

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

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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.

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Chief and responsible editor

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