Spatial Planning in Vorarlberg, Austria

Ecological Aspects of Land-Use Planning and Regional Development under Conditions of a Narrow Space

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Introduction

The Federal State Vorarlberg is an Alpine region with narrow plain space and a rich mountain landscape. For this the regions Rhine Valley and Walgau are confronted with a lot of conflicting land-use patterns. To find new ways to deal with the problem is one of the tasks of the regional development process 'Im Walgau'. The paper describes the approach used for the region.

One part of the task is to work out basic information for planning and decision making including for example the development of the patterns of settlement over time, the inquiry of vacancies. Another part of the task is to gather strategies and concepts with relevance for the spatial development from different departments of the Federal State.

With this information the local communities of the region Walgau start to elaborate spatial development concepts. The specific quality of these concepts is (1) the cooperation between several municipalities in the planning process, (2) the time horizon: 2 generations, 50 years, (3) the definition of regionally significant land-use patterns including the ecological features and (4) a broad participation of the local public. The overall goal is to sign a contract between the municipal level and the federal state level to fix the regional development concept of the Walgau region and make it more obligatory.

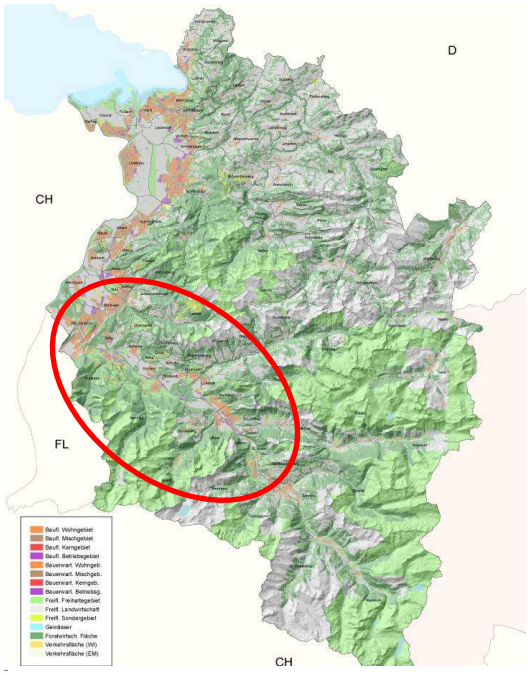
Of course there are some restrictions connected with the implementation of such a planning process which show that the learning process of the many actors involved is at the beginning. But at the other hand the region has the idea of some far-reaching measures to make the concept work including new instruments as a 'zone bankbook' and a 'spatial impact assessment'.

Summarizing the process some factors of success can be identified, which from a scientific attitude are important. Planning processes imply ‘to step out from theory into exercise and to face politics’ as Schneidewind (2007:48) told. It is an ‘asymmetric relationship’ affected by different expectations concerning the quality of results and based on different perceptions, system logics, and mechanisms of steering (ibid.: 50).

Scientific consulting of political processes means interaction in a way that does not restrict scientists on providing expert’s opinion. Scientists also are expected to give methodological support to design processes and to give strategic support to integrate the organizational and institutional environment (Sellnow 2007). The approaches range from transdisciplinary agenda-setting (Jaeger, Scheringer 1998, Jahn 2005) to sophisticated modelling tools like cybernetic system modelling (Vester 1999, Honegger 2008).

On the other hand scientific findings should be consistend and verifiable and are far away from politics’ normative appraisals of ‘true’ or ‘false’. In this area of (potential) conflict scientific experts act if they work as scientific consultants for political processes. The paper describes an example of such a process and the role scientific expertise can play.

1. The region Walgau



The region Walgau is located in the Southern part of Austria's very east federal state Vorarlberg. The region can be characterized as a Alpine trough valley with a bottom of about 42 square kilometres located at 500 m above sea level. The ambient mountains rise up to 2.000 m above sea level. In the Walgau region 19 small cities and villages with 86.000 inhabitants show a small-scale structure of settlement.

