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CHANGES OF RURAL SPACE IN SLOVAKIA FROM SUSTAINABILITY PERSPECTIVE

Introduction — the changing nature of rural areas

Rural areas are dynamic and constantly changing in response to a wide range of economic, social, political and environmental factors. The changes have accelerated in recent years in rural areas not only in market economies, but also in countries in transition. They are diversifying as a result of broader socio-economic and political transformation and societal modernisation.

From the economic point of view, rural areas are no longer dominated by the agricultural sector. Agriculture is being restructured. National and international processes of change contribute to the diminishing importance of the previously dominant production function. Non production functions of rural landscape are of growing importance (nature protection, environmentally friendly tourism, etc.).

Local socio-economic changes become part of the global processes of restructuring. The increasing mobility of people, goods and information has enabled the rural areas to be utilised in new ways. The employment structure has been changing very fast in rural areas, especially in manufacturing, service sector and in terms of small and medium enterprises.

New utilisation of rural space, as e.g. the environmental conservation, tourism, etc. together with changing in employment combine to create new relationships and developmental trajectories.

Economic transformation in rural areas is related to social changes associated with the emigration and in-country migration of particular groups of people.

Many of these changes have coincided with a massive reduction in the influence of the state upon rural lifestyles. Such deregulation has been accompanied by privatisation.

Economic and social changes in rural areas have caused increased pressure on human and natural resources. Governments are being forced to re-evaluate their policy for the countryside. Regulations are becoming very important in relation to environmental conservation and sustainability. Different initiatives are introduced to protect rural landscapes and their components (wildlife protection, air and water pollution prevention, soil erosion prevention, cultural heritage protection, etc.).



Sunflower field near Komárno in the Pannonian part of Slovakia.

Rural migration and social, economic and demographic change

After World War II, the depopulation of the agricultural and more remote rural regions escalated to such an extent that outmigration was often accompanied by natural population decrease. Predominantly, economic factors could be regarded as the cause of decline (employment in industry and later in services, new housing, developed social and technical infrastructure).

Four decades of changes in agriculture (especially collectivisation) and industrialisation in Slovakia also had their demogeographic consequences. Building-up of new urban centres, new jobs and new housing attracted the rural population and caused a migration from the traditional rural settlements. Between 1970–1996, the rural population decreased by 0.5 million inhabitants, and its percentage dropped from 63.8 % to 43.0 %. The statistical data from 1970 show that in 4 districts (Košice-vidiek, Veľký Krtíš, Stará Ľubovňa, Dolný Kubín), the share of rural population was higher than 80 % (11 districts exceeded the level of 75 %). On the contrary, in 1996 only in the district of Košice-vidiek the percentage of rural population was significant — 86.9 % (Fig. 1 and Fig. 2). Concentration and centralisation of practically all areas of life (economy, public administration, job opportunities, housing, etc.) led to a decrease of importance of rural settlement. The process of concentration slowed down and somewhere practically stopped after 1989. An intense depopulation

process changed the population structure in source rural areas with a logical effect on the development of demographic indices and processes in the whole country (Podolák, 1998).

Fig. 1: Share of the rural population in total population (1970)



Fig. 2: Share of the rural population in total population (1996)



The process of demographic ageing of the population was manifested in the 70s in the whole population of Slovakia. Ageing in rural settlements was quicker than the national mean due to the emigration of the younger population groups. Mainly the younger generations were moving to towns during the 70s, and thus the urban population was ageing relatively more slowly than the rural one. The smallest settlements were ageing much more rapidly (Podolák, 1998).

From the 1980s onward, the process of outward movement from cities to the surrounding countryside accelerated and corresponded with an increase of environmental pollution, efficient public transport, and a rising rate of private car ownership. Suburbanisation of countryside is not uniform. The image of silent, green and small villages may draw people from large cities like Bratislava and/or Košice. The availability of relatively cheap housing and the socio-economic character of the villages have become significant factors in the suburbanisation of recent years.

