Regional development in the Region Upper Styria West/Austria – a case study

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1. Introduction

The region "Upper Styria West" can be described as a rural mountainous region of about 3.000 km². The region consists of 3 districts (Judenburg, Knittelfeld, Murau) and a decreasing number of inhabitants of appr. 107.000, what already reflects the main problem of the region. In order to succeed in a forward-looking development of the region not only regional agencies were founded but also enterprises, politicians and the people living in the region have been invited to shape the future of the region. This happens on the bases of a sustainable, integrated and self-contained development run by a strong participation of actors. Meanwhile there are already too many agencies and initiatives involved in development processes that someone speaks about "uncontrolled growth". Guidelines for small regions and regional structures have been created therefore.

However, there are many of such guided activities which should support weaker developed regions in order to provide the inhabitants, especially the young and good educated to remain in the region which is one of the central goals of regional development activities in the region "Upper Styria West".
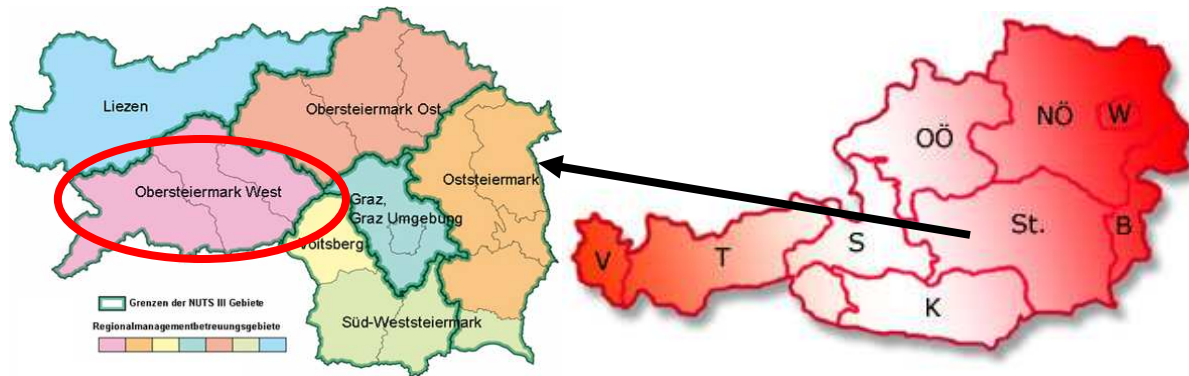
Fig.1: NUTS III Region "Upper Styria West" (www.regionext.steiermark.at/cms/ziel/14146250/DE).

2. The Region "Upper Styria West"

The NUTS III region with number 226 is called "Upper Styria West" and consists of the 3 districts Knittelfeld, Judenburg and Murau with total 107.492 inhabitants (what means 8,9 & of Total 1,197.527 inhabitants in Styria) in the year 2005. The region 3.059 km2 what means 18,6 % of Styria) is characterized by the west-east running valley of the river Mur and mountain ranges in the north and south. There are some passes which allow the crossing of the Alps from North to South into this region. When Austria became member of the EU in the year of 1995 regional management bureaus were established in order to realize the EU programmes in an optimal way.

2.1. Regional Potentials

The main topics in the research field of regional development are the regional potentials and the strengths and weaknesses. However, one very important factor is the landscape which is still very natural and open for recreation. The mountains reach approxemately 2.800 m. and because of the glacial shape several lakes are forming the picture of the landscape (Fig. 2).

Fig. 2: Many lakes, wetlands and forests are characterizing the mountainous region of Upper Styria West what represents the basis for touristic adventure.

Another potential can be seen in the touristic infrastructure. Alpine skiing, cross-country skiing, wellness, spa, golf, mountain biking etc. is well established but some more hotels in the highest category should be erected soon. Quality tourism irresistibly becomes an important factor (Fig. 3).

Beside the landscape the region stands out for its cultural heritage. Many traditional processions can be attented all over the year and many activities are supported by the government to preserve these traditions and to meet the interests of younger generations in traditional activities.

Fig. 3: The development of worldwide´s tourism shows that more and more high quality destinations are in trend. In the region of Upper Styria West some more hotels should expand nowadays offer.

Another regional potential is the food. Therefore the term "Region of enjoy" was born. This concept contents wellness, sport, recreation, silent, culinary highlights, etc. (Fig.4).

Fig. 4: Culinary highlights become more important in the regions and are a kind of secondary key element for regional development measures.

Fig. 5: Picturesque but artificial mountain villages allow enjoying the landscape both in winter and in summer. The main role plays the winter tourism but one of the strategies for the future development of the region is strengthening the summer tourism. (www.fewo-1800.de/huette-m-falkertspitz-kl.jpg).

Fig. 6: Murau is the western town in the Upper Mur valley that forms the central lineament in the region Upper Styria West. (www.tiscover.at/at/images/RGN/276/RGN276at/murau-sommer_407x175.jpg).