Fig. 1: Location and profile of the Walgau region (Departement of Spatial Planning Vorarlberg)

At the bottom of the valley, big enterprises are located mostly belonging to the branches of metal and food processing while the mountain area is characterized by small rural communities with agriculture and small manufacturing and service enterprises.

At the bottom of the valley a demanding pressure of different land use patterns characterize the region. In the same narrow space the fertile and easy-to-handle agricultural areas and the recreational areas near to the villages compete with ecologically valuable areas like wet iris meadows and relicts of riparian forests along the river Ill. At the same time the small area contains most of the settlement, industrial, and service areas and the main traffic zones (railway line, express highway and two state roads).

The Walgau region has experienced a massive change over the past 50 years. From 1951 to 2010 the population has nearly doubled from 43.610 to 86.041 inhabitants. There is no other Federal State in Austria that has experienced comparable growth in the same time frame. The strong growth in the population also can be seen in the development of settlement areas. The number of buildings has almost tripled from 6.746 in 1951 to 19.167 in 2001 which was the latest date of this census.

Fig. 2: Impressions of the Walgau region

During the regional development process an investigation was started to collect data on vacant or less used buildings. Municipal offices have been questioned to extract data of the population registers and also to localize and describe the respective buildings. In 17 local communities 933 buildings have been identified, from which 149 are vacant and 784 buildings only are occupied by 1-2 elderly persons. Together with about 40% reserve areas of development zones which are legally dedicated but not yet under roof the local communities show a huge potential for their prospective settlement development. But the potential is a theoretical one because the areas and buildings are not at the market.

The glacier- modelled landscape also saves a big reservoir of groundwater which is able to permanently supply the whole federal state Vorarlberg with clean drinking water (potential issue quantity 1.400 l / sec). Another important problem for the regional land use planning is the imperative of flood protection. In 1995 and 2001 the region has been affected two times by a ‘hundred year flood’ which in 2001 caused a damage of up to 47 million Euros. Confronted with the anticipated impacts of the climate change in the Alpine regions more of this kind of damaging events have to be expected after a 'period of peace' during the phase of intense industrialization.

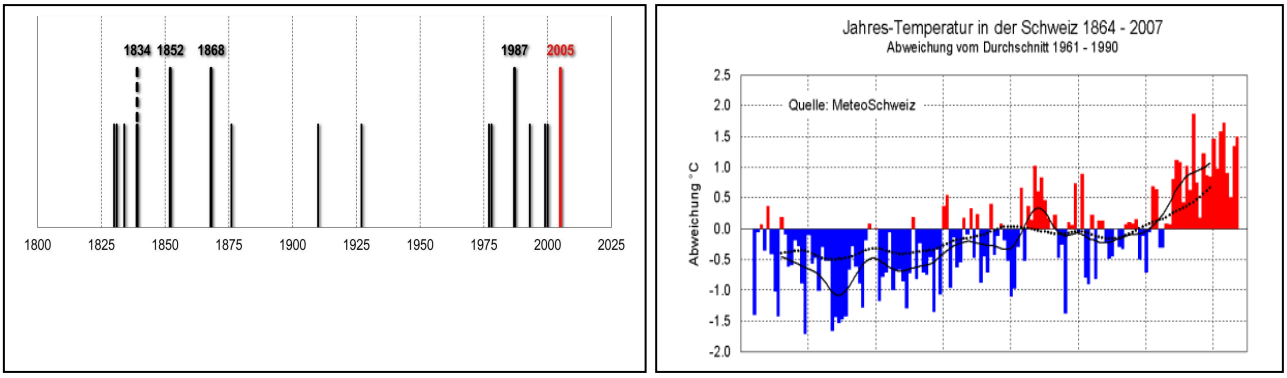


Fig. 3: Long-term development of floodwaters and annual temperatures in Switzerland 1800 (1864) - 2005 (2007) (Andreas Götz, Bundesamt für Umweltschutz der Schweiz, director of the 'Platform Natural Disasters Switzerland PLANAT, presentation 25 Jan. 2011)

