

SUPER – Sustainable Urbanisation and Land Use Practices in European Regions

Applied Research

Annex 3.2: Case study AT-Vorarlberg

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Abbreviations

AESOP	Association of European Schools of Planning
ARTS	ESPON Assessment of Regional and Territorial Sensitivity
CEMAT	Council of Europe Conference of Ministers Responsible for Spatial/Regional Planning
CLC	Corine Land Cover
COMPASS	ESPON Comparative Analysis of Territorial Governance and Spatial Planning Systems in Europe
EC	European Commission
ECP	ESPON Contact Point
ECTP	European Council of Town Planners
EEA	European Environmental Agency
ERDF	European Regional Development Fund
ESPON	European Territorial Observatory Network
ESPON EGTC	ESPON European Grouping of Territorial Cooperation
EU-LUPA	ESPON European Land Use Patterns
EU	European Union
GVA	Gross Value Added
ISOCARP	International Society of City and Regional Planners
ITI	Integrated Territorial Investments
JRC	EU Joint Research Centre
LAU	Local Administrative Units
LCC	(Corine) Land Cover Change
LUE	Land Use Efficiency
MCA	Multi-Criteria Assessment
NUTS	Nomenclature of Territorial Units for Statistics
PCG	Project Coordination Group
SCBA	Societal Cost Benefit Analysis
SDG	Sustainable Development Goal
SPIMA	ESPON Spatial Dynamics and Strategic Planning in Metropolitan Areas
SUPER	ESPON Sustainable Urbanisation and Land Use Practices in European Regions
TANGO	ESPON Territorial Approaches for New Governance
TIA	Territorial Impact Assessment

1 General introduction

In ESPON SUPER, the case studies contribute to the objective of unravelling how different interventions in diverse social, environmental and economic settings have transformed land-use development practices. In particular, the aim is to analyse, understand and learn from the successes and failures of practitioners and decision makers over the last three decades in their search for more sustainable land use. All case studies are based on close observation and direct contact with each territory and with the people involved in the design and implementation of each intervention. To this end, each case study was assigned to the project team with the greatest local knowledge of the territory, institutions and language.

The methodological framework used for all case studies consisted of three groups or basic sources of information and knowledge.

1. **Context:** each intervention addressed or influenced a particular land-use development practice which had emerged within a specific territorial and institutional context, which is crucial for understanding and interpreting the results. It was also important to know the objectives related to the sustainability of land use that had been set for each territory, albeit on paper, at the regulatory level. These tasks were based on desk research, even though, in some cases, local stakeholder support was valuable to locate the most relevant pieces of information.
2. **Developments:** the second source of data was the quantitative land use changes in the form of maps and graphs. This allowed each case study team to consider to what extent the underlying contextual factors and the studied interventions had transformed the territory and the rates of urbanization. This information was essential for evaluating the effects that each intervention had on land-use sustainability and, more indirectly, on culture and spatial planning practices.
3. **Stakeholder interviews:** each case study held over ten in-depth interviews with stakeholders involved in one way or another with the intervention. At these meetings, they were asked about the reasons for and the perceived urgency of the intervention, how its objectives were defined and by whom, the experience of implementing each intervention, the pitfalls encountered, as well as the benefits it had brought in terms of improving the three thematic dimensions of land-use sustainability: ecological, economic and social equity. In addition, stakeholder maps were produced that present the type and intensity of the relationships that some stakeholders had with the rest in a visual way.

This report on the case study of AT-Vorarlberg presents a synthesis of all three outputs in order. It is structured as follows. This introductory section provides a summary of the main characteristics of the case study (Section 1.1), the scale of analysis (Section 1.2) and geographical scope (Section 1.3). Section 2 contextualizes how urbanization occurs in the case study area. It contains descriptions of typical urban developments, how this is regulated, who

promotes it, how it is implemented and emerging challenges regarding land-use development. Keeping with this contextual approach, Section 3 discusses how the studied intervention addresses the challenge of sustainability in its three thematic dimensions (Section 3.1) as well as in its temporal dimension (Section 3.2).

Section 4 presents the main results of the case study research in three parts. Section 4.1 analyses how the priorities of the intervention were configured based on information collected from the interviewed stakeholders. In particular, it seeks to know how a perceived problem was identified or constructed to justify the intervention, the extent to which land use sustainability was a consideration, and whether these elements tended to unite the community in favour of a collective interest or whether, on the contrary, they were a source of tension and conflict. Section 4.2 discusses in more detail how seven organizational and institutional aspects may have influenced the relative successes and failures of the intervention. Section 4.3 combines the analysis of land use changes, the opinions of the consulted stakeholders and, where relevant, the stakeholder maps, to make an assessment of the actual results of the intervention on the planning and development culture and the different thematic dimensions of sustainability. Finally, Section 4.5 explicitly answers questions posed to the ESPON SUPER team, thus reflecting the direct contribution of each case study to the project's objectives.

While each individual case study contributes to answering the questions posed, its true value lies in the possibility of combining and contrasting the outputs of the eleven cases. This choral work is presented in Annex 3.13. The triangulation of results allows for the formulation of generalizable conclusions and recommendations that can contribute to the design of new plans and policies better aligned with the objectives of sustainability and land take abatement at the European level. In this way, the case study presented in this report also contributes to this other broader objective.

1.1 Case study AT-Vorarlberg

The Vorarlberg Rheintal (Map 1.1) has undergone massive change over the past 50 years. Separated villages and small towns have become an almost closed band of settlements. The demand for space was constantly growing. In 2004, the federal government decided to launch the project "Vision Rheintal" to consider the region as a whole and to tackle spatial planning challenges jointly and across the communities. The intervention lasted until 2017 and was characterized by three successive phases: pioneering, reflection and reorientation phase. This case study investigates the origins, content and impacts of this intervention on Vorarlberg urban development and land use practices and introduces briefly its follow-up programs: "Modell der Kooperationsräume" (model of cooperating spaces) and "Raumbild Vorarlberg 2030".

Map 1.1: Location of case study “AT-Vorarlberg”.



1.2 Scale/s of analysis

The purpose of this sub-section is to identify the main scale in which the “Vision Rheintal” was active but also to describe other scales that were influenced by or had an influence on the vision. The main scale for the initiative “Vision Rheintal” is the Rhine Valley with its 29 municipalities (Table 1.1). This area does not correspond to the standard NUTS units. So, the area is a collaboration of 29 different municipalities on LAU scale. As the state governor of Vorarlberg and the 29 mayors of the Rhine Valley signed the “Rhine Valley Contract” (which was a central part of the whole process and where all participants declared their willingness to cooperate) also the Austrian federal State “Vorarlberg” on NUTS 2 level plays a central part. During the main time frame in which the intervention was active and also as a follow-up project, cooperation occurs with the neighbouring countries – especially with Switzerland. On both sides of the Rhine river (Vorarlberg and Switzerland) processes and strategies were elaborated to improve the cross-border planning. One result of this cooperation was the establishment of the association “Agglomeration Rheintal”. As the Vision Rheintal aimed at achieving sustainable positive effects on the emission situation, as well as improved coordination of settlement development and transport services, it was awarded by the VCÖ Mobility Award in 2007. This award represents Austria’s largest competition for sustainable transport and mobility. The aim of the VCÖ, which is a public-benefit organisation, is to foster “ecologically compatible, economically efficient and socially equitable transport system” (VCÖ, 2018).