3. Regional Demographic and Economic Data and its Development

A central problem in the region discussed is the demographic change which in long term can be described as definitely drastic, more in the western part of the region than in the east (tab.1). This fact can mainly be derived from the topographic situation of the region and means the reachability. The easterly situated districts of Knittelfeld and Judenburg are closer to the economic centers and the capital of Styria, Graz. Therefore someone is not wondering that young people leave the most remote villages and settle in the surroundings of economic centers like Murau, but more Judenburg, Knittelfeld. Many of the young leave the whole region and migrate to the capital Graz where many of them enjoy their higher education. The remaining population underlies the process of excess of age. This thinning out of rural areas leads to shortage of daily supply or higher costs for steady infrastructure like water supply, sewage disposal or waste management. In future less people will have to pay higher fees for the infrastructure in their villages.

	Murau	**Judenburg**	**Knittelfeld**	**Styria**	**Austria**
Inhabitants (1991-2001) change in %	-1,5	- 1,5	-1,2	0,6	1,8
Inhabitants (2002-2005) change in %	-2,4	-3,8	0,5	-0,1	3,0
Prognosis (2001-2011) change in %	-4,6	-4,9	-2,6	0,1	3,1
Permanent settlement area (PSA) %	20,4	21,2	24,1	30,2	37,6
Density of inhabitants/km²	23	44	51	72	96
Density of inhabitants in PSA	112	207	213	239	255

Tab.1: Change of inhabitants (http://www.regionext.steiermark.at/cms/ziel/14146250/DE).

	Murau	**Judenburg**	**Knittelfeld**	**Styria**	**Austria**
Unemployment av. 2005 in %	6,6	7,7	7,6	7,2	7,2

Tab. 2: Unemployment (http://www.regionext.steiermark.at/cms/ziel/14146250/DE).

In regard to the unemployment some specifics can be mentioned:

Specifics:

- Decrease of youth´s unemployment – increase of elder people´s unemployment in Murau

- High unemployment of people with higher education in Murau

- Mainly youth´s unemployment in Judenburg

- High unemployment in production sector (unskilled worker) in Judenburg

- Decrease of unemployment in all age groups in Knittelfeld

The result is, that e.g. also many groceries disappear what leads to mobile groceries at one hand. But nevertheless disadvantages appear for those people staying in their villages. This fact strengthens the indicated process of migration again. Some private and official initiatives invite mobile trader (fig. 7) to supply the municipalities. This way of shopping possibilities becomes more and more popular.

Since 1980 the total amount of groceries in Austria decreased from beyond 27.000 to 16.288 in the year of 2007. Only in the year of 2004 in sum 274 groceries with less than 250 square meters of sales area had to close. Reason for this is the increasing pressure of competition of shopping malls and branches of supermarkets. They are often built up aside existing settlements and can not be reached without cars, what results in an adequate increase of individual traffic. Both for elder people, children and the youth and other persons without cars this extinction of local supply means a decline of their quality of live. More often the way from the home residences to the next grocery becomes longer and longer and can not be reached by feed or bicycle any longer. Public transport has not been adapted to this development and mostly shows no alternative (www.vcoe.at/publikationen/factsheets/detail_factsheets.asp).

Fig.7: Mobile trader in villages without groceries. http://www.schoberleitner.co.at/images/bild4.jpg

These are defined problems in the region of Upper Styria West which have to be managed during the next couple of years indeed.

4. Regional Development Activities and Strategies

4.1. Regional Process of Partizipation

Partizipation meets the so-called bottom-up-principle and is a very important confidence-building measure in the process of regional development. However, the experience shows that

it is not easy to steer the discussion and planning processes when too many different and often individual interests are accompanying the processes and activities.

In Styria the governmental department of regional planning launched a project so-called "Regio**next"** (http://www.regionext.steiermark.at/cms/ziel/14146250/DE/) in 2007, therefore. One of the goals of "Regio**next"** is the improvement and enhancement of Styrian regional politic. A thematic and structural bundling on communal, regional and governmental level should force attractive living spaces which are successful in competition to other regions. Thus an intensive regional partizipation-process of citizens was introduced. During this activity main elements of this project should be mentioned, e.g. following:

- Communities which could not build small regions during the process of partizipation will be invited to make own proposals.
- Inclusion oft the made proposals in to "Regionext".
- Presentation of results from the events of partizipation and further adaption in the regions.

An appointment was made to initiate the process of partizipation, where the main elemts of "Regio**next"** were discussed:

- Better coordination of regional policy and the financial aid from government,
- The erection of one`s own responsible regional structure of district and region across-the-border decisions and
- The stronger perception of communal tasks within a co-operation of small regions.

Furthermore the special department A16 of the Styrian government initiated the elaboration of two papers of discussion (draft version of „compendium small regions" and another compendium of "regional structures").

These compendia are the basis fort he regional process of partizipation. The focus lies on the creation of small regions.

The goal of „Regio**next"** is a cost cutting at the regional administration and currently the improvement of the service for the citizens and the creation and marketing of a common brand for the different regions in Styria. In this context the Styrian government passed a resolution about future LEADER-guidelines.

In the districts of Knittelfeld, Judenburg and Murau following rather successful projects are existing:

- In 2002 the project „Energy-Vision Murau" started and should lead to an intependence oft he district till 2015 in regard to heat and energy supply for 100 percent by using renewable energy resources. However, both an increasing oft he added value and the possibility for future energy exports are expected.

- The main focus in developing tourism lies in the 2002 started project „50plus vacation Swiss Stone Pine-land" in the region Weißkirchen & Styrian Swiss Stone Pine-land. This project counteracts the wide spread trend of youth actions when paying attention to tourists which are older than 50 years. The electronical cross linking of bargains in form of a so-called leisure-stock market additionally forces synergies in tourism and on this basis the increase of the added value in the region.