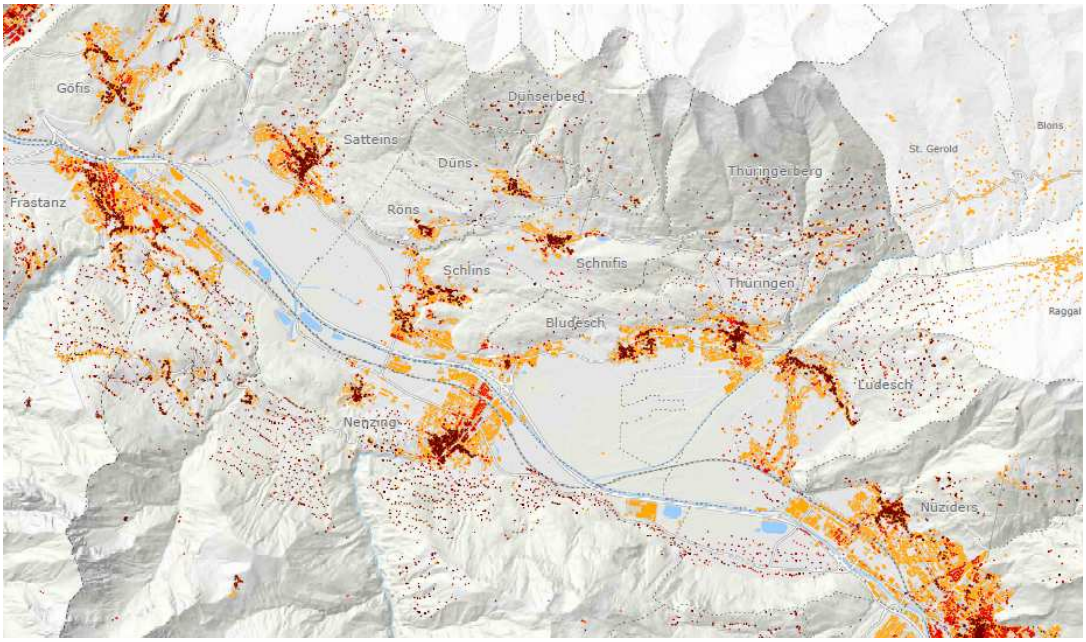


Figure 4: Settlement development – buildings 1857 (brown), 1950 (red), 2008 (orange) – formerly settlement patterns are located in respectful distance to the river Ill. (Department of Spatial Planning Vorarlberg).

The river Ill and its influents are highly set into concrete and the narrow space and the linear infrastructure allow only little flood plain.

2. The regional development process ‚Im Walgau'

The regional development process 'Im Walgau' is aimed at supporting co-operative projects of 21 local communities and in a second step to work out a regional development concept out of these activities. The whole process should be organized integrating different target groups and the region's citizens. After the first phase of establishing the organizational structures and procedures, the conference of the 21 mayors and the regional representatives in the federal parliament decided to start the project phase with three core areas to be executed with different measures: (1) To enhance the regional identity, (2) to foster the cooperation between local communities and (3) to learn from each other.

After two and a half years the process shifts its focal point from concrete projects to enhance and inspire the idea of cooperation towards permanent organisational structures and basics for future planning. One decision is to continue the process which means that the mayors decided to autonomously finance the working structure after the pilot phase which has been funded by the federal state level. Another decision is to develop a regional strategy consisting of different elements:

