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University**

Living in the rural Europe

Problems, challenges and possible solutions

Antrop, Marc; Brandt, Jesper

Published in:
Living in the rural Europe

Publication date:
2005

Document Version
Early version, also known as pre-print

Citation for published version (APA):
Antrop, M., & Brandt, J. (2005). Living in the rural Europe: Problems, challenges and possible solutions. In A. Špínerová (Ed.), Living in the rural Europe: Proceedings from the IX. International Conference on Culture and Environment, Nov. 25-27, 2004, Banská Štiavnica, Slovak Republic UNESCO Chair for Ecological Awareness and Sustainable Development.

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LIVING IN THE RURAL EUROPE: PROBLEMS, CHALLENGES AND POSSIBLE SOLUTIONS

Marc Antrop, with additional remarks by Jesper Brandt

Introduction

The following is a synthesis of the presentations and discussions about a series of problems submitted by the participants at the 9th international conference of the UNESCO-Chair held in Banská Štiavnica, Slovakia, 25-26 November 2004.

The problem

The magnitude and pace speed of change are increasing due to comprehensive market liberalisations initialising land use changes at the local level all over the world, affecting all landscapes. Many of these changes happen 'silently'; there is little opposition and this transformation is felt as inevitable. Nevertheless, a growing number of people experience it as a 'crisis' of the landscape. They feel the actual development as loosing the attachment to place and landscape. The future landscape is unclear and uncertain.

Although, this is a general feeling, the impact seems more important in rural areas, in the countryside, which in former time generally was characterised by great stability and low dynamics.

Characteristics of actual landscape transformation

The general trend: polarisation

All over Europe a similar trend in landscape transformation can be observed. It is a polarisation at different spatial levels between more intensive use of the land and extensification. Intensification is caused by concentration of the population, activities and infrastructures in certain regions as well as in rather small areas, and mechanisation and industrialisation of bio-economic activities in agriculture, forestry and fishing. Extensification occurs over vast areas, most often rural ones, which become depopulated, loose even more accessibility and services, while forest and abandoned land is expanding. However, cores of intensification shifts, and countertrends emerges.

Changing qualities and values

Actual transformations change the existing landscape qualities and values. Qualities are landscape properties, which possess a potential to offer services to the functioning of the landscape or community. Individuals and social groups assign values to these qualities according to their needs, culture and beliefs

In rural landscape very often ancient qualities are lost, such as mixed, small scale agricultural systems, ancient terraced landscape, systems of channels and ponds for transport, inland-fishery and water management for agriculture, mining and settlement.

However, changes create also new qualities and values. Their integration in the landscape is matter of concern and their sustainable nature still needs to be established.

Loss of character and identity

The actual transformations going on are experienced very often as a loss of character and identity. Character is a holistic property, which differentiates one landscape from another, without a judgement of its value. Character can be used to build taxonomy of landscape types, which can be used in mapping landscape units and character areas. As a holistic entity, landscape-character integrates natural and cultural aspects of the landscape.

Identity has to do with the uniqueness of a landscape character area. Identity is often expressed by a proper name for the landscape or area. Loss of character happens where landscape transformations result in degradation of important characterising elements or cut off their relation to the landscape caused by fragmentation or other measures vanishing the holistic entity previously characterising the landscape.

New landscapes

New landscapes emerge and traditional ones are transformed and become fragmented. In particular affected are the suburban fringes where a complex mix of urban and rural elements are found ('rurban' landscapes), as well as rural areas suffering from depopulation, marginalisation and land abandonment and sometimes of functional urbanisation (week-commuters, secondary homes in farms, etc.). Gradually only a 'rural residue' remains. The landscape character seems to dissolve into a variety of subdivisions and sub-trends. Consequently values and sustainability of new landscapes are still mostly unknown and need to be assessed as well.

Forces of transformation

Changing lifestyle

The industrialisation induced an increased mobility for masses of people as well as urbanisation. Rapidly growing urban centres gradually formed networks by improved communication infrastructure, fragmenting the rural space in between. Rural areas became increasingly influenced and dependent upon the urban centres. Gradually also in the rural areas the lifestyle changed, and the former rather homogeneous community dominated by agricultural production replaced by a much more diverse composition of lifestyles and attitudes towards nature and the use and protection of landscapes.