Table 1.1: AT-Vorarlberg scales

Scales	Main scale	Other scales
Supra/Trans-national		Cooperation with Swizerland
NUTS 0		Awarded by the VCÖ (the Austrian traffic association)
NUTS 1		
NUTS 2		The Austrian federal state Vorarlberg
NUTS 3		
LAU1 – NUTS 4	Rhine Valley (29 municipalities on LAU scale)	
LAU2- NUTS 5		

1.3 Geographical scope

Have you ever seen the Rhine Valley from above? [...] You will recognize a variety of very different things – but what you can't see are boundaries [...]. And exactly this view is the central ambition of the Rhine Valley Vision - The Rhine Valley region as a collective space for planning and design.” (Vision Rheintal, 2013, p 2)

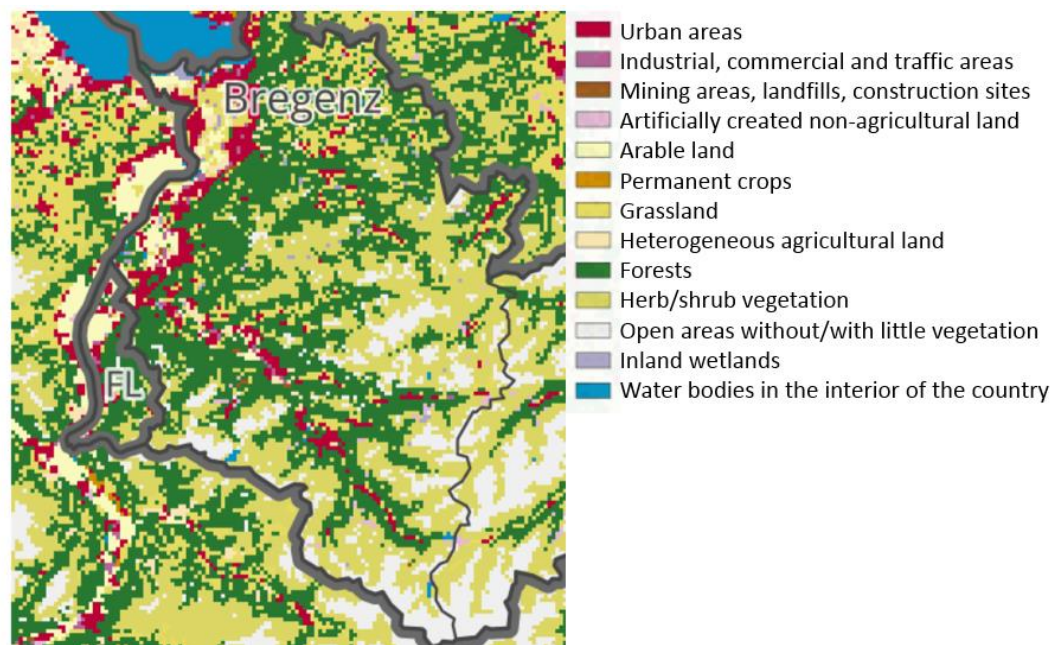
The Valley has experienced a massive change over the past 50 years. From 29 scattered and spread out separate municipalities and small towns, the valley has seen the formation of a fairly dense urban ribbon stretching from Bregenz to Feldkirch. The above-mentioned quotation should demonstrate that the initiative sees the 29 municipalities as one living and planning space. Even if the individual municipalities and local decision-makers (such as mayors) still play a central role, the united region is becoming increasingly important. As a polycentric area, it can combine different characteristics of urban and countryside areas. Different services are distributed across various municipalities but can be used by the entire region.

2 Contextual analysis

2.1 Typical urban development

The Republic of Austria is located in the centre of Europe and is composed of nine federated states. It has a total area of 83,878 km² and is a largely mountainous country due to its location in the Alps. Of the total area, only one quarter can be considered as low lying, only 32% of the area is below 500 metres, and 43% of the surface are covered with forests (Austria Forum, 2019). Only about one third of the total area of Austria is suitable as a permanent settlement area (APA, 2012). Soil or land consumption is one big issue in Austria. In 2018, the daily soil consumption was 10.5 ha (of which 5.4 ha / day were used for buildings, 4.7 ha / day for operating lands and 0.4 ha / day for recreational and mining land) (Umweltbundesamt, 2019). Figure 2.1 gives an overview of current (2018) land-cover in Vorarlberg. Most areas are covered by forests and grasslands, as well as urban areas.

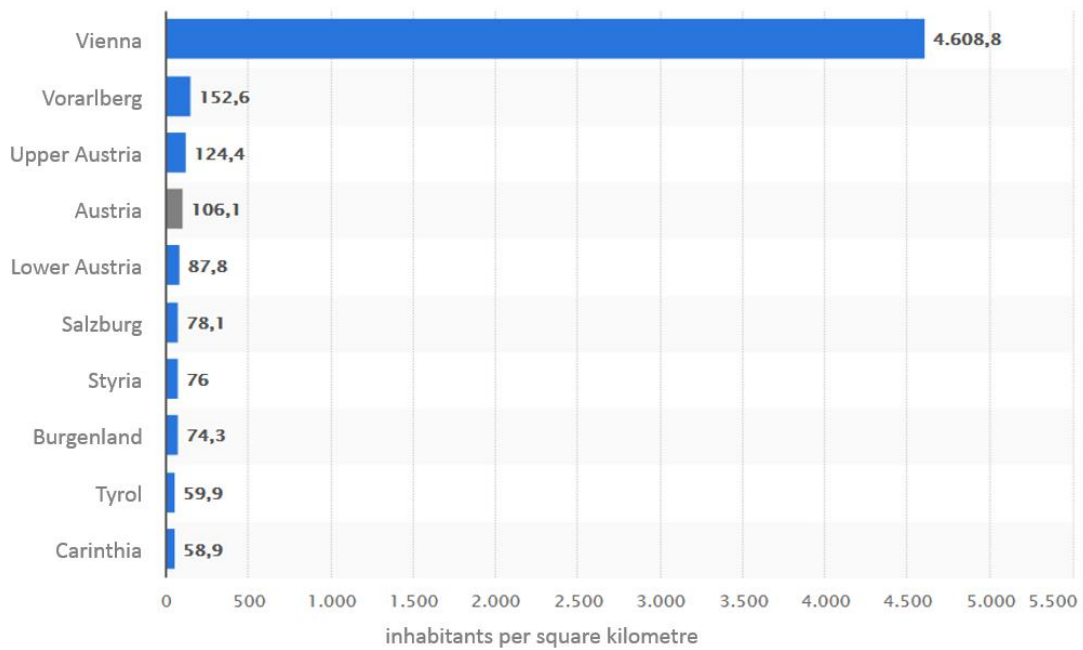
Figure 2.1: CORINE land-cover Vorarlberg



Source: ÖROK Atlas, 2018

Vorarlberg is already the most densely populated area in Austria after Vienna and lies with approx. 153 inhabitants per square kilometre almost 50% above the Austrian average (see Figure 2.2).

Figure 2.2: Population density in Austria by federal, status as of January 2020



Source: Statista, 2020

The Rhine Valley and Walgau form the most densely populated central region of Vorarlberg. Approximately 80 % of the population live in the valleys of these regions on 35 % of the total area of the federal state (especially within the urban centres Bregenz, Dornbirn and Feldkirch).

The jobs in the commercial sector are also concentrated in the Rhine Valley and Walgau, as 87 % of the workforce is employed in these areas (WKO, 2019).

Over the past 15 years, the number of people living in Vorarlberg increased by 40,000, reaching approximately 390,000 in 2019. The following figure gives an overview of the development of built-up land in Vorarlberg, which shows a steady growth since 1998.

Figure 2.3: The development of built-up land in Vorarlberg since 1998



Source: Vorarlberger Naturschutzrat, 2013

Most of this population increase took place in the urban regions of the *Rheintal*, increasing demand for space for homes and businesses. Current estimates state that between 20,000 and 25,000 new apartments and between 200 and 350 hectares for businesses will be needed in the *Rheintal* over the next 15 years (Amt der Vorarlberger Landesregierung, 2018).

The case study area concerns the mountainous *Rheintal* region in Vorarlberg, whose urban development is strongly defined by valleys and rivers and which is the most densely populated area in Vorarlberg.

2.2 Basic institutional conditions

Due to the federal state structure of Austria, there are nine different versions of the *Grundverkehrsgesetz* (Land Transfer Law) in force. These laws regulate the acquisition of land between Austrian inhabitants, EU and non-EU citizens. The law applicable in Vorarlberg is called the *Vorarlberger Grundverkehrsgesetz* (VGVG).