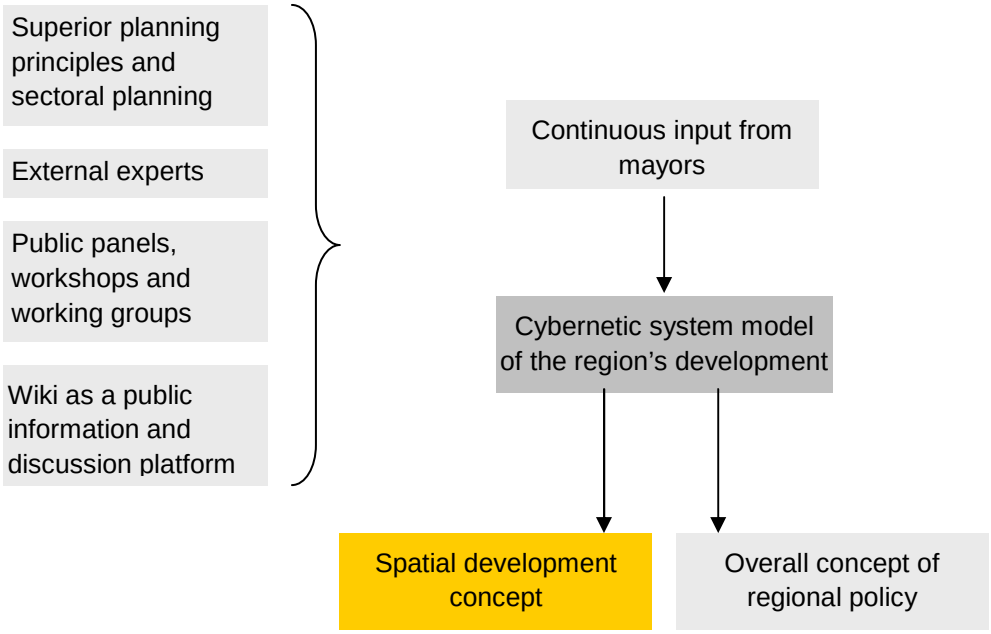
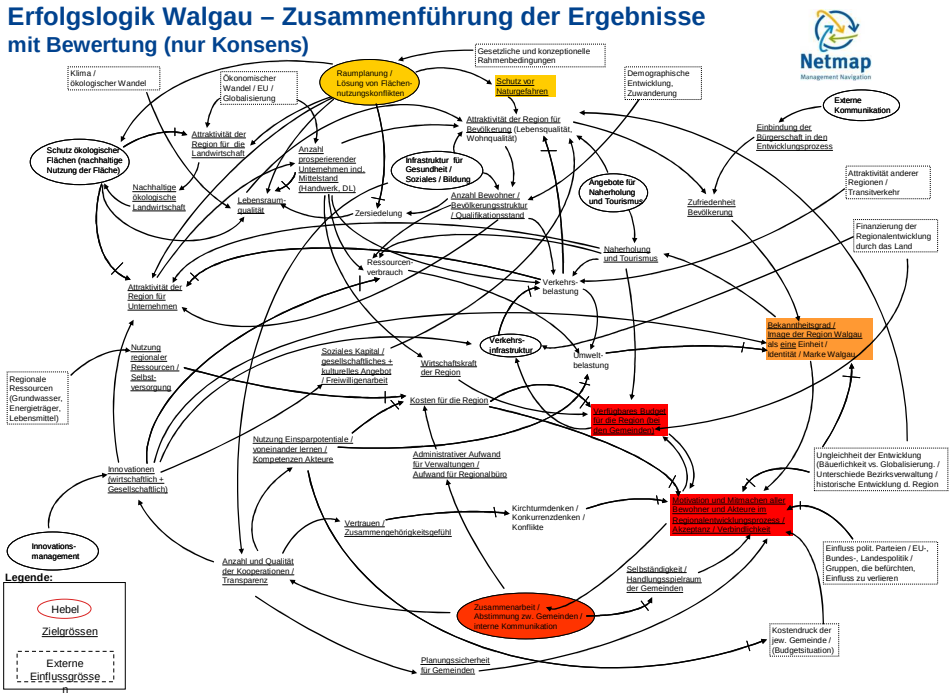


Figure 5: Approach to compile a regional development strategy

After two years of analyses and a lot of workshops, public panels and working groups on very different issues, compared by a lot of face-to-face interviews and discussions, the main problems and potentials of the region's development emerged. At this point a cybernetic system model of the regional development has been generated by the Mayors and – in parallel as a 'control group' – by a group of engaged citizens and entrepreneurs.