Economy and market-orientation

Most changes are market-driven. Economy is an important factor to be considered. In rural areas, the sustainable subsistence of agriculture cannot be based any more solely on food production. Farmers will have to diversify their tasks to guarantee their income. They might become entrepreneurs who also take care of the landscape as part of their income. The changing vision of the CAP from agricultural production to rural development points in this direction. Urbanised lifestyles and growing access of even remote areas gives possibilities for settlement and land use based on a growing variety of activities.

Globalisation

Globalisation groups forces that are acting all over the world primarily working at the local scale. The magnitude and scale of impacts are important, such as in natural processes as climatic change, but also improvement of communication is important, in particular for

economic global changes. Following paradox can be noticed: non-global issues become more important as they are increasingly threatened by globalisation.

Scale levels and competences in decision-making

Landscape is shaped by land cover draped over the physical land. Land cover may serve different uses chosen by the land tenure or landowner. The field and the one who uses it are the smallest spatial unit in decision-making with a direct impact in the land. Landowners possess the *territorial competence*, which according to Hägerstrand is the combination of freedom of choice, technical ability limited by legal and social constraints. Higher levels of decision-making are hierarchical ordered and aim to regulate and control lower levels. They have *spatial competence* according to Hägerstrand. The act in specific spatial domains, such as a municipality, district, region or state, but their decision do not act directly in the landscape unless the also possess the territorial competence. Spatial competence may develop a profound power within limited sectors, e.g. ministries and related organisations, thus performing *functional competence*, often with considerable influence at the detailed level, including influence on the territorial competence of owners related to the sector, e.g. agriculture.

Together we might name these territorial, spatial and functional competences for *geographical competences*. The composition and qualifications of the different geographical competences at the regional and local level is crucial for the planning and management at the landscape level.

How to deal with this transformation?

Is there really a need for measuring, for indicators?

How to describe the multiple changes that go on simultaneously in the landscape? How to measure them to assess their significance? Can indicators be formulated to monitor them, to compare scenarios and to evaluate the effect of planning decisions?

In general, measurements and indicators of change are considered to be necessary, in particular for monitoring changes. Indicators can be categorical, dichotomised and threshold-based, or continuous and measured on at least an ordinal scale. They should be based upon reliable, sound, up-to-date and representative data. Their formulation should be clear and transparent, and their sensitivity should be tested. Indicators should be objective (reproducible) and problem-oriented. Also the combination of discrete data with continuous data fields (geographical surfaces) should be considered, as well as the use of aggregated data. Data necessary for monitoring need to be standardized over time and preferentially cheap and fast to acquire. Indicators are always dependent on available data sets referring to a specific time, spatial extent and resolution, and on the method used. Land use is an important attribute but already difficult to use as data sources often refer primarily to land cover and not the real land use that is the primary factor of change in land cover and landscape character. To avoid misuse, a critical interpretation is necessary in the appropriate context.

Several domains of indicators were evoked: degree of degradation, rurality. To express 'rurality' several indicators might be necessary depending on the definition of rurality. Consideration should also be given for the monetary expression of landscape values, ecological budgeting, applications of life cycle analysis and feasibility studies.

Landscape as an integrator

By its definition landscape demands an inter- and transdisciplinary approach. As such it can act as a common integrator for different disciplines and stakeholders. It can also – and will to an increasing degree in the future form the basis for multifunctional use of the land in intensively used regions and areas. Top down and bottom up approaches should be used simultaneously and efforts should be made to connect them.

Market oriented landscape management

Landscape has also economic assets, which are important in agriculture, forestry, nature conservation and rural development. Investment in these landscape qualities is important for sustainable landscape management. However, some important prerequisites should be considered: return of the investments to local actors, and clear rules about 'who pays, who earns?' Also, here the changing profile of the farmer becoming entrepreneur is an issue to be discussed. The importance of good (positive) examples has been stressed several times.

Respect for the past

Landscape is also a common heritage of a community or nation. Landscape, heritage and history are closely linked to each other and to the regional character and identity. Landscape as heritage is both collective and personal, and consists of natural and cultural elements. The UNESCO convention on World Heritage and the European landscape Convention (Firenze 2000) make this a core issue in landscape protection and sustainable management.