Agriculture substituted for the social role of the state to a significant extent. This situation was significantly changed after 1989, and the process of decreasing employment in agrarian sector accelerated. Since 1989, the employment in agriculture decreased by 228.6 thousand persons (Buchta and Námerová, 1997). In 1996, there were only one third (36 %) of those who were employed in the agriculture in 1989. The rate of employment in agriculture exceeded 10 % in 6 of the new administrative districts (July 1997). Relative employment per 100 hectare of agricultural land dropped from 14.7 % in 1989 to 5.4 % in the year 1996. In 1989 the rate of those employed in agriculture to the total population was 1:14.4, and after 7 years increased to 1:40.7. Apart from the above mentioned changes, the decreasing rate of the female population employed in the agriculture is evident.

The most recent period has been characterised by the process of segmentation of entrepreneurs' units into smaller organisational forms. The notion of agricultural unemployment appeared in Slovakia together with the political changes after 1989. In the 1993, the figure exceeded 30,000 persons and gradually dropped to 16,300 in 1996.

During the 90's, significant changes have taken place in public transport. Gradually the number of bus and railway connections have been limited. As a consequence, the rural areas (especially in marginal regions) have been affected. It is manifested in the number of persons transported by road and railway transport. The changes between 1989 and 1996 are shown in the table 1. In spite of the increasing role of individual transportation, the role of public transport in rural areas continues to be of significant importance.

Table 1: Persons transported (in thousand).

Year	1989	1990	1991	1992	1993	1994	1995	1996
Road transport	943663	937528	939311	855467	825467	761439	722510	699758
Railway transport	122567	119262	11753	106725	86727	99100	89471	74294

Source: Statistical Yearbook of the Slovak Republic 1994, 1997.

Changes in the agriculture and the use of the rural land

Agriculture in Slovakia has undergone substantial restructuring in the post-war period. After 1948, two major phases of change can be identified. The collectivistic-productivistic phase, where the emphasis was placed on collectivisation of agricultural activities and on raising output. This phase lasted from 1950's to the late 1980's, and was characterised by concentration, modernisation and industrialisation of agriculture.

The above described processes were accompanied by negligence of natural conditions in the whole area of agricultural production that inevitably led to the deterioration of ecological stability, aesthetic properties and, eventually, to the deterioration of production potential of agricultural and forested land (Huba et al., 1996).

Contemporary agricultural production inherited relatively uniform agricultural complexes characterised by a high rate of arable land and corn fields.

An irrational preference given to corn production during the communist era with no respect to ecological conditions led to uncontrolled extension of arable lands in exchange for grasslands even on steep, shallow or infertile soils with no respect to increase of erosion risk. This inevitably caused the loss of soil from arable lands, loss of nutrients and also alteration of the water regime in these areas.

In the field of animal farming this era can be characterised as era of factory farms for meat, milk and egg production established without respect to possible ecological impacts.

Cumulative and long-term impacts of some activities of this type of farming caused a decrease of capabilities of soil environment (degradation of physical, chemical and biological properties of soils). Erosion currently threatens more than 1.5 million hectares of agricultural land. Intensification of agricultural production together with other activities resulted in destabilisation of the landscape homeostasis.

Continual increase of energetic inputs into process of production exceeded the thresholds of carrying capacity of ecosystems and caused unsatisfactory efficiency of these inputs as well as degradation of environment.

The consequences to nature and landscape conservation and protection can be summed up as reduction of biodiversity, contamination of hydrosphere, soils, biosphere and food chain by different types of contaminants, as well as uniformity of landscape. In the framework of sustainable development the stress is put on revitalisation of degraded landscapes with damaged ecosystem structures.

Transitional phase (post-collectivistic and post-productivistic transition) is characterised by:

- reprivatization (restitution of ownership of agricultural land as of Act No. 229/1991 — Reform of ownership rights to land and other types of agricultural land as amended),
- deconcentration (decentralisation and disintegration of co-operative farms),
- reducing farm output (decrease of agricultural production as a result of

reduction of government subsidies, reduction in the use of fertilisers and heavy agricultural machinery, etc.) and,

- integration of agriculture within broader rural economic, and environmental objectives (implementation of new ecological approaches in agriculture in respect to implementation of new environmental and other relevant legislation).

The efficiency of the measures mentioned above in terms of mitigation of human impacts can be positively evaluated. The most significant change has been observed in the sphere of use of fertilisers, when the total consumption decreased by 5-times (Table 2).