The system model tries to identify the influencing factors connecting different topics and goals. It also takes into account the levers (which means the opportunity for the region to successfully influence the development with own measures), the command variables (what the actors want to reach) and the external parameters (developments which cannot be steered by the region but have to be observed).

Figure 6: Cybernetic system model for the regional development 'Im Walgau'



One of the main levers in the model is called 'Spatial planning / solving problems of land use'. Both workshops agreed on this estimation. Looking at the primary interlinkages the lever is connected with various topics like 'regional attractiveness for agriculture', 'regional attractiveness for enterprises', 'diversity', 'quality of living space', 'urban sprawl', 'protection from natural threads', and with another lever called 'protection / sustainable use of ecologically sound areas'.

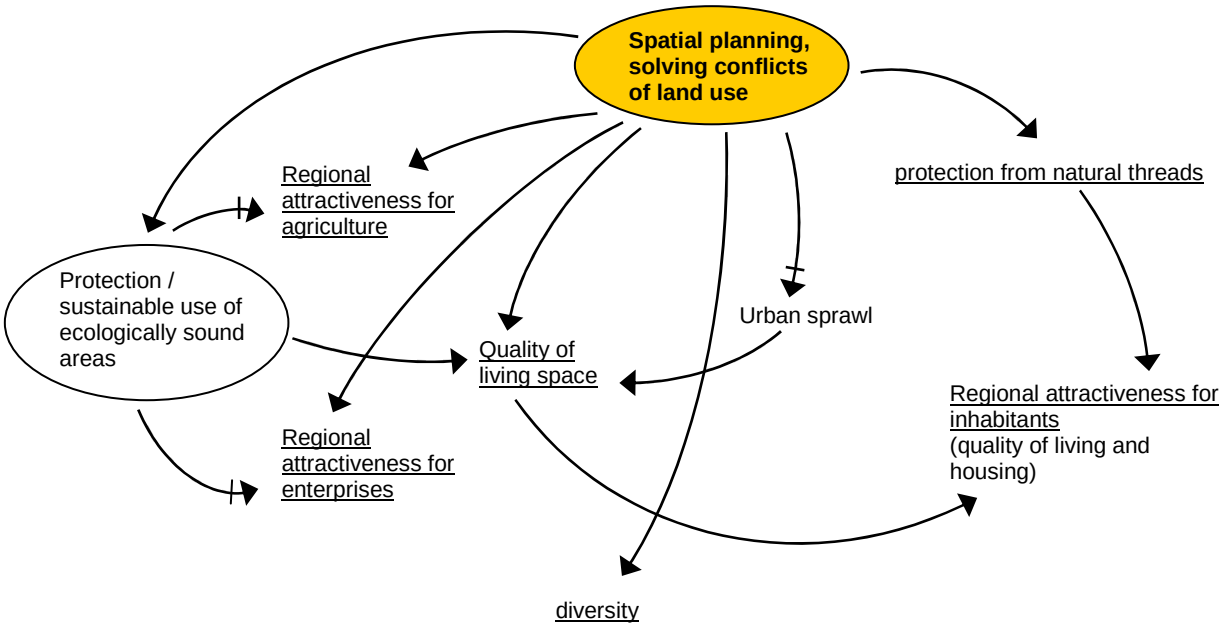


Figure 7: Primary linkages of the regional lever ‚spatial planning'

Encouraged by these findings the mayors decided to start with the spatial development concept of the Walgau region.

3. The process of spatial planning under conditions of a narrow space

In the Federal State Vorarlberg ‘Spatial Development Concepts’ are scheduled by law as an optional local planning basis and announcement by choice (Vlbg. Law on Spatial Planning § 11). Such a concept for example can include local assets, aspired spatial structures of economy and infrastructure, free space to protect, the order in which local areas should be dedicated and covered with buildings, and much more. Because the concepts are voluntary there is no specific content or depiction required.

