolândia in Mato Grosso do Sul state. The part in the latter state is known as the southern Pantanal and is the object of this study.

The principal economic activity of the Pantanal is beef ranching. The wetlands have low population density and historically were divided up between huge ranches so that few urban areas exist in the region. Population is concentrated in the small cities of the Pantanal and around the ranch stead. The ranches are so large that they are located at great distances from one another as well as from the cities and vast empty areas exist in between. Relative distance is further aggravated by the difficulty of establishing transport facilities in wetlands and the seasonal isolation which occurs during the annual floods, all of which have historically limited economic integration and development so that the region has never been very dynamic.

However, today within contemporary processes of restructuring global capitalism, the Pantanal has assumed new functions of organic beef production often times associated with tourism so that productive ranches have set up eco-lodges to cater to Brazilian and foreign tourists. This multi-functionality of Pantanal rural space has assumed considerable importance for economic and social regional development. The opportunity for additional income to be earned in rural and eco-tourism is such that both traditional and modern ranches have taken on this activity.

The incorporation of the Pantanal in global tourism is based on its comparative advantages of great natural beauty, a slow way of life conducive to "ecological leisure" and de-stressing, rich fishing resources and a traditional way of life based on wetland ranching. These advantages have created an environment for innovative business to use the rich natural and cultural landscape to market holidays on the historic ranches of the Pantanal.

The object of this study is to evaluate the spatial transformations provoked by the introduction of rural and eco-tourism into the southern Pantanal, the part of the wetlands which has lead this process. The results presented here are based on bibliographic research, secondary statistics and field work in which questionnaires were applied to 91 ranches in the southern part of the Pantanal in 2002 to 2005 as well interviews with fifteen representatives of tourist agencies. In addition, follow up visits were undertaken in 2006 and 2008.

2. Tourism in the Southern Pantanal: Natural Beauty and Historic Ranches

Tourism is a global growth industry which can be of great importance for social and economic regional development but involves two apparently contradictory movements: spatial differentiation and homogenization. Tourism attributes value to spatial differentiation at the same time that space is standardized in terms of price, comfort, basic infrastructure and service and product quality so that spatial difference is reduced but still remains different (Araujo 2006). Consequently, the natural beauty and cultural heritage of the Pantanal are emphasized but tourist activities follow the fundamental logic of global capitalism. As Santos (1997) points out, spatial uniformity is re-dimensioned by the perception of distance at the same time that technical unity occurs and productive relations are internalized so creating value for regional differences. Within this dynamic process in the southern Pantanal, trans-cultural interaction and the conservation and preservation of social and natural attributes are tied into global spatial production, which articulates the region into world tourist markets but also can provoke internal change to the point of threatening local distinctiveness and ultimately the product being sold (Araujo 2006, Araujo and Bicalho 2009).

In the southern Pantanal the only tourist activity of any importance in the past was sport fishing, which was based solely on the natural attribute of large stocks and variety of fish present in the region. This overly specialized tourist base caused tourism to decline during the 1990s due to the poor quality of the services offered and the lack of infrastructure and planning. Fishermen would trailer boats and beer in from their home states and stay in gaudy camp grounds and motels surrounded by brothels. These male tourists would get drunk while fishing by day and then whoring by night. This generated little local income of questionable social sustainability. As a result, after 2000 many of the camp grounds and small motels were transformed from eye sores to more presentable establishments catering to rural and eco-tourism. Today public and private officials are trying to revitalize sport fishing in the region but as part of more diversified tourist products which includes fishing within rural and eco-tourism.

Eco-tourism is promoted in the media by marketing the Pantanal as a 'paradise', an 'El Dorado' and an 'ecological sanctuary'. Officials are keen on developing eco-tourism in a more planned way which would be coherent with maintaining local natural and cultural resources rather than encourage mass tourism which could provoke the opposite. The development of local rural and eco-tourism was first promoted by government tourist agencies and then taken up by the ranchers. A crisis in beef production during the 1990s sent home the need to diversify economic activities and tourism based on local natural resources and a distinctive way of life proved to be a promising line of work.

The historic ranches maintained traditional extensive cattle raising at the same time that eco-lodges were set up near the ranch house on the property. This new activity aggregates value changing the ranch but maintaining it as something akin to what it was before. In the words of a woman who transformed her ranch in this way, "With the division of my grandfather's ranch among heirs into a number of separate properties, with each heir needing to invest money into new infrastructure, we passed a period of great difficulty. Then, in 1996, the prospect appeared of investing in tourism as an alternative source of income. At first my father was against it but we insisted and he finally agreed to let us set up an eco-lodge. In 1997 we opened

for business and tourism was the salvation of the ranch. Today we earn up to 50% from rural tourism, my father still turns his nose up at the activity but is pleased with the financial return" (interview, 2003).