The purpose of this law is to:

- maintain agricultural and forestry land for family farms in the interest of improving their structural conditions in accordance with natural conditions;
- maintain a broad distribution of property ownership;
- counteract 'hoarding'¹ of built-up areas;
- restrict the acquisition of land by foreigners who are not on an equal footing with nationals operating under EU law or under Austrian constitutional obligations.

¹ "counteract 'hoarding' of built-up" areas means that land which is already assigned and ready for building should be made available and not be held back for a longer period of time.

The law was recently amended (1 March 2019) to introduce a waiver to developers when purchasing less than 1,000 m² pastureland; approval by the respective district land transfer commissions is still required above this level. Before that, any purchase of agricultural and forestry land was subject to approval. This recent deregulation intends to make procedures faster and more flexible. The new amendment could also promote speculation and reduce control by the relevant commissions, which might in turn increase the non-agricultural use of pastureland, especially on the urban fringe. Moreover, the amendment has put a cap on the time span of zoning rights to seven years and capped the purchase of non-built-up land to 50,000m². The latter should prevent the hoarding of unused, zoned land.

2.3 Planning permission

Public administration in Vorarlberg is traditionally organised on a decentralised basis. The mayor is the competent authority for zoning and, as such, can use a number of legal instruments and procedures primarily deriving from the regional development plan, the *räumliche Entwicklungsplan* (REP)².

In Vorarlberg construction projects are subject to two different laws, the *Vorarlberger Baugesetz* and *Vorarlberger Gesetz über die Raumplanung*. The former law distinguishes between three different categories of urban development:

- Minor construction projects: these concern structural preservation, renovation or improvements. Such projects are announced to the municipality in writing, and if the mayor does not react within a given period, tacit approval is given.
- Notifiable construction projects: these concern the construction or modification of smaller buildings. A written notification is submitted to the municipality. After examination of the documents, the municipality can approve the construction project straightaway or initiate a permit procedure.
- Building projects requiring planning permission: these concern larger construction projects that have not yet been approved. An application for a building permit must be submitted, leading to a so-called 'building negotiation' between the municipality and the developer.

Even though, spatial planning was always an important topic for various stakeholders (such as planners, politicians or environmental protection organizations) its function was mainly based on individual case decisions. Regional thinking started to emerge in the 1970s when the green-zoning plan was established and was strengthened in the 1990s when more and more communities recognised the importance of regional thinking. Various interest groups, in particular the Vorarlberg Institute of Architecture (vai), politicians and planners became

² Municipalities are now obliged to develop a REP, which must be approved by the federal state of Vorarlberg. These plans are binding and have the character of a regulation. If the plan of a municipality affects surrounding municipalities, they have to cooperate with the neighbouring municipalities (VN, 2019).

increasingly concerned with this dynamic and networked region and its interrelationships. The starting point for the Vision Rheintal was a skyscraper project in Lustenau, where it was recognised that a solution had to be found jointly (Vision Rheintal, 2006) (see 3.2. Temporal balance).

2.4 Development process

Since 2006, the consumption of space for buildings and infrastructure has risen almost five times as fast as the population in Vorarlberg. This has produced scattered low-density urbanization patterns and increased traffic (see Figure 2.4).

Figure 2.4: Photo of scattered settlements in Vorarlberg



Source: ÖIR

At around 37 hectares of building and transport infrastructure areas per 1,000 inhabitants, Vorarlberg still lies far below the Austrian average of 53 ha. Only Vienna has a lower urban land consumption than Vorarlberg (11 ha).

In order to promote sustainable development the “Vision Rheintal”, as well as its follow-up programs “Modell der Kooperationsräume” (model of cooperating spaces) and “Raumbild Vorarlberg 2030” was developed and implemented by the federal government. The latter creates a framework for the sustainable spatial development of Vorarlberg over the next 10 to 15 years and is oriented towards the Sustainable Development Goals. It forms the basis for regional spatial planning and for the preparation of regional spatial plans as well as other spatial

planning instruments. It covers the following topics: open space and landscape, settlement and mobility, economy, tourism, agriculture and forestry and regional cooperation.

2.5 Current issues

Only a third of the currently designated sites for building in Vorarlberg are still unused (share of reserves of building land corresponds in Vorarlberg to approx. 30% - in comparison the share of reserves in Austria (including Vienna) corresponds to 23,5%) (ÖROK, Atlas, 2017). Many building sites are unavailable in practice due to high prices, value guarantees or speculation on building land, combined with a strong tradition of ownership. As mandatory charges for holding building land may create conflicts, only in some parts of Austria such instruments have been used. The introduction of such instruments was discussed in Vorarlberg but never implemented (they only have to pay property tax). As one result, communities and businesses turn to greenfields. Rising interests from the agricultural, flood protection, tourism and local recreation sectors has put unused land under increasing pressure, causing several conflicts. For instance, natural areas have become more and more isolated due to settlements and transport infrastructure. Likewise, the impact on natural sites, rising land prices and the decreasing availability of land for affordable housing and for businesses have significantly complicated spatial planning in Vorarlberg.

The following points summarize some of the main challenges:

- Building land reserves are scarcely available, pressure from the population and businesses has increased
- Rising land prices lead to unaffordable housing for older and young populations and can lead to migration (also for businesses)
- Insufficient knowledge about the availability of empty buildings and the potential to use them
- Growth in car and freight traffic
- Biodiversity is declining in certain areas (animals and plants)
- The quality of the national green zones in the *Rheintal* suffers from pressure of industrial zoning interests.
- In smaller villages zoning mostly relies on the decision of the mayor as the competent authority of planning and zoning.

However, the share of temporary zoning of building land is increasing in Austria. Some regions (like Vorarlberg) has already implemented temporary zoning of building land into their planning law. The spatial planning law does not include expropriation as a possible sanction in connection with time-limited zoning as building land. However, at the same time the limit to 7 years is set, a subsequent zoning must be determined (like building maintenance area, open space free-standing area or as an open space agricultural area). The subsequent zoning does not necessarily have to correspond to the zoning of the property before the temporary zoning (Amt der Vorarlberger Landesregierung, 2019). As the land owner is aware of the fact that the zoning is limited, no financial compensation will be provided.

3 Sustainability of objectives

3.1 Thematic dimensions

All three different dimensions of sustainability are considered during the different phases of the intervention. They are covered during the formulation of the various guiding principles as part of the first phase of the initiative (2004 – 2007, pioneering phase), they are considered during the second phase of the intervention (2007 – 2010, in-depth treatment of relevant topics), during the implementation phase (2011 – 2016)³ and also after the end of the intervention as part of the reflection and reorientation phase (2015 – 2017).

In total, more than 75 different cooperation projects were collected and presented at the initiatives main communication channel (which is their project website: <http://www.vision-rheintal.at>). The topics range from childcare, care of elderly, mobility or nature conservation to regional building law administration or regional planning.

The **social dimension** was inter alia addressed in a research study with focus on childcare across municipalities and also in the formulation of recommendations of actions for the support and care of elderly people. Also, a magazine called "10 food for thought for a development suitable for grandchildren" (*10 Denkanstöße für eine enkeltaugliche Quartiersentwicklung*) was released which focused on sustainable neighbourhood development. In addition, social housing construction projects were one of the main priorities within the social dimension. *"The aim of residential building support is to provide the use of several usage forms. Working and living will, therefore, move closer together in the future - even within the buildings themselves. This creates settlement structures that help to avoid unnecessary traffic."* (Vision Rheintal, 2006, p 44). Also, the provision of enough space for young people was one of the priorities: *"There are meeting places for young people in many communities. The need for public space is increasing."* (Vision Rheintal, 2006, p 56). But also the needs of people from other cultures were addressed: *"Little offer at mosques and prayer rooms. The proportion of the Islamic population is rising - and so is the need for space to meet their religious needs.[...] There is no cemetery for Muslims. There's a need for burial facilities in the Rhine Valley."* (Vision Rheintal, 2006, p 56). But also gender-specific aspects were considered: *"Consider gender-specific differences in planning and implementation, design infrastructures for specific target groups."* (Vision Rheintal, 2006, p 56).