- The project „HIZ – Holzinnovationszentrum Zeltweg" (wood innovation centre) supports the regional wood manufactoring enterprises with directed settlings of enterprises, the allocation of bureaus and the support in product distribution. By establishing additional chains of added value new jobs should be created.

It is the strategy of the Styrian government to prevent the identity oft he small, but nevertheless Styria is in competition to another 350 regions in Europe. Therefore it is a must to think the big in order to preserve the small in Styrian regions. At the re-orientation with „Regio**next"** forcing upon above (top-down-principle) may and will not happen (www.regionext.steiermark.at/cms/ziel/16844161/DE/).

During the following five years the Styrian government plans to develop the country Styria to a well linked location with its neighbours and whole Europe. This is the clear defined and absolute goal. Furthermore this location should assure a high quality of environment and living. Styria should be noticed as an innovative and sustainable trade mark.

A very important goal of Styrian regional development strategies is a much stronger regional individual responsibility. A widely held belief is that within regions initiated, voted and accounted decisions are mostly of a high regional relevance. The preconditions are proper installations of partizipation and a well working municipality (municipal office and diverse agencies). On this basis communities should be able to generate financial aid and to realize their forward-looking projects.

The steady increasing pressure of costs of the public budget, the steady increasing complexity of planning and development tasks, the steady increasing links of internal and external connections in regard to the process of globalization but especially the competition of regions in the European context and the demographic development cause urgent need for action (www.regionext.steiermark.at/cms/ziel/16844161/DE).

"Regio**next"** is no radical change but an uprating of the previous way to a higher level. An analysis showed following key elements:

- Thematical and structural bundling of development-political activities on communal, regional and governmental level.
- Broad regional anchorage with an higher individual responsibility and engagement
- Attractive living spaces for the inhabitants
- Higher competitiveness through utilization of regional potentials.

In future the so-called "regional panel" should link all the structural existing regional bodies. Branch offices will be the already existing bureaus of the regional management. The regional panel should be constituted as an association or as a limited company. This should be the basis for realization of the regional mission statement in co-operation with the regional competence-centers (http://www.regionext.steiermark.at/cms/dokumente/10690314_16844161/983204b7/Leitfaden_Region_20070206.pdf).

5. Tourism as a trigger for innovations in the region

5.1. The holiday region Murtal in the network of regional development

The holiday region Murtal is comprised of the districts Murau, Judenburg, and Knittelfeld and has developed well as a center of competence for tourism since the merging of the regions Freizeitarena Oberes Murtal and the holiday region Murau four years ago. Legally, the holiday region Murtal operates as an incorporated society which is represented by 17 board members: the representatives of the tourist board and by the three mayors of the districts Judenburg, Knittelfeld, and Murau.

With about one million overnight stays per year, the holiday region Murtal is ranked 4th among the seven Styrian regions, with traditional tourism dominating in the Murtal region, and event-, business-, and industrial tourism being dominant in Aichfeld-Murboden. The number of overnight stays in 2006 amount to about 963 000 with about 232 000 arrivals (foreign overnight stays ca. 454 300 with about 95 400 arrivals). The primary markets abroad are Germany, Hungary, the Netherlands, and Italy. The most promising future markets are the Czech Republic, Slovakia, Slovenia, Croatia, Romania, the Russian Federation, and the Ukraine. The domestic market is dominated by Vienna, Lower Austria, and Upper Austria.

The main tasks of the center of tourism, and especially of the executive board, are:

- Pooling the touristic topics (with special attention given to summer and winter tourism) such as alpine skiing, cross-country skiing, snowboarding, winter/summer tradition and customs, culinary art, hiking, golf, pilgrimage, health, business and industrial tourism, World of Wood and the Bioregion.

- The annual creation of a marketing plan and with it the stipulation of the budget as well as the preparation, creation, and implementation of advertising materials and representing the region at domestic and international trade fairs and at workshops for tourism.

- The operation and maintenance of the internet platform. This modern and interactive tool has become an important means of communication and is a wonderful source of information for the guests.

- Keeping constant contact with the different tourist boards, smaller regions and other communities.

- The participation at all general assemblies for tourism and constant interaction between the 24 offices of tourism in the region.

- A substantial part of the task lies in further developing the region in line with the regional mission statement through large and small projects for tourism, by co-operating with the EU-regional management as well as with all crucial actors in the region. Thus, professional networking and the resulting professional management of the projects and the development will make up the main focus of the daily work.
- The center of competence for tourism thus forms the hub of the regional tourist business and is also an important interface between the communities and their supporters: the province of Styria, the state and the EU.

Having ideas and visions, as well as being able to actively discern the regional situation is of crucial necessity in order to spur regional development. Also, co-operation of tourism, agriculture, politics, and the economy is indispensable in order to achieve anything in the region. Active networking and the implementation of good ideas for projects will eventually lead to the goal.

The holiday region Murtal, as well as the former organisations, and the people have had to accept enormous industrial reorganization in their regional development over the last 30 years. The change from heavy steel and mining industry to tourism surely is not always easy to accomplish.