As there are in-numerous natural and cultural attractions in the Pantanal, rural and eco-tourism has quickly become a promising activity, which could result in sustainable development by incorporating environmental and cultural dimensions into regional development. Local business people have become acutely aware of the natural value of flora and fauna for international tourism and of the necessary trade-offs involved with combining activities, as the following remark shows,

"We have a number of scientific projects on the ranch, which are undertaken in partnerships with universities with the objective of preserving species threatened with extinction, such as the blue macaw and the spotted jaguar. We may lose calves to jaguars but we are more than compensated by the tourism" (interview, 2004).

The incorporation of an environmental dimension to regional development policy was fundamental for permitting access to the financial resources necessary for funding new rural activities, which in turn, reinforce wildlife conservation. This synergy was identified on all of the 91 ranches researched, with cattle ranching combined to different tourist activities in such a way as to result in the preservation of the environment. One interesting combination is organic cattle raising and tourism present on 11% of the ranches researched in which alternative forms of ranching seek harmony and balance with the Pantanal ecosystem.

3. The Role of the State in Promoting Tourism in the Pantanal

Different levels of government have stimulated the development of tourism in the region of study. With the objective of preserving biodiversity, traditional genetic resources and local culture, federal and state environmental reserves and parks have been created as well as private-sector reserves which can be quite large given the size of the ranches in the Pantanal. At the regional level, all levels of government have been involved in improving roads and other transport infrastructure as well as expanding electric and telecommunication services. Many of these investments have been made with the express intent of stimulating the growth of tourism and specific governmental agencies have been created to regulate and advertise tourism in the southern Pantanal (Araujo and Bicalho 2009).

With the aim of integrating the region into national and international tourist destinations, the International Airport of Corumbá was amplified, a new airport was built in Bonito municipality and another new airport is planned for Porto Murtinho municipality. A paved highway was built across the Pantanal linking Corumbá and the state capital Campo Grande. Existing roads within the wetlands have been transformed into "park routes" and are being better maintained and a number of bridges were built permitting all-season access to the tourist destinations. In 2009 the historic railway between Campo Grande, Miranda and Aquiduana was reactivated as a tourist attraction.

Municipal governments of the Pantanal have followed federal directives for tourism by setting up Municipal Secretariats for Tourism as well as private-public Municipal Tourist Councils which permit feedback to government. At the state level, in 1999 Mato Grosso do Sul implemented its part of the National Plan for Sustainable Tourist

Development (PDTUR) in partnership with a number of public and private institutions. This plan includes training qualified tourist workers, planning tourist development in specific parts of the Pantanal, advertising tourism at the national and international level and establishing a tourist calendar of traditional festivities and events regularly held so as to assure a constant flow of tourists.

4. Tourist Development

The ranchers and business people engaged in tourism have assimilated the different suggestions for the sustainable development of the activity made by different levels of government. They are becoming better organized in associations, such as the Brazilian Association of the Hotel Industry of Mato Grosso do Sul (ABIH/MS) and the Association of Eco-lodges of the Pantanal (APPAN). They have invested heavily in expanding hotel capacity, in sophisticated leisure infrastructure and in advertising and marketing.

Among the measures taken by the private sector, the most important has been to build a network of tourist services in urban and rural areas, including hotels, eco-lodges, restaurants, night clubs and other attractions, organized in enterprises which are passing through a period of acquisitions. Urban amenities are demanded by tourists so that after 1995, when electricity was made available for the first time in these remote rural areas, most ranch eco-lodges installed electric lighting, running water, air conditioning, cable television, internet and mini-refrigerators in the guest rooms and saunas and swimming pools for collective use. Tourist attractions have been set up on and off the ranch in order to fulfil what the rural and eco-tourist of urban origin expects to see in the Pantanal. Tourist facilities include parking lots, public bathrooms, access roads to lakes for recreation fishing, ecological trails and viewpoints, so permitting easy and safe access to natural attractions. On the ranch, attractions emphasize cattle raising cultural heritage and a relaxed life style.

Tourist operators market regional difference and the distinctiveness of place in English and Portuguese language brochures, "In photographic boat cruises, jeep tours, horse back riding and trekking the visitor will have the opportunity to experience the spectacularly beautiful region of the southern Pantanal, the meandering creeks and rivers, the exuberant forest at water's edge, the floodplains and the birds and wildlife all in plain view".

Municipal governments also produce similar brochures highlighting the attractions in their counties, an example being: "Located in the southern Pantanal, Miranda county is an excellent tourist destination offering ecological tourism in which the visitor can contemplate the beauty of the local flora and fauna. Rural tourism is also available in which the visitor can participate in the daily activities of a typical Pantanal ranch. Sport fishing is another option with a long tradition of good service and an abundance of fish".