One of the main characteristics of the Rhine Valley Vision was the extensive involvement of different people. "Particular attention was paid to the regular exchange of information in the Rheintal vision project: As many participants as possible should be informed as much as possible". (Vision Rheintal, 2006, p 20).

³ Vision Rheintal was limited until the end of 2016. The evaluation of the vision started already in autumn 2015.

The social dimension as a whole was considered as a very important part of the whole process: *"Beside ecological aspects and land management, social aspects (like recreation) becomes more and more the third important function of open spaces."* (Vision Rheintal, 2006, p 96)

The **economic dimension** was i.e. covered by measures dealing with the development and the assessment of new industrial sites – namely Rhine Valley Center, Rhine Valley South, Rhine Valley North. *"On the basis of numerous studies, locations for future regional industrial areas were identified for the Rhine Valley North, Central and South regions. The planning was carried out jointly with the communities concerned. They concentrated not only on industrial sites but also took into account the important functions of the landscape for ecology, agriculture, and recreation."* (Vision Rheintal, 2017, p 18). The spatial design of the Rhine Valley follows the principle of polycentric development. Important institutions of the economy, culture, education, and administration are distributed to the best locations. "Regional industrial sites bundle areas for trade and industry at particularly suitable locations, independent of municipal boundaries. They are a building block for sustainable regional development and are jointly planned, realised and operated by several municipalities." (Vision Rheintal, 2017, p 18). One key statement of the mission statement defines the Rhine Valley of the future as being a region where high-quality business locations for innovative production enterprises are given support. *"The Rhine Valley is a highly attractive business location for creative, dynamic companies and start-ups. Vorarlberg offers a variety of incentives that lead to the founding of numerous young and interesting companies. Attractive and high-quality business locations promote the development possibilities of existing companies and the selective settlement of new companies. This ensures the efficient use of existing resources."* (Vision Rheintal, 2006, p 77) Beside, the assessment and development of new industrial sites, also smaller initiatives emerged to foster regional economy. A concrete example refers to the so called "Gutschein amKumma", which is a voucher that can be redeemed in approx. 230 local businesses in the four "Kummenberger"-municipalities (namely Altdorf, Götzis, Koblach and Mäder). This initiative was launched by a local association ("Wirtschaft amKumma" – economy at the Kumma). (Vision Rheintal, 2007).

The **ecological dimension** was mainly addressed after the end of the intervention with the so-called Green-zoning Value Compensation (Grünzone.Wert.Ausgleich, 2015 – 2017). The green-zoning-plan was introduced in 1977 as a result of the uncontrolled building activities. It regulates the preservation of green areas in Vorarlberg. However, some exceptions exist for new operational sites (for example 30 hectares of future industrial sites are located within this green zoning areas). In order to compensate green areas which were taken out from these dedicated green-zoning areas, experts from various fields discussed the potential of other sites which could compensate these areas. *"Green network for nature: Large connected and unfragmented natural areas are a prerequisite for stopping the progressive loss of ecological diversity. They will also be preserved in the future as habitats for animal and plant communities."* (Vision Rheintal, 2006, p 75). One main result of the project was that the valley provides a lot of possible compensating areas. *"Economical use of building land (use of already*

existing building sites, so that no rezoning is necessary, this will also take the pressure off the green area". (Vision Rheintal, 2006, p 78)

One key statement of the mission statement defines the Rhine Valley of the future as being a region where open spaces are linked to a green network for agriculture, ecology and leisure time. *"The landscape is accessible and can be experienced, the Rhine Valley offers a comprehensive supply of open and green spaces within the settlement areas. For the inhabitants, it is important to live close to green spaces, to be able to receive products and recreation from the landscape."* (Vision Rheintal, 2006, p 17). But also the conservation of nature is considered: *"Ecological sensitive areas will be protected through special guidance of visitors."* (Vision Rheintal, 2006, p 75).

A focus lied also on the fostering of sustainable transport modes. *"Public transport and private transport should complement each other in a useful way. The use and further development of the already good public transport services in the Rhine Valley are the prerequisites for promoting environmentally-friendly mobility. [...] The range of cycle and footpaths for everyday and leisure traffic increases the quality of life in the region"*. (Vision Rheintal, 2006, p 14).

3.2 Temporal balance

The Vorarlberg Rhine Valley has experienced a massive change over the past decades. That's one of the reasons why spatial planning always played a central part in this area. No other region in Austria has experienced a comparable growth within the last 50 years. The number of built-up areas has increased eightfold. The former scattered municipalities and small towns of the valley have merged into a dense urban area, where the borders of different municipalities can only be identified through name signs along the streets. As a response to this uncontrolled building activities, the Green-zoning plan was introduced in 1977. Due to this regulation, 112 square kilometres of the area (almost half of the valley area) were protected against building activities. One starting point for the development of a regional approach was the planned construction of a building with 23 floors and a height of 83 m (which would have been the highest building in Vorarlberg). Different actors decided that not only for skyscrapers but also for the entire regional planning sector a comprehensive regional approach which includes all municipalities was needed. The official starting point of the Rhine Valley Vision was in July 2004, where more than 800 people worked together on a common mission statement. In 2006 a public document was presented which included goals, mission statement, and guiding principals. The report also includes so-called guiding-maps for different sustainable topics. *"Guiding maps for the future were created which shows the best areas for different usages, like for production-oriented, ecologically-oriented or recreation-oriented use."* (Vision Rheintal, 2006, p 94).

The process covers several meetings of involved people (e.g. the Rhine Valley Conferences) where also the Rhine Valley Contract (which is seen as one central part of the whole process)

was signed by the Governor and 29 mayors of the Rhine Valley. By signing this document, they declared their willingness to cooperate. After the formulation of the mission concrete projects, which covers all three dimensions of sustainability and with a focus on special issues were implemented. The projects cover the topics:

1. Regional industrial areas
2. Settlement and mobility
3. Community cooperation regarding childcare
4. Community cooperation regarding care and care of the elderly
5. Youth and integration

Studies covering the social dimension (topics: 3, 4 and 5) have been completed during the implementation phase (2011 to 2016), e.g. projects focusing on “social houses”. Within the economic dimension (projects covering topics 1 and 2) the Rhine Valley Vision is still very active with the focus on the coordinated development of industrial sights. *“Through the definition of important industrial sites, the future-oriented economy receives better chances. Wherever it seems appropriate, regionally important industrial sites should be organised through cooperations of various municipalities.”* (Vision Rheintal, 2006, p 16).

Various statements in the 2006 report also address the ecological dimension, e.g. *“Small and isolated natural spaces are connected to larger natural spaces. The separating effect of linear barriers is eliminated. These natural spaces are protected as habitats for animal and plant communities also for the future.”* (Vision Rheintal, 2006, p 75).

However, results of this dimension (in the form of the so-called Green-zoning Value Compensation model) were first available after the end of the implementation time (the official end of Rhine Valley Vision was 2016). An interdisciplinary team (including experts from spatial planning, agriculture, environmental protection, water management, and economy) discussed different possibilities of quantitative (area-based) and qualitative compensation measures in cases where dedicated green-zoning areas will be used for industrial sites.

Also, a sustainable mix of transport modes was envisaged for the future: *“Transportation 2030: 25 % by bus and train (today 11 %), 25 % by car and motorcycle (today 56 %), 25 % by foot (today 19 %), 25 % by bicycle (today 14 %)”* (Vision Rheintal, 2006, p 117).