Many promising projects for the future such as, for example, the Formula 1 race-track (A1-Ring) around Spielberg, show that successes can only be achieved by great commitment and the appropriate dedication to the task. Despite major losings, especially in tourism in the Aichfeld-Murboden region, the holiday region Murtal has shown how economic crises can be availed in order to seize the chance for innovative re-orientation towards tourism. All the more, an integral part of the current strategy is the resumption of business of the A1-Ring in Spielberg since this has traditionally always been an essential pull-factor of the region. It, therefore, constitutes a key element in the future development of the region. Ultimately, however, the negotiating skills of the politicians will determine the future of the long hoped for realization of the project A1-Ring in Spielberg.

A purposeful co-operation of the groups of actors who are involved in touristic measures is of immense importance for the exchange of ideas concerning new and trend-setting topics. For this reason, the holiday region Murtal, with assistance of the province of Styria, embraced the topic 'pilgrimage' three years ago. By building a professional network consisting of the church, the communities, hiking regions, the Austrian alpine association and numerous regional actors it was possible to bring into being the 'Mariazeller Gründerweg' from Stift St. Lambrecht to Stift Seckau and on to Mariazell. From the many visitors it can be inferred that this measure was another successful one to strengthen tourism.

Another example is the participation in the Interreg IIIc-project (RISE: Regional Identity and culture, Strengths development & Environment action www.interreg-rise.de/). Together with the EU-regional management the holiday region Murtal has proved that EU-projects are not just about the development of concepts but about launching and implementing a presentable, tourist project of Austria, Germany, and Switzerland for motorcyclists in Europe. Before the tour bikers can now prepare their personalized route with all the important information for the partner countries using the internet-tool www.bikerroad-rise.de.

There are many more examples where the determined creation of a topic-oriented network guaranteed the successful realization of regional projects. There were many examples from the region, where on the basis of a good idea, the co-operation of many people in the network and other committed people worked well and from which excellent projects have emerged (Holzmasse Murau www.holzwelt.at, the Bioregion Murau http://www.bioregionmurau.at, Genussregion with Murtaler Styrian Cheese www.oml.at)

Welcome in the holiday region Murtal!

During winter the 7 Murtal skihills invite you to ski and snowboard. Winter-fun offside the slopes can also be found: cross-country skiing on over 200km of groomed trails, ice-skating, or the legendary night-tobogganing.

The holiday region Murtal is a popular winter sports region which also offers an abundance of other holiday possibilities. The 'Oberes Murtal', an insider's tip amongst Austrian holiday regions, does not boast the highest mountains, the greatest number of lakes, the most modern extreme sports, or the most exclusive art treasures. It offers diversity and variety and can always offer something special from its 'healthy mix'.

The densely wooded Murtal region – with the 'best air in Austria' – takes you time-travelling through the fantastic World of Wood. The whole array and diversity of woods is covered by the Steirische Holzmuseum St. Ruprecht ob Murau, the Steirische Holzstraße, the Holzstadt Murau, the Sculptor Workshops, and the innovative wood manufactures at the lumber mill Pabst, or the KLH-factory, which covers all fields of woodwork.

The natural park Grebenzen combines the unique flora and fauna and its events in an awe-inspiring summer program. The nature park offers water and ice-age hikes, bike- and boat-rides, the exploration of the Dürnberger Highmoor or the enjoyment of culture at the Benedictine monastery St. Lambrecht.

The lofty summits of the Tauern-mountains, the gentle knolls of the Nockberge as well as the Seetaler and Seckauer Alps promise hiking adventures. A short break at an alpine cabin is almost obligatory. Up there the food tastes much better than in the valley and some can hardly break away for the descent back to civilization.

Hundreds of kilometres of bike trails lead through valleys or up to rewarding lookout points. Also worthwhile are sightseeing trips to the historic towns of Judenburg, Murau, and Oberwölz, as well as to other destinations in the region. By the way, our region is a perfect starting point for day trips to the provinces of Styria, Carinthia, and Salzburg.

One thing we are especially proud of: the hospitality of the people in our region and the Murauer beer – perhaps the best in Austria.

Advertising text

Because of the many opportunities, the excellent prospects and the regionally available brainpower the holiday region Murtal is not yet at the end of the realization of its touristic potential. A generally big challenge for the region lies in finding and taking notice of its own regional identity and to deal with the negative image of a dying industrial region, and at the same time the challenge of a traditionally rich industrial history, which has lately excelled at producing and implementing innovations which could eventually generate a regional form of industrial tourism. In order to get the project 'Industry and Tourism' going, it is necessary to make use of the already existing regional networks because the key to success-oriented implementation lies in the co-operation of the available powers.

6. Important Innovative Regional Impulses and its Potentials of Added Value

6.1. AQUALUX – The new hot springs in Upper Styria

The actual project AQUALUX can be evaluated as an important and promising intention. Aside from several hot springs in South-East Styria the new therm is something special in the region and therefore can be seen as a prospective impulse and pull factor for the regional development, however. In accordance to the tradition of mining in the community of Fohnsdorf the architecture of the therm AQUALUX reminds on the picture of an open coal bed (fig. 8). A very important role plays light, what means that the whole building is affected by its intensity of light-floods. In regard to the concept of "Industry and Tourism" the therm AQUALUX plays a very important rule, because it is the only one in the region and has the attribute of a key differentiator.

