AT1 (Mittleres Ennstal, Austria):
The role of stakeholder networks in landscape valorisation

Objective

The results of the first local stakeholder laboratory in the CSA Mittleres Ennstal (AT) indicate that the main driver for the development or enhancement of strategies and concepts of generating value from the resource "local landscape" in rural areas are assumed to be local actors. Functioning networks of local actors are seen as utterly important for the successful implementation of such strategies. Against this background our study targets at identifying the network of local actors having a stake in local landscape management and landscape related development strategies. We particularly aim at locating strategic gaps in the network and detecting potential starting points for collaboration and improvement.

Methodology

To analyse the relationships between the most important stakeholders we apply a Social Network Analysis (SNA) on a closed stakeholder network. This network consists of 22 institutions representing agriculture, tourism, local administration, local economy, nature conservation and rural development. It has been identified including the information of 5 local key actors. The core aspect of the SNA is based on a valued graph, which considers stakeholders (nodes), the relationships between them (links/ties) and the quantity and quality of these single relationships (values). As regards quantity of relationships we look at the frequency of contacts ([1] occasional, [2] frequent, [3] intensive). As regards quality of relationships, we look at the conformity of landscape related strategies ([1] opposite, [2] rather opposite, [3] neutral, [4] rather common, [5] common).

On level of the single stakeholders, we measure the immediate contacts they have to other stakeholders in the network ('degree centrality'). Also we look at the placement of a stakeholder within the network ('betweenness centrality'). On level of the network, we assess the proportion of realised relationships to possible relationships in the network ('density') and the share of reciprocal relationships ('dyad-based reciprocity': a 'dyad' is defined by 2 connected actors). We conduct these analyses on level of the "basic network" and on level of "sub-networks", which are composed by actors pursuing the same strategies of landscape exploitation. Also we analyse two different models: The first model (1) considers all existing contact ties within the networks, without making differences as regards contact intensity. The second model (2) considers only "frequent" and "intensive relationships within the networks.

Results

Table 1 shows the key results on level of the basic network for both models. In general it becomes obvious that the basic network of "landscape stakeholders" in the study region is exceptionally dense: In the entire basic network (Model 1), 76% of 461 possible relationships are realised. As regards the actor's capability of self-perception the results indicate, that the single stakeholders have

a very clear assessment of their communication to other actors within the network: More than 70% of the dyads in the overall network are reciprocal.

Nevertheless, despite most stakeholders in the entire basic network know each other, many contacts are rather occasional, which becomes visible in an average contact intensity ranging only between 'occasional' and 'frequent' (average contact intensity: 1.5). Focussing on only frequent contacts (Model 2), the density of the network considerably decreases to only 30% of possible ties. Compared to the entire basic network, the network of frequent contacts also shows a lower reciprocity. However, in the network of frequent contacts, it becomes obvious that higher contact intensities are coupled with a particularly increasing conformity of strategies.

Table 1. Key figures on overall network level.

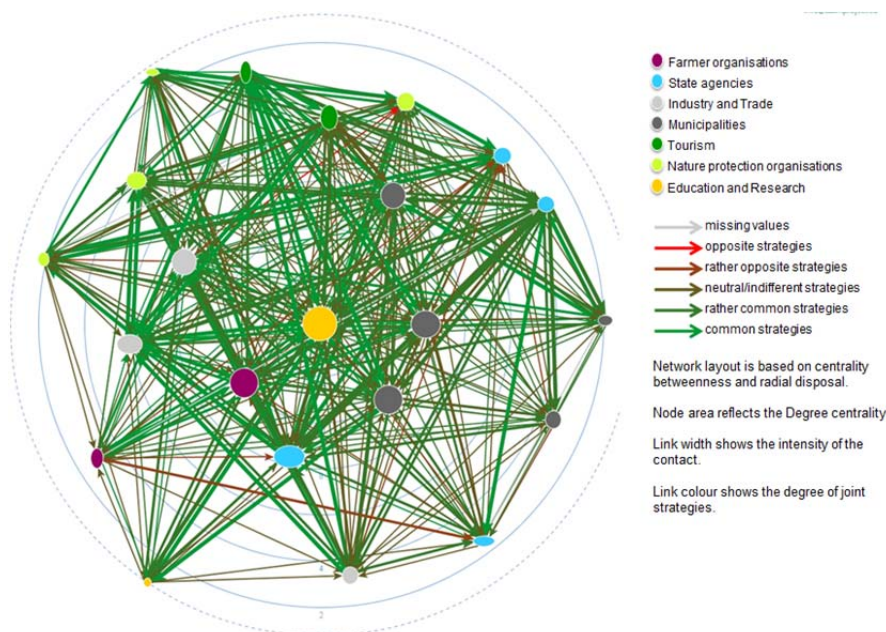| Parameters	Model 1	Model 2
possible ties	461	461
existing ties	351	142
density	76%	31%
dyad-based reciprocity	71%	33%
average degree centrality	16.0	6.5
average 'contact intensity'	1.533	2.317
average 'conformity of strategy'	3.809	4.268

Figure 1. Model 1 visualised on actors-level (Tie width illustrates contact intensities. The layout of the graph is based on 'betweenness centrality', thus node expanses show the characteristics of the scores. Node width is based on ties sent by an actor (out-degree) and node height on actors' received ties (in-degree). Consequently, a balanced number of in-degree and out-degree shows a round node.