In the case of the region Walgau the Department on Spatial Planning of the Federal Administration supports the process which is structured as follows:

Step 1: Several sections of the Walgau region work out a spatial development concept, each section combining three or four local communities. They use the same arrangement of topics as a common framework structure which allows merging the results in the whole region. In this way the local communities prepare the planning process.

Step 2: The process of preparing the concept is funded by the federal state according to a specific quality each concept should have. This quality means:

(1) The cooperation between several municipalities in the planning process should secure a kind of 'regional viewpoint' to avoid the complete concentration on local issues and interests. The challenge is to keep the balance between local autonomy and regional coordination.

(2) The time horizon should cover two generations (50 years) which also is a great challenge because no one can even not approximately forecast the development over such a period of time. But the task is not to anticipate the future development but to define the desirable condition-to-be of the local community. Looking for example at the growth of population over the last fifty years the question about the size of population fifty years later shows a lot of impact on spatial issues.

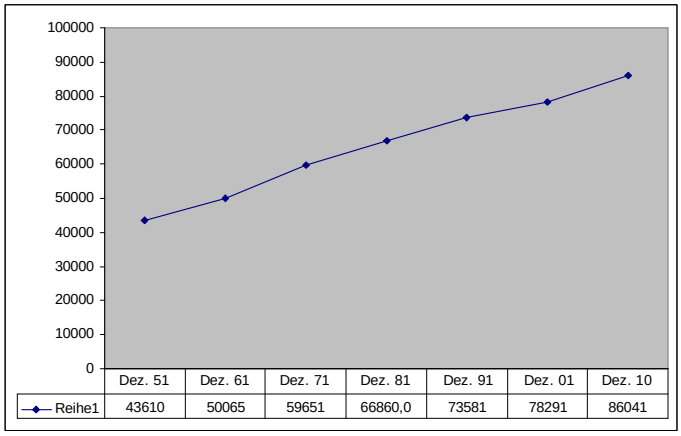


Fig. 8: Number of inhabitants 1951 - 2010 of the region Walgau (Statistik Austria)

(3) The definition of regionally significant land-use patterns also are part of the specific quality of the ‘Spatial Development Concepts’ the federal state will pay for. Every local community has to define such areas including ecological features and should discuss the future development of these areas together with the other communities within the Walgau region.

(4) Last but not least a broad participation of the local public is claimed to enhance the commitment and binding character of the concepts in case of concrete planning activities of the future.

Step 3: The final goal of the process towards a 'Spatial Development Concept Walgau' is to sign a contract between the municipal level and the federal state level to fix the concept and to make it more obligatory.

At the moment (May 2011) the core region shows the following state of affairs:

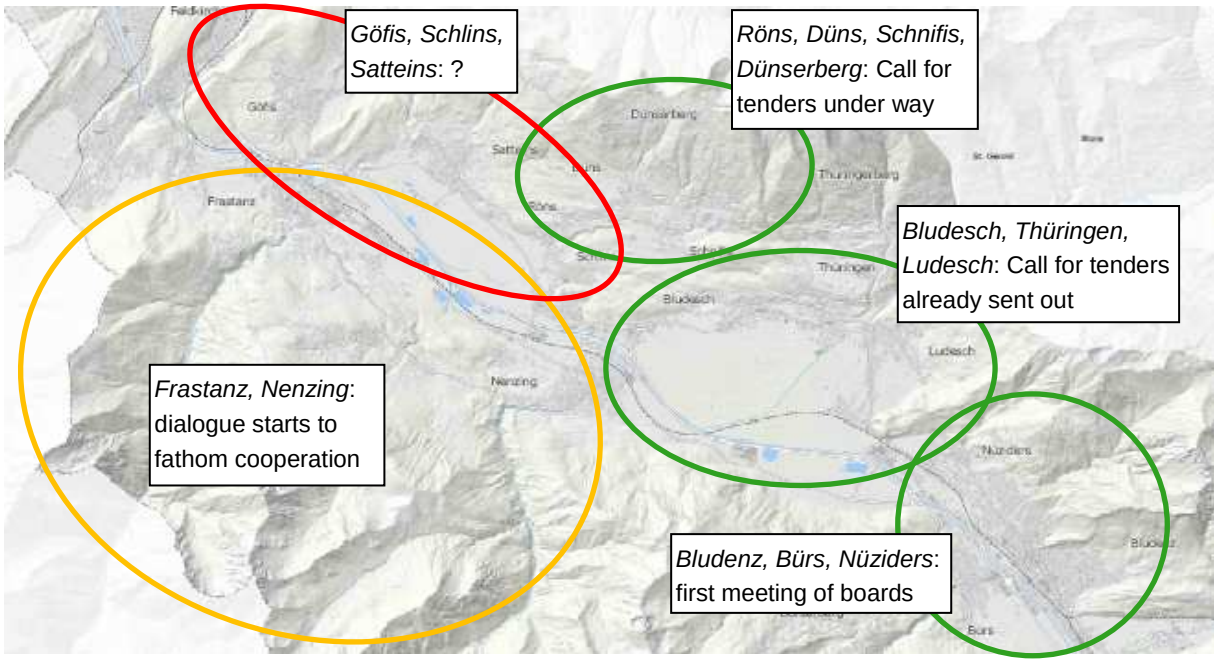


Fig. 9: 'State of the art' of the spatial planning concepts within the region

4. Outlook and further activities

The Walgau region as a slightly structured region with small local communities needs a lot of inter-municipal cooperation per se. The narrow space of an Alpine trough valley additionally forces cooperative planning and collective acting to prevent the region from disperse settlement and deterioration of nature. To reach this a common development process has been started to compile a common strategy.

In the case of the Walgau region we can identify four factors for success to enable and foster the region's planning process:

1. Transdisciplinary agenda-setting:
   The process concentrates on "real-world problems" defined by the regional actors and completed by scientific analysis as the relevant questions arise. Methodologically spoken a kind of ping-pong between scientific expertise and local knowledge has been established. The regional actors' awareness of problems is a precondition for commitment and participation and needs to be at eye level with the scientific definition of needs for action.
2. Input from experts and scientific analysis:
   Different analyses of regional issues and inputs from experts has been used to collect the data to describe the regional status quo. A lot of problems have been more or less 'hidden' before presenting the results or at least some important actors didn't assess the problems as serious as it should be necessary (see for example the analysis of vacant buildings, the change of settlement patterns over time or the future prospect of the climate change in the Alpine space).
3. Systemic modelling to raise the awareness of the linkages and interrelationships:
   The cybernetic system model was an important step to gather and structure all the information

collected within the first phase of the process. As a main result the process towards a 'Spatial Development Concept Walgau' started, because it was defined as a crucial lever for the regional development.

4. Development of trust and mutual understanding among decision-makers
   Of course there are some restrictions connected with the implementation of the process which show that the learning process of the many actors involved is at the beginning. But the intensive process of coordination during the last two years caused an increase in confidence and mutual understanding between the mayors which allowed to start a challenging planning process which in fact force the local communities to turn down a part of the local self-administration in favour to regionally facilitate reasonable land use patterns.

Of course there are a lot of other factors of success to enable this kind of planning process reaching from the small-scaled regional structure and the regional culture of interaction to the type and acuteness of the specific problems the region is confronted with. But in this case the emphasis is on such factors of success which can be influenced and strengthened by the scientific input in and the design of the planning process.

With respect of the regional development the process should go on. The 'Spatial Development Concept Walgau' is not seen as the final upshot of the regional development process. The region has the idea of some far-reaching measures to make the concept work. One idea promoted by the Federal Department of Spatial Planning is to establish a new instrument. A kind of 'zone bankbook' of each community should balance different types of land use and should facilitate the trade-off between the local communities. In this way it is expected to adjust imbalances between large area- communities and communities holding a small area as well as imbalances between the villages at the bottom of the valley and the small mountain villages. The instrument will be a stringent implication of the 'Spatial Development Concept Walgau'.

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