The actual concept bases on three elements:

- Feeling good and having fun

At all parts of the therm someone can feel wellness and healthy. The offer varies from massage to water-gymnastic to light and motion-therapy. But also fun and adventure are an important factor and therefore meets the youth. Additionally a wave-pool, a stream-pool and a Black-Hole-Slide   have   been   erected.

- Regional viands

The term „region of pleasure" is an very important one in conjunction with nowadays regional planning concepts. In AQUALUX´s restaurant culinary specialties at the highest stage will be served, what underlines the efforts on commercialization of regional products. Also alimentation-specific   diet   and   weight-reducing   diet   will   be   offered.

- AQUALUX Fair-Family ®

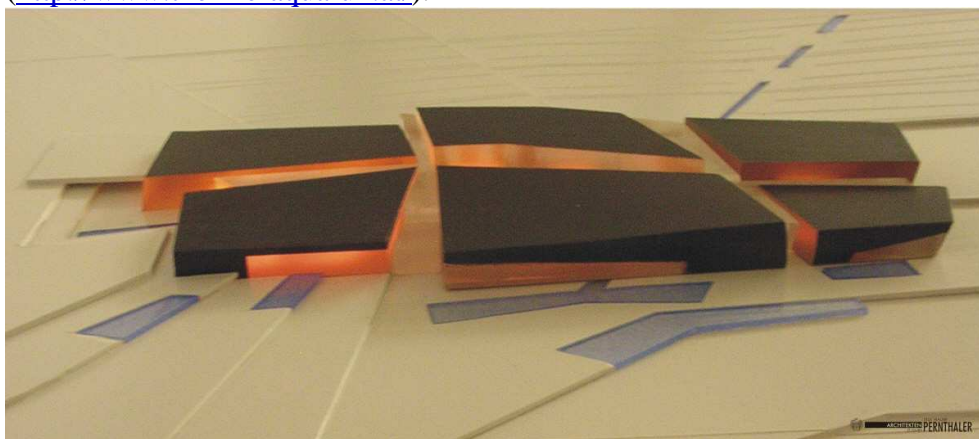It is a special family-packet, what means a kind of all-inclusive fort he whole family (http://www.therme-aqualux.at/).

Fig. 8: The new AQUALUX therm in Fohnsdorf (near to Judenburg). http://www.therme-aqualux.at/

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7. Experiences with Networking in the Region Upper Styria West

7.1. Five Preconditions for Sustainable Networking on the (Inter-)Regional Level Derived from Experiences Generated by the EU-Regional Management of Upper Styria West

7.1.1. EU-Regional Management of Upper Styria West

The institution EU-Regional Management of Upper Styria West (EUROW) has a long history (over 10 years) in supporting the integrated sustainable development of the Austrian Region of Upper Styria West. This task requires networking competence in order to bring together the interests of the Government of the Province of Styria and of the Towns and Communities within the Region. Therefore EUROW is developing and maintaining a vast network of contacts with different regional stakeholders and close relationships with project developers and owners. They share the common interest in further developing integrated sustainable development in an international context.

In July 2005 the Styrian Business Promotion Agency (SFG) took over the management of EUROW to strengthen EUROW´s networking competence.
The SFG has a long term experience in building up regional clusters, e.g. the Automotive Cluster of Styria, Wood Custer of Styria (WCS), etc. The SFG senior officer responsible for the EUROW management, Arnulf Hasler, has a rich experience in building up integrated sustainable networks on a regional level (since 1994) and has a long specific research record. In order to strengthen regional competitiveness and future integrated development EUROW intensifies its efforts to generate cooperation between communities within the region. One aim is to encourage communities to work together in building up industrial and commercial estates using renewable energy that is also provided to residential areas. This use of alternative sources of energy should reduce the dependence of the region from fossil energy sources. The use of wood biomass as an energy source also helps to create additional value within the region. Therefore EUROW is working closely together with the Wood Cluster of Styria which manages the Wood Innovation Centre. This Centre is the result of the successful cooperation of two industrial and eight rural communities. Also the Energy Agency of Upper Styria (ENAUS) is a strategic EUROW partner which supports communities in creating sustainable energy solutions using regional resources.

The following text contributes to the theoretical side of sustainable networking on an (inter-)regional level as well as to the practical side. In the following, an evolution model of integrated sustainable networking will be presented based on the experiences made by the development of a special type of sustainable networks, the eco-industrial network. The expression "eco-industrial networks" was created by Cohen-Rosenthal (Cohen-Rosenthal, E. 2003, pp. 18 f.). The prefix "eco-" highlights the ecological as well as economic advantages of sustainable networking structures between companies (Cohen-Rosenthal, E. 2003, p. 22). The presented data refer to the case studies of Recycling Network of (Upper) Styria in Austria (Strebel, H., 1995; Hasler, A. 2004a) and to the Recycling Network of Oldenburger Münsterland (Hasler, A. 2004b).