Even though the Rhine Valley Vision has officially ended in 2016, the reflection and reorientation phase (2015 – 2017) came to the conclusion that *“the Rhine Valley Vision is not over, it will just transform itself and start a new phase – the phase of implementation”* (Vision Rheintal, 2017, p 24). The research and groundwork of the intervention provide very important insights for future steps and also emphasised the importance of land: *“Land resources should be used even more sustainable in the future”* (Vision Rheintal, 2006, p 17). However, the new

phase should be based on more binding planning processes to improve the implementation of measures and project. During the reorientation phase, several topics were formulated for regional planning in the future. One result was the foundation of the association Agglomeration-programme Rhine valley in 2017. Ten municipalities of Vorarlberg (Austria) and twelve municipalities of St. Gallen (Switzerland) are formulating together strategies for a long-term sustainable development of the Rhine Valley.

4 Impact assessment

4.1 Pre-intervention

4.1.1 Identification of the problem

The Rhine Valley consists of 29 municipalities which, in the last decades, have grown and merged to a dense urban area. Nevertheless, the municipalities' spatial planning perspective was focused on the local area, without pursuing a common regional development of the Rhine Valley. Hence it is not surprising that 6 out of 8 interviewees see the need of joint and coordinated planning on a regional level to deal with regional topics (traffic growth, disorderly settlement developments, quality of infrastructure) as main trigger of the process of *Vision Rheintal*. Adding to that point, one stakeholder notes that the root of the problem was the missing common identity which led to this municipality centred planning approach.

Table 4.1: The main focal issues according to interviewed stakeholders

Focal issue	# instances
Joint, coordinated spatial planning on a regional level was missing	6
Land use	2
Traffic growth	1
Quality of infrastructure	1
Missing common identity	1

The stakeholder's common problem formulation (although certainly partly due to the numerous repetitions of this formulation during the *Vision Rheintal* process) can be seen as a main asset of the process. The involved stakeholders seem to have agreed on the definition of the problem at the start of the process and pursued a common objective since then.

Another asset of the *Vision Rheintal* process becomes obvious by the stakeholder's judgement of the support the process was receiving. From the stakeholders in the municipalities and their representatives in the association of local authorities, to various players on the level of the federal province and the civil society (including various associations) – everybody was in favour of the process. Tension was only perceived between the interest groups within the process (ecology vs economy) and also some mayors of little municipalities were afraid of being overpowered by the bigger cities in the region. These conflicting lines however, did not stand in the way of pursuing the *Vision Rheintal*.

The challenge of uncoordinated regional planning touches all three spheres of sustainability. The ecologic dimension was addressed by land use topics and mobility issues; the social dimension by the quest for a common identity and the provision of good quality (social) infrastructure in the region; and the economic dimension played a role both by land use topics and by the provision of good quality infrastructure.

4.1.2 Inception of goals/action

The process of *Vision Rheintal* was structured in several phases. It started 2004 with the pioneering phase, which was characterised by the development of the common vision and a broad participatory process. Altogether more than 800 citizens, experts, municipal and state politicians worked on this mission statement. The next phase focused on enlarging upon key topics and project implementation. Being scheduled to end 2016, *Vision Rheintal* entered a reorientation phase in 2015 to reflect upon the past developments and develop a perspective for regional planning post *Vision Rheintal*.

All stakeholders agree that the first phase was designed and implemented very well. It was an adequate way to identify and analyse the region's challenges, to develop a common understanding of specific topics, and gather knowledge and data on these topics.

While one half of the stakeholders considers the process fitted the needs perfectly from beginning to end, the other half criticizes that the process was not a suitable instrument for implementing projects, was missing binding steps and should have ended sooner before it lost its power. Nevertheless, all stakeholders in general agree with the course of actions taken and found them useful in tackling the regional challenges.

More diverse are the perceptions of the right timing. Two stakeholders feel that the federal state should have become active much earlier, since the need for an intercommunal perspective was evident for quite some time. Another agrees in that sense, that some topics should have been discussed earlier. The majority found the timing very good and one of the reasons for its success. Two stakeholders argue, that for processes like that one, people have to be ready. In the case of *Vision Rheintal*, it started when the constellation of actors on various levels was right. Furthermore, the process was agreed upon voluntarily before "the big catastrophe" which, according to another stakeholder, contributed to its success.

4.1.3 Pre-intervention conclusions

The example of *Vision Rheintal* shows very clearly that a common understanding of a problem and the way forward is a big advantage. The process was backed by all planning and political levels. This might be attributed to the increasingly pressing problem of urban sprawl and traffic growth. It became obvious that the municipalities alone did not have the instruments at hand to deal with the resulting challenges. However, the responsible stakeholders acted before the collapse and hence were able to take control over the process. Although some stakeholders felt that *Vision Rheintal* could have started earlier and ended sooner, the general perception is that of an appropriate process, well fitted to the needs of the region.

4.2 Implementation

4.2.1 Technical capability

When asked about the management of the technical aspects of the intervention, all stakeholders referred to the maps created for and within the *Vision Rheintal* process. All but one considered them as very useful for the implementation of the intervention: The maps were used to introduce the different topics while at the same time sharpening the regional perspective. E.g. one map illustrated all social housing locations in the Rhine Valley. It became very obvious that the distribution in space was very uneven - a starting point for discussion.

According to one stakeholder involved in the process, it was their ambition to prepare maps that can be read by anyone. That is why they put a design studio in charge of creating maps that only depict one layer of information per map that fulfil an aesthetic standard but at the same time provide a sketchy image so that people felt confident to add information. Half of the stakeholders confirm, that this goal was reached. Two more agree, that the maps were useful instruments for the implementation but not all necessarily aimed to be understood by all citizens involved in the process. One stakeholder, a representative of a political party on federal level, however, disagrees. He assesses the technical capabilities as a weakness for the implementation: too many resources were invested in the development of figures and maps and the results were too abstract, primarily designed for experts.

On the whole one can deduce that when it comes to regional issues, maps can be a very helpful instrument to incorporate a regional perspective and launch discussions based on facts. It goes without saying that the more information one packs into one graph the harder it is for non-experts to read them, hence if the target group is the entire population the graph should be as easy to read and well-designed as possible.

4.2.2 Data and information

Unanimously the stakeholders agree that the data created within *Vision Rheintal* was a big strength of the process. At the beginning a lot of numbers were in the room but a lot of actual data was missing. The *Vision Rheintal* process included basic research (for topics like intercommunal operating zones, social housing, ...) like a current-state-analysis and a social-space-analysis, which contributed to a better data basis. One stakeholder – the same who found the maps too abstract – criticized the approach as too academic and the current-state-analysis as too detailed. In some cases, the data was compiled in *Vision Rheintal* working groups, in others, the expertise was purchased externally (planning offices, universities). Naturally, the opportunity to base discussion on sound data was favourable to the process.

4.2.3 Participation

Participation was THE key element of *Vision Rheintal*. The intervention was designed as participatory process aiming to bring all stakeholders together to create a common vision for the region. The primary focus was on the public interest.

The stakeholders applauded the participation process as being transparent and fair, including a variety of different stakeholders (all municipalities in the Rhine Valley, federal state representatives, citizens, train company, transport association, architects, ecologists and other experts) and trying to hear all voices. Although according to one political stakeholder of the opposed party, the number of events that were specifically addressed to the population was too small leading to his perception, that the term or image *Vision Rheintal* is not well known among the population. Even so, all stakeholders assess the process design and coordination as exceptionally professional.

One stakeholder who played a major part in the process design, describes the process as very innovative and ambitious. Innovative, because a lot of new formats were tried out successfully, forming a new approach to regional spatial planning at that time. Ambitious, since a lot of participants had to stay on board for a very long time. He concludes that a good rhythm and a close contact to the decision makers, the media and the citizens is a crucial element for a successful process. He also indicates, that the process should have ended sooner to keep the energy of the participants high until the end.

