



Landscape and rural heritage

Paysage et patrimoine rural

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An inter- and transdisciplinary approach to support sustainable land-use – a case study in the Apuseni Mountains in Romania

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Traditional cultural landscapes in central Europe have changed drastically over the last centuries. Many landscapes were completely transformed by human activities and lost their unique character. The traditional, rural subsistence economies have been transformed and integrated into national and global markets step by step. Such changes have occurred now in the countries of Eastern Europe and they will have a tremendous effect upon the rural population and the development of the landscape within the next few years.

The Romanian cultural landscapes particularly in the mountainous regions of Transylvania, are composed of a semi-open mosaic of meadows, pastures and forests, with high values concerning biodiversity and nature conservation. On the other hand the traditionally managed landscapes are in the same way of special interest for the cultural heritage and for further regional development strategies.

Short presentation of project Apuseni

A traditional cultural landscape in the Apuseni Mountains in Romania, its land-use systems and future perspectives for sustainable development were studied during an inter- and transdisciplinary project supported by the German Ministry of Education and Research (September 2000 – February 2004). The study area is situated in the Moți country, where the traditional agro-silvicultural land use is currently undergoing a transition from subsistence economy to gradual participation in national and global markets.

Aim of the project Apuseni, was to analyse the transformation process in a rural mountainous region, to identify and evaluate development strategies, and to make recommendations for a sustainable regional development in participation with the local people and the Romanian politicians (Rușdea *et al.* 2005).

A “nested approach” was adopted for the research, comprising three geographic areas, in which data collection was carried out with decreasing intensity. The village of Ghețari with its surroundings (308 hectares, 28 households, 106 inhabitants in the year 2000) constituted the central study area. The investigations extended gradationally from this community towards the administrative centre in the village Gârda de Sus (situated in the valley at 700 m) and to the mountain high-pasture “Poiana Călineasa” (1 350 m) covering an area of about 6 000 ha, 63% covered by forests. Generalisations about the region could be made from studies of the social and economic characteristics of fifteen communities in the Moți country. These studies facilitated the analysis of the functional coherence of the regional land use system.

Disciplinary approaches were used to investigate the physical and biological characteristics of the landscape, the agricultural and forestry land use practices, the history of culture, settlement, architecture and the life of the people. Two economic approaches were adopted to assess the economy at the household level (combination of subsistence and market production ; activities, products, costs and prices), and at the regional level – the “Moți country”. Additional studies related to the specific political and legislative conditions in Romania. Together these studies facilitated the analysis of the functional coherence of the regional land use system.

Altogether on the basis of this disciplinary approaches and the interference between the disciplines an evaluation in terms of nature conservation and economy was conducted. The results were used as indicators and descriptors for the creation of scenarios in subsequent modelling.

To determine strategies and methods for sustainable management in a participatory way, the problems of the region were identified from the perspective of the local people in the course of personal interviews (with farmers, experts and local politicians) and through questionnaires. In a second step, the central problems faced by the local actors were analysed (problem analysis) and clustered on a problem-tree, showing the cause and effect relationships. The results were transformed into objectives for future development with the specification of key indicators for the creation of scenarios in subsequent modelling. A landscape model with spatial and non-spatial variables (indicators and descriptors) describes and explains the functioning of the system. This synthetic model was used at the same time to create scenarios for the future development of the landscape by changing the driving forces influencing the system. Additionally, participatory methods like “planning for real” were performed. This was done together with the pupils of the local school, who articulated their personal wishes with regard to future development and built a three-dimensional model of the village.