Table 2: Fertiliser consumption per 1 ha of agricultural land (kg of pure nutrient).

Year	kg of pure nutrient/1ha
1988/90	231.2
1989/90	239.7
1990/91	123.1
1991/92	63.9
1992/93	41.6
1993/94	43.5
1994/95	45.0
1995/96	48.9

Source: Statistical Yearbook of the Slovak Republic 1994, 1997.

In spite of this multiple decrease of fertiliser consumption yield decreased by only 15 %. However, we also should mention the negative consequences of decrease of some elements in soils in respect to the yield.

The process of transformation and recognition of ownership rights and privatisation is inevitably connected with the partial decentralisation and diversification of giant agricultural farms. One of the big changes, that agriculture has been forced to face, is the restriction of government subventions, liberalisation of input prices and competition of surpluses from abroad. As significant innovative step was the development of municipalities and the process of small privatisation in the conditions of small rural settlements, as well as development of small and medium-size businesses.

Marginalisation

The marginalisation has had a similar impact on both economic, social and demographic aspects of life as well as on the character of the landscape (abandonment of settlements and agricultural land, degradation of soils, etc.).

Apart from structural aspects, the political, social and economic transformation

also has territorial dimension. There are areas that differ from others because of their demographic and socio-economic character. They have been shifted to the margin of social and economic development. In marginal regions, the social costs of transformation have increased considerably. The marginality is rooted in the previous period of industrialisation and urbanisation. Economic transformation was accompanied by conversion of industries and the decline of heavy industry and the construction industry. The restructuring of agriculture caused the decrease in employment in the agricultural sector. These and other aspects of transformation contributed to the socio-economic marginality especially in rural areas. The marginalisation that has taken place with socio-economic transformation has created large compact areas within marginal territories in borderland regions in the northern (district of Čadca), eastern (district of Trebišov, Svidník, Vranov, Michalovce), and southern (district of Veľký Krtíš, Rimavská Sobota, Lučenec, Levice, Nové Zámky, Galanta) regions of Slovakia (Gajdoš et al., 1995). Some regions are located in central part of Slovakia (part of district of Žiar nad Hronom, Topoľčany, Spišská Nová Ves). In these economically and socially marginalised areas the problems emerged not only in the social life, but also in the socio-technological structure, and in environmental modernisation.

Research in marginal rural areas enables the identification of principal problems. The mayors' sociological research (Pašiak, 1995) has proved that the economic situation of villages belong to the key problems of local self-government. The mayors of villages in two of the areas studied have tabled the following economic problems: lack of finances, unemployment in villages and nearby neighbourhoods, indistinct perspective of agriculture, etc.

Quality of life and the environment is critical. The mayors perceived the following problems as the most urgent — problems concerning holding communal trash, problems concerning provision of drinking water, technical infrastructure insufficiently developed, insufficient shop and service facilities, insufficient condition for cultural and social life, existing facilities that are unsuited and in need of repairs, and insufficient provision of health and social services.

The analyses from research conducted in 1996–1997 on the basis of structured interviews with mayors and decision and opinion makers in three regions — Lower Morava river basin, Tatras, Eastern Carpathians (Huba and Ira, 1998 a, b, c) shows that the most important problems connected with the implementation of economically, socially and environmentally balanced developmental programmes of rural communities are: lack of subsidies from state funds, inadequate sharing fees, lack of public drainage and/or sewage disposal plants/water waste treatment, lack of development programmes and activities, unfavourable demographic structures of population, damaging forest management practices, lack of jobs, waste disposal, water quality, lack of capital investments, lack of advantageous credits, lack of recreation/leisure facilities, historical (cultural) sites safeguarding, inadequate agricultural land-use, and nature protection.

Landscape ecology aspects of sustainable development in rural areas

Sustainable systems of agricultural management methods should be implemented in the regions of natural accumulation of water (293 thousand hectares), in the areas of national parks and protected landscape areas (138 thousand hectares). The same management principles should be applied also in the core areas, ecological corridors and areas of development of natural elements within the national system of territorial stability. The aim is to achieve sustainable agroecosystems and to initiate natural autoregulative processes. Increased ecological stability can prevent against spread of diseases. This also provides suitable conditions for conservation of fauna and flora. Another tool for establishment of sustainable management systems is optimising of the size and shape of fields together with implementation of linear and planar elements of landscape and secondary vegetation. An elementary part of the sustainable systems of agricultural management is restoration and increase of biodiversity of agroecosystems as well as reconstruction of original and creation of new communities (Huba et al., 1996).