Participation was possible via several formats⁴:

- 1) **“Rheintalkonferenz”** (rhine valley conference): decision-makers of the federal state and municipal politics discussed the Vision Rheintal
- 2) **“Regioteam”** (the strategic control centre of the vision): monitored the progress and made strategic decisions on the course of the vision.
- 3) **“Rheintalgespräche”** (rhine valley talks): within the framework of these talks, renowned experts were invited to discuss selected topics (including spatial planners, architects, municipal employees and all interested citizens of Vorarlberg).
- 4) **“Rheintalforum”** (rhine valley Forum): a communication platform that served on a larger scale to discuss different interests, problems and results.
- 5) **“Das Quartier der Zukunft”** (the quartier of the future): addresses the question “how can more quality of life be created in our cities and communities despite increasing settlement density?”

⁴ More detailed information on the various formats of participation are available on the main webpage of Vision Rheintal: <http://www.vision-rheintal.at/beteiligung.html>

1. **“Raumplanungsbeirat”** (spatial planning advisory board): made up of various stakeholder in order to advise the state government on technical matters of spatial planning.
2. **“Planertag”** (planners day): during these three event local planners and building authority managers from the 29 rhine valley municipalities met to exchange ideas and work together.
3. **“Verwaltungstag”** (administration day): during these two events the heads of office from the 29 rhine valley municipalities came together for a networking meeting.
4. **“Grenzüberschreitende Treffen”** (cross-border meetings): these regular meetings of the mayors of St. Gallen (CH) and Vorarlberg (AT) offered the opportunities for networking activities and launching of common projects.
5. **“Fachteams”** (expert teams): within the framework of Vision Rheintal, a mission statement for the region was drawn up. A total of seven specialist teams developed the basis for this. The main task of these teams was to gather expert knowledge on various topics and to link it to possible goals and measures.
6. **“Gemeindegespräche”** (community talks): during these meetings the following questions were discussed: “What do you know about Vision Rheintal? Which projects do you know? What do you want from Vision Rheintal?”
7. **“Exkursionen”** (excursions): they were organised to foster cross-community cooperation and other exemplary projects. These excursions also took place in neighbouring countries.
8. **“Road Shows”**: they were organised to increase the awareness of the Vision Rheintal, and to make it accessible to a wider public.

All in all, it was crucial to the intervention to set up the process as a participatory process broad in scope, with a particular focus on the municipality level in order to enable the regional perspective to grow.

4.2.4 Strategic vision

The process started with a very intensive mission defining phase, involving more than 800 citizens, experts, municipal and state politicians⁵. The strategic vision was clear-cut: to form a common identity of the Rhine Valley's municipalities and strengthen the cooperation among them to allow for integrative, intercommunal spatial planning. This vision was put down as a mission statement, defining the Rhine Valley of the future "as being a region where:

- important economic, cultural, educational, retail, recreational and administrative institutions should be divided up across different locations as part of a balanced regional development plan
- areas between settlement and open countryside should be maintained with structured and high-quality urban development taking place within these borders
- development of public transport in particular is critical when considering where different forms of living and economic activity take place
- open spaces are linked to a green network for agriculture, ecology and leisure time
- high quality business locations for innovative production enterprises are given support" (ibid)

This distinctly strategic vision was seen as great strength of the intervention by all stakeholders. Their accounts of the vision did not all encompass all the punctuation but they all seemed to have the same vision in mind. Dissents to this vision were not noticed or mentioned.

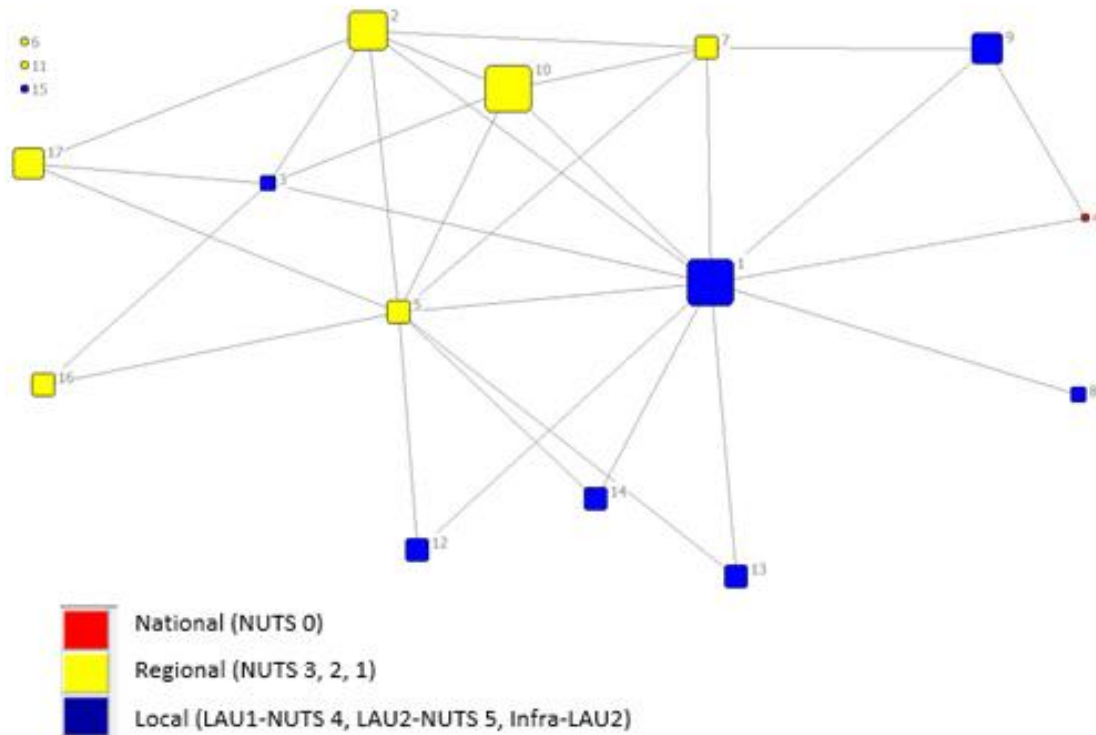
The energy put into this mission finding phase seems to have paid out. The extensive involvement of diverse people fostered their commitment to the process. This not only was essential for keeping up the energy for this lengthy process (going on for more than 10 years) but also supported their understanding of the need to work together for the common goal.

4.2.5 Institutional coordination

From the start, the *Vision Rheintal* used a very broad and open approach including a variety of stakeholders. This extensive involvement of diverse people was an essential principle of the initiative. All stakeholders agree that the process was coordinated very well among the stakeholders and institutions, and point to the exceptionally well collaboration of the stakeholders on municipality and provincial level. It was mentioned several times, that they were working on equal terms, deciding on the key issues together. Measured on the emphasis the stakeholders put on that fact, this must be a novelty in the region and a great strength of the process. The social network analysis based on the interviewees' opinions also confirms this. In particular, by looking at the involved scale level, the diagram below (Figure 4.1) shows that both regional and local stakeholders cooperated on an equal footing.

⁵ Vision Rheintal (2013) 29 Municipalities. One living space. http://www.vision-rheintal.at/fileadmin/VRuploads/PDF/Downloads_A-Z/Projektinformationen/Kurzinfo_2013_E_web.pdf (last accessed 25.11.2019)

Figure 4.1: Network of cooperation on regional and local level.



4.2.6 Institutional leadership

On paper, the institutional leadership was assumed by the steering committee, composed equally of representatives from the province and the municipalities. This answer is however given only by one stakeholder. The majority perceived the Department of spatial planning and building law of the provincial administration in the role of the institutional leader. Others pointed to specific people who seemed to have promoted and supported the process with a lot of vigor (one mayor, two members of the provincial government, project and process manager) or made out no leadership at all, suggesting the participatory approach enabled an equal playing field with no one predominantly leading the process. The social network analysis (Figure 4.2) based on the interviewees' opinions also reveals that different stakeholders influenced the decision that were made for the Vision Rheintal. In particular, when looking at the node size, the diagram highlights that especially the different project managers (stakeholders 1, 9 and 10), but also the Deputy Governor of the Vorarlberg State (stakeholder 7), or different mayors (stakeholders 8 and 13) influenced the intervention. The same also applies, when looking at the Figure Affectedness (Figure 4.3). Different stakeholders were perceived as being affected by the Vision Rheintal in a similar manner.