The participatory approach within Project Apuseni

From the outset “Project Apuseni” was based on transdisciplinarity (Thompson Klein et al. 2001, Balsiger 2005), which implies participatory action research aimed at

developing adapted applications for the studied region. Therefore one of the most important objectives of the project was to get to an exchange of scientific views and the knowledge of the people living in the area. The knowledge gained by project members in the preliminary phase of the project was incorporated and extended through participatory appraisal. A stakeholder analysis provided the base for the integration of local, regional and national actors (local population, politicians, etc) and institutions. For centuries, the lives of rural people in Eastern Europe were dictated by hierarchical structures. As a result, the farmers in the Apuseni Mountains became sceptical of governmental institutions, individualistic, and developed an aversion to association and cooperation. Recently attempts were made to include the farmers and their interests into decision making processes. The analysis was used for an appraisal of social norms, attitude and influence of the stakeholder.

The concept for the participatory approach employed within the Project Apuseni was based on a gradual involvement of the stakeholders, according to three levels of intensity :

- information (and motivation) : to involve the majority of the local actors – which was most important at the beginning of the project ;
- participation : to involve the interested people ; and
- cooperation : with key-actors and innovative individuals
- more towards the end.

Varying elements of participation were selected with respect to the specific stakeholder groups. Several methods of participation were practised in different intensities and forms, including kick-off meeting, flyers, info-sheets, lectures, discussion, interviews, workshops, consultancy, “planning for real” and a role playing.

Due to language barriers and different educational backgrounds, both verbal and non-verbal communication was used. On the regional level the project offered workshops and discussion to specialists, politicians and entrepreneurs.

According to the degree of cooperation and communication, four levels of involvement were distinguished : information and motivation – which were most important at the outset – as well as participation and cooperation, more relevant towards the end (Bühler & Wehinger 2005). The quality of the participatory action process was continuously monitored. The briefing of the staff members on how to set objectives, and on the planning and evaluation of every action ensured the methods applied. The selected participatory methods should allow for feedback between researchers and stakeholders. They included intercultural and organisational aspects, and relevant problems were discussed. The majority of the local community got involved in the participatory process, when the goals were clearly communicated and the intensity of the methods were appropriate.

The foundation of a local activity group, called “Forum Comunal”, was the most important step in cooperation. This steering committee offered an organisational frame for the exchange and the discussions between scientists and local authorities. It was held three times a year and included the mayor, members of the community council, some local key-actors and members of the project team. Especially with the implementation of this forum the acceptance and the structural settings improved. Another milestone was the foundation of a local association (“*Asociație*”) for the village, targeting the sustainable development of the whole region, with participation of interested local actors and again members of the team.

Scenarios for future development

On the basis of the problems identified through participatory methods and the resulting key indicators, an expert working group of the Project Apuseni defined future development trends and scenarios for the next 15 years for the research area.

Three scenarios – representing three different political strategies of future development – were presented to and discussed with local and regional experts and politicians during a planning workshop, followed by a discussion about the recommendations for sustainable regional development. These scenarios represent in fact three different political strategies :

- continuation of traditional land uses with uncontrolled short-term management (scenario “*traditio*”) ;
- foreseeable sustainable land use with moderate investment of own capital, which includes reduced timber harvesting and income in the short-term, but more or less stable conditions in the future (scenario “*evolutio*”) ; and
- large-scale investments by an external investor, who constructs roads and builds facilities for tourists (scenario “*capital investitio*”).

The local people (farmers and politicians) of the village Ghețari were invited to participate in a role playing session, in which three potential mayors (‘*traditio*’, ‘*evolutio*’ and ‘*capital investitio*’) candidate and presented their plans for the local future development. Afterwards the people evaluated the three programmes (scenarios) by a means of a vote. The results of this ‘vote’ revealed that men tended to prefer a policy promoting sustainable land use (‘*evolutio*’), the children clearly voted in favour of a policy to attract a big investor and the women’s votes showed no clear preference.

Cooperation in ‘pilot projects’

Most successful proved to be the local transdisciplinary initiatives implemented as practical actions within the so-called “pilot projects”. They were selected using the criteria (1) importance for sustainable development, (2) sustainability after termination of the project, (3) possibility of rapid success, and (4) realisation during the project period (Brendle 1999).