At the national level, rural and eco-tourism in the Pantanal is aggressively marketed in advertising in newspapers and on television in the principal metropolitan areas of Brazil. These areas have serious problems with air and noise pollution as well as with urban violence so that tourists come for a peaceful stay. A tourist from industrialized São Paulo summed up his experience as, "This place is Paradise. I breathe fresh air and here it is so calm. I never felt so close to God. The sky is

blue, there is so much water and so many creatures, all surrounded by Nature" (interview, 2004).

Foreign tourists make up the majority of tourists (65%), many of whom are Europeans (Fig. 1). Brazilians comprise 35% of the total and the great majority of them come from the neighbouring state of São Paulo (Fig. 2). The tourists from Europe and São Paulo seek a respite from their highly urbanized, domesticated landscapes and come to the southern Pantanal in the hope of encountering a natural world untouched by modern capitalism in which they can experience a rural lifestyle. Contact with cattle and horses in the rural zone and sighting wild animals on swamp tours are thought as medicine for the daily tensions of the big city in which they live. Differently from sport fishing of the past, rural and eco-tourism give great value to personal introspection and contact with the natural landscape and local culture rather than coming to engage in binge drinking and whoring.

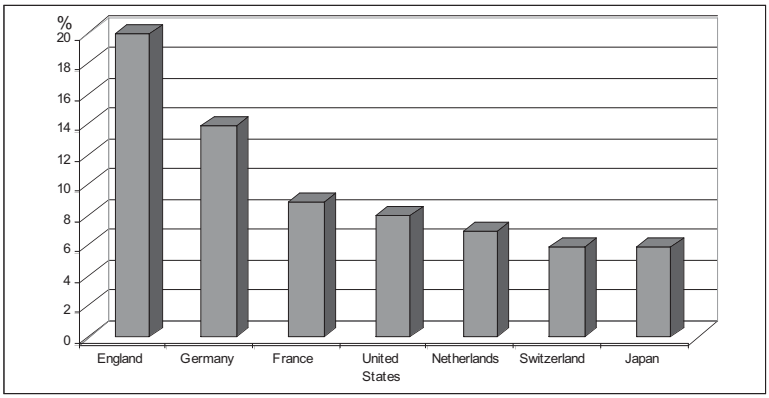

Fig. 1: Country origin of foreign tourists to the southern Pantanal, 2004.
Source: Field research (2004).

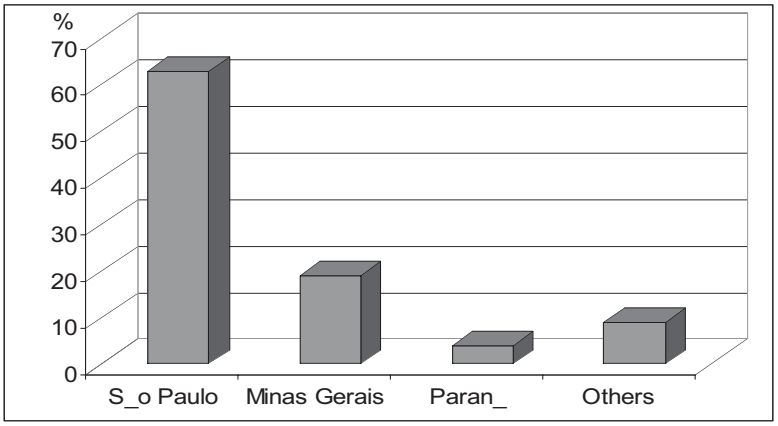

Fig. 2: State origin of Brazilian tourists to the southern Pantanal, 2004.
Source: Field research (2004).

The new kind of tourism is expanding rapidly in the southern Pantanal. According to the Brazilian Association of Hotels of Mato Grosso do Sul in 2005 the area received 260,568 domestic and foreign tourists who spent R$100 million (the equivalent of US$40 million). The number of tourist in 2005 was 10% higher than that of 2004 when 234,512 visited the area and spent about R$90 million (Fig. 3). It should be emphasized that the number of annual visitors has reached the point of being almost the same as the total inhabitants of the southern Pantanal: 296,788 in 2000.