Figure 4.2: Influence in relation with interviews

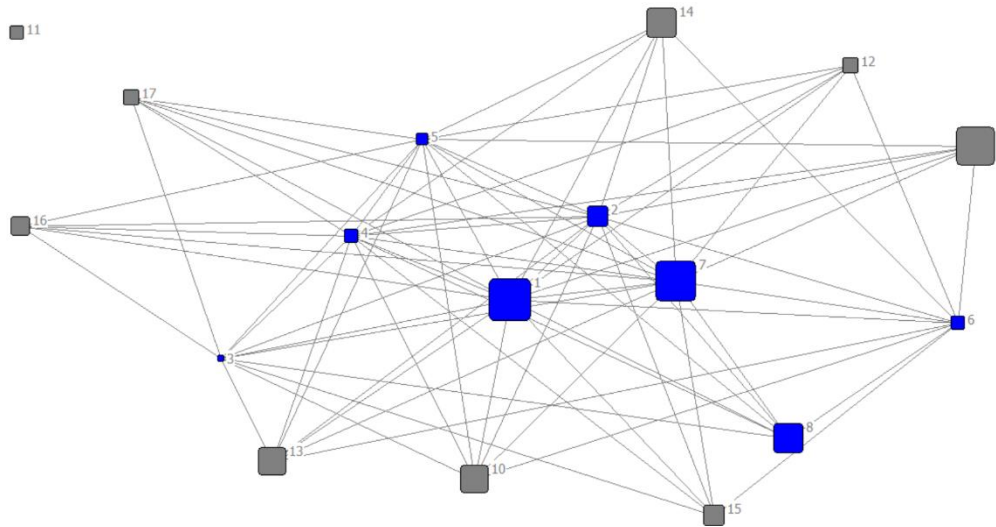
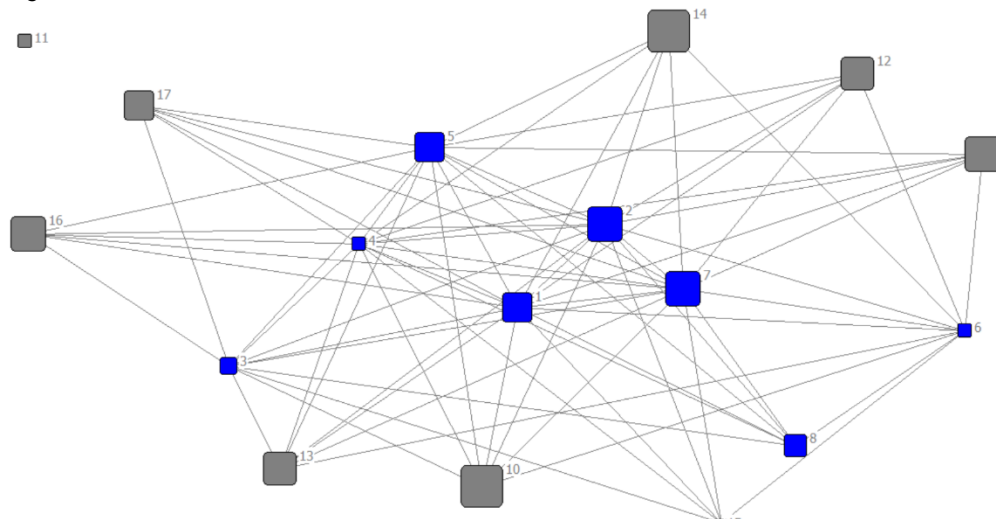


Figure 4.3: Affectedness in relation with interviews



Whoever was or was not made out as fulfilling the role of institutional leader, all stakeholders agree that the set-up was a strength of the intervention. Although the organisational structure was not as straight forward as one might hope (refer to the differences in defining the institutional leadership), the success of the process but more so the perception of the participants, that each opinion matters, contributed a great deal to the satisfaction of those involved.

4.2.7 Political will

Political representatives played a very important part in the *Vision Rheintal*. As one stakeholder put it, the participation of provincial- and municipality politics is “the essence” of *Vision Rheintal*. The stakeholder perceived their involvement as very conducive for the process. Political

influence in the sense that one party tried to push its agenda for the party's sake, was not noticed. It was obvious, that - albeit in some cases from different parties - they pursued a common idea thus worked theme-oriented. Moreover, since the municipalities were part of the steering committee, it needed their consent to any resolution, which in turn strongly anchored the *Vision Rheintal* in the municipalities.

It is crucial to have all level of politicians on board and actively involved – is one of the conclusions that can be drawn from the stakeholder's accounts.

4.2.8 Implementation conclusions

What becomes apparent when studying this case study is that there are at least three favourable factors that contributed to the success of the intervention called *Vision Rheintal*

First, the institutional set-up. From the outset it was clear to the responsible stakeholders that *Vision Rheintal* needed to be a joint project of the province and the municipalities, breaking with existing hierarchies and instead working out results on equal footing. This approach was necessary in order to adopt a regional perspective, and leave behind a spatial planning approach that ended at the municipality's boarder. This rationale lead to the institutional arrangement of a steering committee, representing the province and the municipalities in equal shares. It ensured that results and compromises reached on this level were backed and anchored at municipality level.

The second success factor is the clear vision. A lot of time and energy was put into the mission defining process, involving hundreds of stakeholders from the outset onwards. This effort payed off. The participants had a clear and common vision of what they wanted to achieve. It seems that this helped to hold party politics at bay and focused the energy on theme-centred discussions. It also encouraged the participants to take a broader view and raise awareness to the benefits of intercommunal cooperation, from the level of services that can be provided to the reduced pressure on land when e.g. settlement processes are coordinated.

The third major success factor is the participation process. According to the stakeholders, it was characterized by a respectful togetherness and theme-oriented discussions, always having the common vision in mind. A prerequisite for such a positive feedback is a sound process management, and a moderation that takes each participant's view seriously. The participants, in turn, contributed constructively to the process. The reasonable use of maps and data supported objective discussions. This package seemed to have encouraged the participants to stick to the process for quite a long time span.

4.3 Sustainability assessment

4.3.1 Planning and development culture

Vision Rheintal had a great impact on the planning and development culture of Vorarlberg in general and the Rhine Valley in particular – all stakeholders are positive on that.

Most importantly, the process supported the municipalities to form a common identity as a region and hence acknowledge the importance of cooperation in spatial planning issues. It strengthened the understanding, that stakeholders of a region should work together in order to provide better services to the population to lesser costs. In a nutshell: due to awareness raising, the regional (planning) level became more visible and significant.

An important step along the way was the formulation of the common mission statement and the signing of the Rhine Valley Contract. These official steps gave the process a more binding character and also more weight in the public perception. For a majority of the interviewed group however, the liabilities were not strong enough.

The development of a regional perspective and coordinated regional planning triggered discussions on many topics relevant to land use practices. Handling urban sprawl was an important topic (and trigger to the process) that found its way into the mission statement. An interviewed mayor goes so far as to say, that the intervention put a stop to urban sprawl. It is worth mentioning however, that the representative of the green party feels that the agricultural areas and areas under nature conservation are still under a lot of pressure.

Regarding the goal of densification within the settlement margins as opposed to urban sprawl, the *Vision Rheintal's* focus on mobility issues played an important part. In its mission statement *Vision Rheintal* envisions the public transport routes as backbone of regional development. Settlement development and mobility are coordinated and areas around train stations consolidated and upgraded. This vision lead to various concrete outcomes:

- Emphasizing (public) mobility interfaces in planning processes (e.g. close cooperation with Austria's largest mobility service provider ÖBB to take into account the interface between the different modes of transport as well as amenity values when rehabilitating train stations);
- The implementation of urban densification in the surrounding area of the trains stations Lauterach and Lustenau;
- More frequent and extended services of the public transport in general;
- One stakeholder also mentions that the parallel process "Mobil im Rheintal" (being mobile in the Rhine Valley) benefitted from *Vision Rheintal*. For a long time, there was an impasse. *Vision Rheintal* served as inspiration for the process and laid a foundation for results to the astonishment of those involved.