Promising approaches were supported by “Project Apuseni” and implemented in the fields of tourism, agriculture (crop farming, manure processing, fertilisation, hay harvesting), water supply, medicinal plants, and forest use / wood processing.

These pilot projects :

- represent a cooperative strategy in a local and regional network of different partners,
- contain opportunities for ‘learning by doing’ and encourage the creativity and engagement of the stakeholders,
- symbolise the aims of regional development and enhance knowledge within the region,
- represent concrete actions and exemplary results,
- promote changes to existing structures.

They enable a close cooperation between scientists and local people ; the experiences garnered from these pilot projects and the results of the Project Apuseni revealed the strengths and weaknesses of this mountain region, and were used to formulate recommendations for regional development. They will continue to provide impulses for sustainable development and livelihoods in this mountain area, and at the same time help to preserve at least some of the habitats within the landscape. As the pilot projects demonstrated, successful regional development will be the most convincing argument in the transfer of the results to other mountainous rural regions in Eastern Europe.

Recommendations

Sustainable development and the management of natural resources must be based on a common view of the future within the local society. To gain this, it is necessary to involve stakeholders, who are able and willing to make decisions towards an effective and efficient use or conservation of natural resources. Participatory action research becomes more common on regional development.

Our experience during Project Apuseni in Romania was, that the Romanian people appreciated the transdisciplinary approach, which had to be adopted to various aspects of the regional society and social norms. Participation in rural areas in Romania compared to Germany (or other western countries) means, that the rural society with a specific focus on the informal networks needs to be reflected intense, to identify key persons, which will be involved into the process. Politicians and experts in the administration have great influence on the project itself, but also on the attitude of the others towards the project. From our experience it is necessary to get them involved directly from the beginning of the process.

The concept of the participatory process generally appeared to be feasible. The distinction between informing, participating and cooperating with the stakeholder matched the resources of both scientists and stakeholder. Very important seems to be the implementation of a “steering committee”, which can coordinate the further regional development process after the end of a participatory project. Practical actions of cooperation – like the “pilot projects” in our case – help to achieve interest and commitment to the research issues and to sustainable development. Their outcome can be summarised with a major contribution to awareness and know-how-transfer, to cooperation within the region.

Some recommendations gained from the experience of the Project Apuseni concern the participatory approach in landscape management and rural development :

- let all relevant stakeholders participate from the very beginning : in the participatory process. It is important that all political levels be considered : the local and regional level are certainly of greater relevance, but stakeholders from national and even EU level should also be involved ;
- respect local knowledge and experience : the identification of respected key actors and local multipliers with a high degree of influence may play a decisive role in the success of the process ;
- establish local ‘steering groups’, for example, local agenda groups : these are necessary to ensure the smooth running of the process and the continuation of management after the end of a project ;
- enact and support practical solutions and joint actions : the implementation of results should not only begin after the conclusion of a project. Small and successful working initiatives should be carried out during the field work phase in order to improve the researchers’/managers’ local standing.

Sustainable landscape management and planning is not possible without participation. In regional development the participatory process could provide the arena for consultation, negotiation and the joint actions of the people involved.

Conclusions

The mountain regions in the “Moți country” in Romania have relatively less unfavourable climatic conditions. Sustainable forest use must be the first aim of regional development. Given the unclear economic perspectives, it is recommended that the economies of households, villages and the region be based not only on one sector, but on combinations of forest use, farming, crafts, marketing and rural tourism. The existing potential of the landscapes, especially the high nature value of the grasslands, but also the cultural heritage (e.g., historical monuments, traditional handcraft and land use systems) should be preserved and carefully developed. This can only be successful if new forms of cooperation and participation with the local

people occur, and if environmental education, adequate financial instruments and better marketing strategies are implemented. Successful regional development will be the most convincing argument in the transfer of the results to other mountainous rural regions of Eastern Europe.

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