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7.2. Theoretical Framework

Sustainable Development was defined as an overall concept of society in the Brundtlandt Report in 1987 (World Commission on Environment and Development 1987, p. 43). Ten years later it was written down in Article B of the EC Treaty (Möller, L. 2003, 236 ff.).
By networking regional actors are enabled to cope with increasing complexity of their environment (Kappelhoff, P. 1999, p. 376), which is caused by a growing number of environmental laws in order to enforce sustainable development.
The dynamics and self-organizational potential of integrated sustainable networks will be described by using a system theory model. This process-orientated model was developed by Mildenberger to describe the evolution of production networks (Mildenberger, U. 1998, p. 103). The following networking model uses the autopoietic Concept of Gradual Autonomy which Teubner created to describe social systems (Teubner, G. 1987).

7.2.1. Pre-Networking Stage

The basic level of the process model is described by non-networking actors without specific interactions (microscopic chaos). Referring to Teubner´s Concept of Gradual Autonomy (Teubner, G. 1987) their activities are only guided by their own expectations and expectation structures which are shaped by their identity.
The actors increasingly recognize the problem of double contingency which means that their isolated activities produce mutual complexity of their environment. Therefore they look for strategies to reduce this experienced uncertainty in relation to their own contingency. In many cases they realize that the institutionlization of interactions and communications within an eco-industrial network is an alternative to cope with this challenging task.

The declared decision of the foundation of a sustainable network marks the step to the networking level. (Mildenberger, U. 1998, p. 175 ff.). In this context the decision-making itself seems to be far more important than the contractual agreements between the future networking partners (Mildenberger, U. 1998, p. 165 f., Rössl, D. 1994 p. 203, Spremann, K. 1990, p. 577). For example, in the Industrial Symbiosis Kalundborg[1] the first described eco-industrial network - there existed a number of independent recycling projects between the future symbiosis partners at Kalundborg for a long time period. (Christensen, J. 1998, p. 326 f.). In 1989, the responsible managers realized that the residue exchanges between their companies formed a network. As a consequence they consciously started networking between each other under the label of Industrial Symbiosis Kalundborg. Also two eco-industrial networks in Austria and Germany started without written contracts between the responsible company managers (Hasler, A. 2004a, p. 11 f.). In fact, these case studies show that the definition of the system boundaries is of great importance for the future network development. Therefore this demarcation was chosen as the first precondition for the successful installation and management of eco-industrial networks.

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[1] The expression "industrial symbiosis" was used first by economic geographers in the 40ies of the last century. The managers of the Danish industrial eco-system adopted this expression in analogy to the symbiosis between organisms in natural eco-systems. Symbiosis means organisms (symbionts) live together permanently in order to create mutual advantages for each other. The industrial symbiosis consists of bilateral and trilateral relationships between independent companies on the basis of free choice [Christensen, J. 1998, p. 328]. They share the aim to raise their competitiveness by exchanging "materials, energy, water and/or by-products" in order to foster sustainable development [Chertow, M. 2004, p. 2].

Concerning the selection of network members existing business relationships may be helpful due to easier accessible data (Dahlstrom, R./Ingram, R. 2003, p. 774) and because of an established trustful atmosphere (Klein, S. 1995, p. 340). However, the requirement of networking members out of different fields of activities to increase the number of networking potentials (Strebel, H. 1996, p. 56) reduces chances to build on already establish networks. The definition of the networking space refers closely to the selection of the networking members. Industrial areas and regions with a high density of business interactions are very suitable for sustainable networking processes (Sterr, T. 2003, p. 285). The analysis of eco-industrial parks and networks came to the result that especially the regional area provides sufficient variety and locality which Korhonen claims for successful eco-industrial systems (Korhonen, J. 2001, p. 254) in order to generate problem solving capacities that ensure sustainable development. Referring to this, another important criteria to consider are the distances between the actors (Strebel, H. 1995, p. 51).

7.2.2. Stages of Sustainable networking

The following stages of sustainable networks on a regional evolution are labelled referring to Teubner´s three autonomy levels of organizational development (Teubner, G. 1987, p. 115).
These three evolution levels differ from each other by the increasing collaboration between the member companies. In the following the specific characteristics of these stages will be described.

In the phase of self-monitoring/-description communications and transactions start between the network companies in order to get to know each other and to exchange information and resources. Therefore the information and knowledge transfer and the recycling driven cooperation between the system members are two also very important preconditions for eco-industrial networking.
The inter-temporal analysis of the frequency of subjective information deficits of waste managers within the German eco-industrial structure Recycling Network of Oldenburger Münsterland Region showed a successful intensification of the specific information exchange within the network by organised networking (Hasler, A. 2003a, pp. 106 f., Milchrahm, E./Hasler, A. 2002, pp. 277 f.). The uncertainty of the waste managers was decreased in a remarkable way: None of the interviewed managers experienced frequent information deficits in the years 2001/2002. Four years ago, at the beginning of the networking process, 40 % of the managers complained about frequent information deficits concerning waste solutions. In the same period the share of managers who state no information deficits raise from 5 % up to 77 %.
One helpful instrument of supporting the information flow in eco-industrial networks is a "Regional Recycling Information System (REGRIS)" (Hasler, A. 2006). This system was developed on the basis of the GIS-software ArcView.