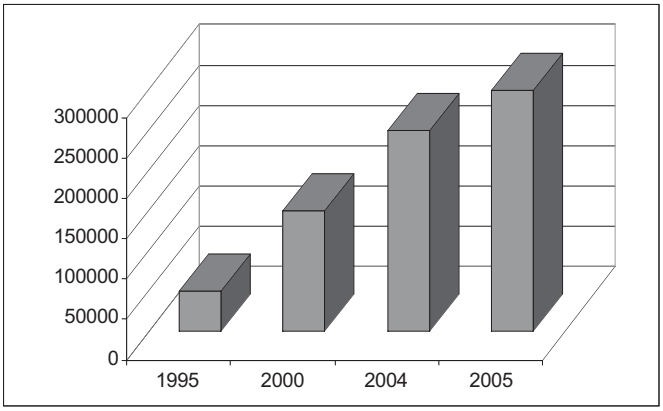

Fig. 3: Number of tourists per year visiting the southern Pantanal.
Source of data: ABIH/MS (2005).

The importance of the new form of tourism vis-à-vis sport fishing of the past can be seen in the number of tourists who visited in 1995 and afterward. In 1995 about 50,000 tourists visited the area, of which 80% came for sport fishing and only 20% for rural and eco-tourism. After 2000 this relationship became inverted as sport fishing entered into decline and rural and eco-tourism expanded.

Capacity was expanded to accompany increased demand and the number of hotel beds increased by 30% from 4,859 beds in 2000 to 6,938 beds in 2005. In Miranda municipality alone, 71% of the ranches located within the wetlands invested in tourist development alongside their cattle raising activities.

On the other hand, considerable spatial concentration occurs with most of the establishments being clustered in Aquidauana, Miranda and particularly Corumbá municipalities, which cover only 28% of the total area of the southern Pantanal. The concentration occurs because of the comparative and competitive advantage of these municipalities. They are characterized by great beauty, offer a diversity of services, have easy access and local business people invest heavily in publicity.

Direct and indirect employment has accompanied this expansion, increasing qualification in hotel and tourist management and services such as guides, boat drivers, chefs and waitresses. Eco-tourism in particular requires training and on 60% of the ranches researched a professional manager runs the operation, 85% of which have university degrees and have done English or Spanish courses.

5. Conclusion

The development of tourism in the southern Pantanal of Mato Grosso do Sul state has induced the construction of a new territory with new functions, forms, structures and spatial processes. These in turn has made the area competitive, with the inclusion of the area in international tourist routes as a non-subordinated space. To become "attractive" in such a way as to compete with other tourist destinations Pantanal tourism has had to standardize its style, services and taste, so that despite being a differentiated space in the world, the Pantanal has had to conform to universal technical requirements and to homogenize its productive space.

The modernization of ranches into eco-lodges and dude ranches is such an example of this process. In the beginning tourist services were rustic but today they have become increasingly sophisticated going beyond former local characteristics. Even if elements of regional identity and preservation of natural and cultural attributes of the southern Pantanal are valued by tourists, new landscapes are created in a process involving ever greater rationalization and homogenization of tourist space.

Acknowledgements

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CULTURAL LANDSCAPE AND TOURISM ON HISTORIC RANCHES OF THE PANTANAL WETLANDS OF BRAZIL

Summary

The rise of eco-tourism and rural tourism as new complementary activities which add value to traditional stock-raising functions is analyzed on the historic ranches located in the southern part of the Pantanal Wetlands of Mato Grosso do Sul state in the Central-West region of Brazil. The Central-West is undergoing profound transformations of its spatial organisation with the advance of large agro-industrial enterprises, however, these changes did not occur into the Pantanal wetlands. The Pantanal consists of a maze of lakes, meandering rivers and swamp in which historically sparsely populated ranches were established in extensive areas in which annual farm activities were regulated by seasonal flooding of the wetlands. Differently from other rural enterprises of the Central-West, the specific environmental conditions of the Pantanal and limited capital resources make farming in the Pantanal less competitive so that ranchers encounter difficulty in intensifying stock-raising methods or in adopting other new agricultural activities. As a result, the Pantanal has not accompanied wider regional trends.

In the search for alternative economic strategies, historic Pantanal ranches have turned to tourism based on their rich natural and cultural heritage in an attempt to add value to their traditional cattle-raising function. This became a possibility after 1990 when new roads were built and rural electrification took place so permitting the construction of a Pantanal tourist territory which attracts visitors from Brazil and from abroad. Ranches have been modified in order to attain international tourist standards of quality and comfort of the installations, even if they are selling nature and a rustic way of life. The tourist activities are associated to nature conservation and preservation of the Pantanal and a distinctive cultural identity of typical customs associated to the seasonal cycles. Tourists have contact with a slower way of life, wide open spaces and close contact with rich tropical fauna.

The apparent leisurely way of life sold to tourists contrasts with a methodically planned tourist sector which pursues clearly determined economic objectives and articulates the ranches to a local tourist network consisting of private-sector firms and government tourism offices and from there to regional and international networks specialised in eco-tourism and rural tourism. The tourist sector represents an important new economic activity and aggregates value and dynamism to a previously backwater region.

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