Key issues for the future

Landscape and functioning

A basic question for landscape ecologists is the interactive relationship between spatial patterns that structure the landscape and the functioning of all kind of processes: ecological, economic, social, etc. How can a landscape function? What functioning is significant for what issue? What services can landscape provide? How can functions and functioning be monitored? A sustainable development at the landscape level also means to accommodate the varied and changing human needs to the multiple and varied services to be offered by the landscape.

Important issues to consider here are continuity, stability and change, in particular of land use. Also the importance of scale and time horizon is stressed.

Landscape planning, protection and management

Landscapes are dynamic and most changes happen autonomous. Can landscapes for the future be planned? How does landscape planning relate to other forms of planning such as spatial planning and land use planning, etc.? Who takes the lead when several of these planning approaches occur together? In general, we should offer scenarios, guidelines and management prescriptions from the landscape perspective, useful for other planning domains. More public relations effort is needed to get more (EU) money or to involve landscape experts actively in all existing programmes, as is also suggested by the European Landscape Convention.

Public awareness is important to convince politicians as well for active and integrated landscape planning. All planning actions finally must work up to the local level. The

concepts of territorial, spatial and functional competences can be useful here. Important issues regarding the involvement of locals are: their understanding (reading) of the landscape, their personal history as source of information, the willingness of planners to listen first to locals. Landscape planning, as all planning issues, has to deal with a lot of uncertainty. How to integrate uncertainty in scenarios and decision making? Here tools and differentiated methods for negotiation are needed, not at least in connection with risk assessment of new types of methods in land use, e.g. by the co-existence at the landscape level of GM- and non-GM-crops. Goals, visions (Leitbilder) and scenarios should be clear and in simple terms formulated. The simple question "what if...?" is a good start. New visualisation techniques for presenting plans and scenarios are available now, as well as computer models and simulation. These should be used with utmost care as misuse of virtual reality is possible and not intended negative effects can result from their use.

For sustainable local planning, not only the integration of local stakeholders in the planning process of the regional land local communities must be considered, but also how planning can integrate strategies from local stakeholders that are going on anyway as a part of the ongoing globalisation.

As landscapes evolve 'naturally', classic protection becomes more difficult in an ever and rapid changing environment. New concepts have to be developed to keep protected landscapes 'alive'. Examples are given by geoparks, ecosites, etc. Gradually landscape protection evolves more to integrated landscape management. Also, it is important to be aware that the effect of a plan that is realized can last very long.

New curricula in education are needed

Landscapes are complex and dynamic and should primarily be comprehended in a holistic and integrative way. Bridging scientific disciplines by interdisciplinary and transdisciplinary approaches are essential. Some disciplines are to a very variable degree involved in landscape ecological approaches to landscape planning and management, such as landscape architecture for example. Also in the education of geographers and ecologists the landscape ecological approach is being addressed in very different ways and degrees in different educational systems. Most education and training however is not yet integrated between disciplines. Teaching methods need to be adapted as well and a better integration of research projects. Involvement of administrators and practitioners in the education might contribute to integration in the education of landscape ecologists.

Projects - research

A lot of research about the landscape is still based on a sector-based approach and efforts have to be made for an integrated output. Although a interdisciplinary approach is most indicated in landscape research, a sectoral output of the results fits often better in the existing funding, administrative and decision-making structures. Often however, this will result in sector-biased solutions at the landscape level.

More and better informing is needed

For the implementation of applications of landscape research and planning target groups need to be defined more precisely. Landscape researchers need to improve their communication with 'outsiders' to their profession, in a broader scope and also addressing younger people.

Landscape issues need to be better integrated in all legislations

Landscape issues are still poorly represented in legislation, in particular in other legal domains that indirectly have an important impact on the landscape. Article 5 of the European Landscape Conventions proposes this as an important task. Also in the proposal for a European Agricultural Fund for Rural Development (EAFRD) to be realized 2007-2013 through the allocation of app. 90 bill. €, the reference to the importance of the landscape level is made, however with other main priorities, making the landscape aspects dependent on strong regional or local interest in integrated planning and management of the landscape.

Prof. Dr. Marc Antrop
Universiteit Gent, Dept. of Geography
Krijgslaan 281 – S8
B 9000 GHENT
Belgium

e-mail: marc.antrop@ugent.be