This evolution stage of self-monitoring/-description is characterized by its dynamic (Teubner, G. 1987, p. 115). The networking actors are very open-minded and ready to make structural as well as processual compromises First network structures appear based on personal appreciation on a mutual basis. It is possible that a person or an organisation already gains a leading networking role at this early stage.
The self-limitation of the individual contingencies raises the understanding of each other. This behaviour of the networking members corresponds to Willke´s assumption that social systems are less than the sum of their elements at the beginning of the evolution process (Willke, H. 2000, p. 106 ff.). This means that the creation of more complex systems at higher levels of

organization requires that their members decrease their individual degree of freedom in order to enable necessary system structures and processes.

On the other hand the voluntary self-limitation of their own contingencies creates the basis for mutual trust between the system members.

The already described pattern of double contingency will be dissolved when the mutual expectations about the behaviour of the networking partners match their real behaviour. In this way the self-constraint of their contingencies enforces the reduction of the complexity of their environment (Hippe, A. 1996, p. 28).

The self-restricting behaviour of the member companies without giving up their contingencies outside the network changes the communications and interactions within the network and strengthens as a consequence its system borders. Therefore the network membership is primarily based on the ongoing reflexive communication between the partners which take their own situation into consideration as well as the partner´s view of their situation.

The definition of common network aims enables the step to the next evolution stage – the phase of self-constitution (Teubner, G. 1987, p. 115). These goals represent a shared network definition of all networking companies as the result of communication and following communication (reflexive discourse). In this way the basis is created for the creation of confidence in the networking system itself.[2] Confidence can be seen as the trust into the functioning of a system (Appelt, M. 1999), p. 15) which substitutes the (in most cases) missing possibility of the individual system actor to control the whole system (Sprenger, R. K. 2002, p. 58). In the Industrial Symbiosis Kalundborg it is the trust of the symbionts in the success of the system also under changed economic conditions.

Therefore confidence is of high relevance as a coordination mechanism especially in this phase of an eco-industrial network and its existence has to be considered as another important precondition for successful networking.

This eco-industrial network stadium is characterised by growing trust of its members into the stability of their mutual obligations. As a consequence, confidence in the whole network as a long term advantageous form of cooperation is of great relevance for sustainable networks.

Precondition of confidence is the existence of a network identity which expresses a shared view of the network members concerning their environment. The members identify themselves with the network and differentiate between their network and their environment.

This shared understanding enables the increase of the individual contingencies without enhancing the complexity of the individual´s environment as a result of cooperative definition of the networking aims (Rössl, D. 1994, p. 209; Weick, K. E. 1985, p. 132 f., Bellmann, K./Hippe, A. (1996), p. S. 76).

For example, this network identity is expressed by the choice of "Industrial Symbiosis Kalundborg" as the name of the network (Schwarz, E. J. 1994, p. 113). In this way, the advantageous consequences for all symbionts should by highlighted (Engberg, H. 1993, p. 42). In the Recycling Network of Oldenburger Münsterland one example for the existence of a network identity was the willingness of the residue management companies to offer better business conditions to the network members.

A stable confidence on the basis of an institutionalised network identity marks the point of entry to the highest stadium of network evolution which is described as the autopoietic stage by Teubner (Teubner, G. 1987, p. 101). The network gains the ability to reproduce and to preserve itself (Mildenberger, U. 1998, p. 171 f.) which requires a strategic network

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[2] This manifestation of trust has to be differentiated from the personal trust between the networking actors playing an important role in the network stadium of self monitoring/description. (Luhmann, N., 1988, p. 95 ff.)

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management by a central institution as the fifth network condition, for example the EU-Regional Management of Upper Styria.

The instituionalised network identity enables joint actions of the member companies without the requirement of agreements between the individual members and all other partners (Teubner, G. 1987, p. 208). The collective identity represents the sum of all individual network driven actions of its members (Teubner, G. 1992, p. 208). This stage of eco-industrial evolution characterises the regional network of the communities of Upper Styria West. The EU-Regional Management of Upper Styria West is of great importance for the long term stability of the network system. The networking activities of the regional management institution supports the development of the mental vicinity of the symbionts in order to understand the behaviour of their network partners in a comprehensive way.

7.3. Conditions for sustainable regional networking

In summary, based on the presented networking model five essential conditions for sustainable regional networks will be proposed:
- Selection of networking actors
- Information and knowledge transfer between the networking actors
- Inter-actorial activities
- System trust (confidence) into the regional network
- Strategic guidance of the network by a central institution

In the following the interregional networking development between the Region of Upper Styria West and a German and Swiss region will be described by applying these networking model.

7.4 Interregional Networking of the RISE Project Partners

7.4.1. Selection of networking actors

The basis for the INTERREG III C-funded European interregional project RISE (Regional Identity and culture, Strengths development & Environment action) was created in 1999 by a cooperation between two so called "Regions of the Future", the German subregion "Teilraum Deggendorf/Plattling" as a part of the Administrative District of Deggendorf, and the Swiss subregion "Erlach/östliches Seeland" as a part of the Cooperation Space Seeland-Jurasüdfuss-Jura Bernois (Busch, K. 2007). The search for a cooperation partner with similar regional preconditions lead to the involvement of the Austrian region Aichfeld-Murboden.

This cooperating (sub)regions see themselves as a part of an East-West "axis of thinking" including the neighbouring countries France, Czech Republic and Slovenia. The integration of a Swiss project partner supports the cooperation of Switzerland with the European Union and created further interest in Switzerland to participate in international European project also in the future.