Coexistence of agriculture with other activities.

The basic principle of countryside development support is maintenance of viability of countryside settlements. The value of the countryside environment, especially its relaxation and residential functions, will grow with proceeding economic development. Support of the countryside should mean strengthening the advantages of Slovakia in European economic conditions.

Production of industrial materials and energy are important options for use of land unsuitable for production of food and forage. Biomass products considerably contribute to the decrease of demand for depletable resources of energy and materials. Their advantage is their ability to cumulate solar energy and degrade biologically.

In respect to the large extent of polluted areas in Slovakia, part of the agricultural land is unsuitable for growing crops for food production purposes and also represent a strong potential for growing technical cultures with a broad range of applications.

A new function of the rural landscape that is growing in importance is agrotourism and other forms of rural tourism. Rural tourism offers both benefits for local economies and offers new, attractive and authentic recreation possibilities, rational utilisation of unused or inefficiently used infrastructure of rural settlements and landscape, and economic revitalisation of the countryside. It also helps to lessen migration impacts on rural settlements, reduces effects of landscape ageing, contributes in the sphere of nature conservation and indirectly prevents construction of resorts in the environmentally valuable and vulnerable areas.

From the perspective of the sustainable development concept, the partial restoration as well as increase of environmental quality of rural regions is assumed, toge-

ther with improvement of public participation in nature conservation, to achieve the principles of a sustainable way of living.

Biodiversity protection as an example of non productivist function could be mentioned.

Above mentioned functions comply with the main goals of sustainable development concept

Conclusions

Dynamic nature of political, economic and social change in rural areas of Slovakia brought several changes. The main changes are as follows:

- the increasing depopulation of marginal regions, and at the same time, a return to the countryside in certain regions,
- the declining significance of agriculture in terms of employment and the relative importance of food production,
- the afforestation of agricultural land,
- the changing values and perception of land-use,
- the increasing significance of employment in manufacturing and service industries,
- the increasing marginalisation of many rural areas,
- the declining significance of public transport,
- the increase of deregulation and privatisation,
- increasing environmental and sustainable development concerns,
- emerging new family economy strategies in avoiding negative social impacts of the current transition period, which include a combination of traditional and “communist” phenomena.

The cultural values of rural areas are changing. New cultural identities are being placed on rural space by social groups (especially service classes from large cities) who spend much of their free time in rural areas. People from cities have increasing influence over the physical and socio-cultural character of rural areas. At the same time, rural societal environment is characterised by continuity of value hierarchy from the communist period. A significant portion of rural space in Slovakia has been gentrified, and certain groups (the original old population, permanently unemployed, and Romany population) are being excluded and marginalised.

Rural areas are becoming in many ways arenas of conflict and tensions (Ilbery, 1998). Rural change in Slovakia has promoted a number of dualities: development versus protection, deregulations versus regulations, accommodation on communist development model, socialist way of life versus postcommunist modernisation and new model of economy, changing values versus continuity of values from communist period, local versus global processes, rural versus urban processes, agricultural and forestry lobby versus environmentalists, and “holiday-makers” versus “locals”.

All of Slovakia including particular localities and regions are at a cross-roads. There are more alternatives for future development (a return to past tendencies especially coming from the period 1948–1989, prolongation of contemporary tendencies — lack of jobs, rising unemployment, marginalisation of remote localities and zones, underestimation of non-profit activities, and growth of consumer style of life and expectations, uncritical modernisation based on technocratic approach, etc.). According to the research findings the developmental trajectory is characterised by:

- combination of natural and cultural values preservation with the support of new activities, that are relevant and adopted for the localities, regions and country,
- creation of new sustainable jobs in relationship to the above mentioned activities,
- stabilisation of the rural population,
- measures that lead to improvement of the demographic structure,
- a return to adequate land utilisation, revitalisation of settlements and the whole region
- assessment, re-definition as well as elimination of inadequate activities which contradict the key nature protection function of the landscape, could contribute to the sustainability.

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