Figure 1 shows the entire basic network visualised on actors-level. It becomes obvious that 1 actor, representing research and education, reaches high betweenness and degree centrality and consequently is placed in a very central position in the network. This actor's potential to spread and control information and communication is very high.

How can landscape can potentially affect the rural economy - Network gaps in the implementation of strategies and concepts of generating value from the resource "local landscape"

The consideration of sub-networks brings to light that stakeholders pursue in parts common, in parts overlapping and in parts different strategies of generating value from the local landscape. Results show that the most important strategies are *agricultural production*, *tourism* and the marketing of *regional products* (Fig. 2-4).
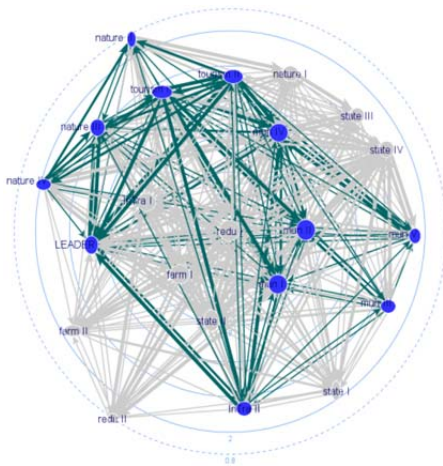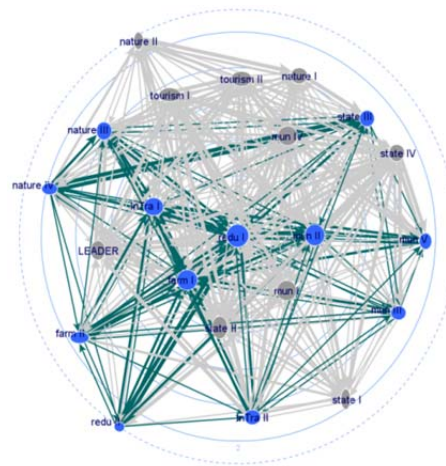

Figure 2. Sub-network "Tourism".

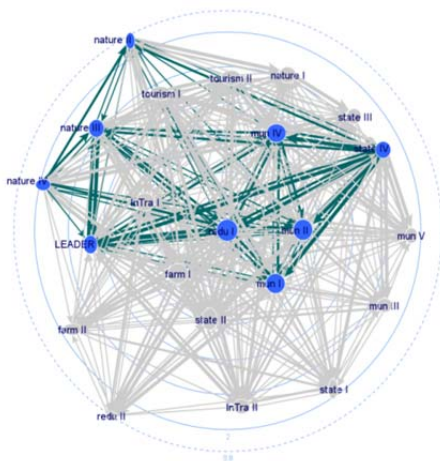*Figure 3. Sub-network "Agricultural Production".*

Figure 4. Sub-network "Regional Products".

However, the analysis gives hints at important interruptions in potential valorisation chains: The strategy "Agricultural production" is supported by institutions from agriculture, industry and trade, research and education, nature protection, as well as local and federal administration. However, it becomes clear that institutions representing tourism, which actually are main beneficiaries of the agricultural landscape in the study region, are not taking part in the strategic network of "agricultural production". In contrast, the strategy "Tourism" is supported by institutions from tourism, industry and trade, nature protection, as well as local and federal administration. Here agriculture, as the main supplier of the cultural services in the agricultural landscape is not included into the strategic network of "tourism". As regards "Regional products", this strategy is supported by institutions from

industry and trade, nature protection, as well as local and in parts federal administration. However, again agriculture, as the main supplier of the raw products to be valorised via "regionality", as well as tourism, as one of the main potential distributer and beneficiary of the marketing of regional products, are not included into the strategic network of "tourism")

Lesson learned & Policy Recommendations

The high acquaintance and connectivity between the stakeholders in the Austrian Mittleres Ennstal, and also the existence of strong key-actors, who are able to channel knowledge and information, indicates a huge potential for developing and fostering common strategies of generating value from the resource "local landscape". Nevertheless, the dense network also could hinder innovation and development due to personal constraints of pushing through new strategies or due to the fact that in dense networks often a reduction of the overall knowledge base takes place. Also, the results reveal that there are strategic gaps in the networks as regards important strategy of value generation, which have to be closed to guarantee successful and integrative implementation.

In the 2nd LSL, stakeholders broadly agreed to the results derived. They validated the strength of connections in their region and agreed to the obvious potential for collaboration and common development. From the stakeholder's point of view, the results of the analysis are an important necessary hint on existing communication and strategy gaps. They recommend using SNA analysis and results to enhance the institutional awareness on the importance of closing potential value chains and fostering the straight implementation of commonly developed strategies, in order to increase the efficiency of generating value from the resource "landscape" in the region.

Reference

Schaller, L., Ehmeier, V., Kapfer, M., Kantelhardt, J. (2014). Agricultural landscape as a driver of regional competitiveness - The role of stakeholder networks in landscape valorisation. *Proceedings of the third Congress of the Italian Association of Agricultural and Applied Economics (AIEAA)*. June 25-27, 2014, Alghero, Italy.

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