7.4.2. Information and knowledge transfer between the networking actors

The information exchange between the EU Regional Management of Upper Styria West and regional key actors was strengthened by the joint project development. The mutual know how

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exchange at the convents and in the project-groups provided an added value to the participating actors.

The official webpage was published in November 2004. It contains German as well as English contributions and was continously updated and extended.
The pilot project "Culture networking at a regional level" lead to the development of an online planning tool to support regional networking in the field of culture.
An important outcome of another pilot project „Benchmarking for carpenter's and joiner's workshops" was the desing an implematation of a benchmarking IT-tool.
An additional webpage was created to support the pilot project "Development of Sustainable and Safe Motorcycle Tour Packages" (www.bikerroads-rise.com). It provides an intranet-section for the development of an "International Biking Information System (IBIS)".

7.4.3. Interregional Activities

The small number of participating regions required from all partner to bear responsibility in the development of the specific theme areas as well as in the pilot projects allocated to them. The partner involvement was provided by the creation of the Operative Work Group (2 persons of each partner region) and of the Steering Committee (1 representative per each national co-financer, 1 representative per each partner, 1 representative per each priority cooperation field and 1 representative of each national project management).

The aim to develop/implement innovative measures to support regional development in densely populated rural spaces was reached by the organization of annual convents in each of the partner countries. In this way regional actors were integrated in the project development. As a result, seven pilot projects as innovative joint inter-regional activities were generated as well as additional innovative ideas outside the RISE-project.
The pilot-projects and the project-management were designed to create value in the partner regions as well as in other regions of the EU that share similar characteristics.
New approaches and forms of cooperation were established during the RISE-cooperation between the three partners and within the partners structures. In Upper Styria West the area of cooperation was expanded to the Murau subregion.
In summary, the intense interregional RISE-cooperation created a positive effect on the cooperation inside the participating regions. In all three partner regions the intensity of the regional management processes was increased.

7.4.4. System trust (confidence) into the regional network

The partnership between rural and urban spaces was also strengthened with pilot projects regarding regional identity. The identity increasing effect of the exhibition "own view – outside view" was clearly visible at the RISE-convent in the Town of Judenburg.
Especially the projects to strengthen regional identity in the fields of cultural heritage and cultural life were developed to increase the value attached to them by referring to further development potentials and economic utilization of regional identity.

This identity building activities supported the confidence of regional actors that (inter-)regional networking creates additional value and potentials within the Region of Upper Styria West as well as within Europe.

In addition, the confidence in the prosperity of a regional network of communities organized by a central management organization increased based on the experienced RISE success stories.

7.4.5. Strategic guidance of the network by a central institution

The take-over of the management of the EU-Regional Management of Upper Styria West by the Styrian Business Promotion Agency took place at the 1rst of July 2005. This new form of cooperation between regional management and business promotion also strongly influenced the RISE-project activities, for example by supporting the pilot project "Benchmarking for Carpenter's and Joiner's Workshops" of the Wood Cluster of Styria, a product of the Styrian Business Promotion Agency.

The acceptance of the EU-Regional Management of Upper Styria West as the partner for the integrated sustainable development in the region increased by the RISE-activities. Also further cooperation pontials with regional partners were generated, for exaple in the field of tourism.

The touristic regional management institution Urlaubsregion Murtal aquired a better overview concerning the regional cultural events and event-planning by the development of an online tool which supports cultural networking.

The RISE partners are planning to adress the following potentials for intensifying their interregional networking activities:

- Exchange of know how to achieve autonomy from fossil energy sources by fostering renewable energy sources based on the untilization of the agricultural structure of the partner regions.

- Exchange of expertise to foster the optimisation of regional value creation by developing the production chain in the wood-sector from the tree to the final product based on the economic structure of the wood-sector in all partner regions.

- Creation of image/profile of regions by city-networks and partnership between the towns and their surrounding.

- Cooperation with universities focusing on the creation of expertise about spatial development and spatial evaluation processes.

In addition, the RISE partners would like to embroaden their sustainable cooperation by integrating new members from further countries.

8. Summary

The paper in hand deals with three districts which form the NUTS III region „Upper Styria West". It underlines the drastic demographic change, the reduction of population and the unemployment especially in remote areas far away from the economic centers, the capitals of the districts.

The Styrian government has therefore implemented so-called regional management bureaus. One is working in the region discussed. Today guidelines for implementing regional structures and guidelines for small regions are edited, because meanwhile there are too many different agencies, bureaus etc. working within the regions. However, coordination is necessary indeed. The center of the future regional development processes is the so-called "regional panel".

The daily work is accompanied by defining regional potentials which are focused on the natural heritage of this mountainous region. Beside the conventional tourism the category "Industry+Tourism" is one of many future innovative concepts. Also Innovation centers like the wood-innovation-center are running and planned to be enlarged. The hot spring Aqualux will open at the beginning of December 2007.

There are many great activities, which are born on the bases of partizipation of the people, public administration, government, etc. This seems to be the key of success in the region. Someone recognizes the spirit of positive future. We will see what the figures show in several years.

Last but not least experiences from the work done by the regional management bureau are described and discussed. Beside the theoretical framework of regional networking the special stages and conditions in the region Upper Styria West are mentioned. The focus lies on the interregional networking of the RISE (interreg project) project partners. The article closes with the strategic guidance of the network by a central institution.

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