Another topic encouraged by the *Vision Rheintal* was the joint designation of industrial sites and business areas in the region. A financial compensation was integrated by the State of Vorarlberg in order to mitigate the profit of a single municipality from the municipal tax the industry would have to pay. This allowed for more variables to be considered when deciding on

the location for businesses and industries, like traffic volume etc. This decision was quite unexpected but applauded by the stakeholders.

Furthermore, the distribution of low-income housing was a topic of discussion. Before the intervention only about 50% of the municipalities provided social housing. The *Vision Rheintal* won over some more mayors and by the end of the process two thirds of the municipalities offered low-income housing.

The *Vision Rheintal* also left a mark in process design. The set-up of the process was pioneering work. The process design was copied (but adapted) afterwards numerous times.

The intervention also manifested itself in the formal introduction of modifications in regulations. New instruments were integrated into spatial planning laws (e.g. spatial planning contracts), including a change of the funding regulations. For example, construction projects from 25 residential units receive subsidies only, if a neighbourhood analysis has been carried out, including the quality of outdoor space, pathways, integration of the project in the urban context, etc. The shift in the understanding of planning is also reflected in the development of a new form of spatial development plans on regional level, which include e.g. optimal locations for care facilities (elderly), youth culture or business zones. They integrate possibilities for cooperation in public administration and sport infrastructure facilities. The upgrading of the regional planning level also becomes visible in the follow-up program of *Vision Rheintal*, the “*Modell der Kooperationsräume*” (model of cooperating spaces), which introduces regional planning structures (with lesser territorial scope and more homogeneous regions than *Vision Rheintal*) endowed with financial and human resources. And last but not least, stakeholders refer to the *Vision Rheintal*'s strong influence on “Raumbild Vorarlberg 2030”, the spatial development concept of the province of Vorarlberg which was adopted in 2019.

To sum up, the intervention left lasting effects in the planning culture, breaking up business-as-usual practices. Grosso modo, the stakeholders are pleased with the *Vision Rheintal*'s impact. The question, whether the effects were unexpected or not, is not answered coherently among the stakeholders. The opinion prevails that positive outcomes were expected, but the extent of the impact was rather surprising, e.g. the radiance beyond the actual planning area, or the effects on parallel processes like “*Mobil im Rheintal*”.

4.3.2 Economy

The stakeholder's statements to the effects of *Vision Rheintal* on the economy remain quite vague. In general, all but one stakeholder (plus one abstention) assesses the effects as rather positive and structural but remain short on details. They do point to the sound economic development of the region but admit that the *Vision Rheintal*'s impact cannot be singled out.

Only one specific topic is named: the location and development of industrial sites was one of the themes discussed within the *Vision Rheintal* process. The aim was to encourage a regional perspective and determine the locations not based on tax considerations of the municipalities

but on other factors, like transport, distances, available brown fields etc. this point was even part of the mission statement, in which the Rhine Valley of the future is described as a region where: “high quality business locations for innovative production enterprises are given support”.

While three stakeholders explicitly name that project outcome (commonly defined locations for industrial sites) as positive for the economy, a political stakeholder from the opposing green party assesses this outcome as negative: Although the sites’ locations were agreed on jointly, they were lacking sustainability concepts (regarding the use of energy, transport connections or construction).

However, the mere decision on the location on business zones cannot be equated with economic impact, positive or negative. Still, economic players are omnipresent in a strong economic region like the Rhine Valley. The decision of the *Vision Rheintal* participants to cooperate to find suitable locations while reducing land consumption shows, that awareness of the implicit challenges was raised and the mayors encouraged to include non-economic variables in their decision-making. The province’s support to balance out the lost tax income for those municipalities, that “missed out” on industrial and business zones was most probably a major leverage.

4.3.3 Ecology

The effects on the ecological sphere are a little more pronounced than those on the economy. All stakeholders agree that, although again the *Vision Rheintal* is not the only trigger, the intervention had positive effects on the environment in the region. Especially on topics where the various interests were weighed up against each other (agriculture vs. nature preservation; industry/economy vs. ecology), the environmental issues received greater support by *Vision Rheintal*. One stakeholder mentioned the example of the green areas surrounding a new planned highway access. These areas were not only preserved but also upgraded. This stakeholder interprets this decision as sign of a more general attentiveness to environmental issues.

This again can be mainly attributed to awareness-building among the participants. *Vision Rheintal* stressed the point, that space in general, and natural areas in particular are very limited in the Rhine Valley. Hence, space is a precious resource that should be preserved where possible. This outcome is already anticipated in the mission statement, where the Rhine Valley of the future is foreseen as a region where “areas between settlement and open countryside should be maintained with structured and high-quality urban development taking place within these borders (... and a region where) open spaces are linked to a green network for agriculture, ecology and leisure time.” However, as one stakeholder points out, the establishment of nature protection zones like Natura 2000 areas, is primarily due to EU regulations and cannot be credited to *Vision Rheintal* alone.

It can be concluded that the relevance of environmental issues in planning has increased during the process of *Vision Rheintal* mainly due to awareness raising. Planning practice benefited from the emphasis on a more integrative planning approach.

Regarding the time frame of the effects, the stakeholders seem undecided. Although the majority assesses the effects as structural (the others did not offer an opinion) they qualify their assessments by statements like “At least at the time being it changed something, if it is sustainable? More yes than no.” Such statements can be underlined by the fact that ecological interventions (such as the “Green-zoning Value Compensation” were mainly addressed after the end of the *Vision Rheintal*. However, various experts already discussed during the *Vision Rheintal* phases the potential of other sites in order to compensate these green zones.

4.3.4 Equity

The *Vision Rheintal* process also negotiated social topics: the provision of child care, elderly care, social housing, facilities for the youth, etc. in the region. The stakeholders agree, that the commissioned studies and debates had positive effects on the provision of these services. *Vision Rheintal* strengthened the regional perspective and hence cooperation between municipalities. Instead of blocking out the existing or missing services across the municipality’s boarder, the municipalities were encouraged to work together and arrange for suitable locations and capacities. This approach should ensure reduced costs and an enhanced range of services.

Apart from these effects on regional level, the intervention also supported the individual municipalities by providing sound data and hence enable a better basis for planning social infrastructure, as one interviewed mayor put it.

Conversely, a critical voice among the stakeholders complained that the discussions were mostly focused on the distribution in space of the social infrastructure rather than on social effects. E.g. the affordability of housing was not part of the discussion. Considering the scope of *Vision Rheintal* however, this is no failure of the process. *Vision Rheintal* was an intervention promoting joint and coordinated planning on a regional level and not negotiating conditions for accessing social services.

With regard to the long-term effects, the stakeholders did not dare to evaluate. The development of facilities for childcare and elderly care however is fact, as is the construction of low-income housing. These amenities are built and in use. In this sense, the effects can be evaluated as structural.

4.3.5 Balance

What lessons can be learned from the experiences of *Vision Rheintal*?

Well, first and foremost, the process design was very pioneering for the time, including not only a wide variety of people but also innovative elements. As a stakeholder involved in the process design put it: “We took some risks, but they paid out”. For example: The moderators focused on dialogue-oriented (versus discussion-orientated) communication; They tried specific seat and room arrangements; Participants were put in big working group with empty maps to sketch on; Specially designed maps were used to sharpen the “regional eye”; and a sounding board was established, meaning a bottom-up process with many interviews with citizens across all municipalities was initiated to check if the *Vision* was going into the right direction. The communication aspect, was a big innovation and had a great impact on the output of *Vision Rheintal*, above all the increased awareness for spatial planning issues and the Rhine Valley as one region.

Second, as already put in B3 Implementation conclusions the institutional set-up was also very benefiting to the *Vision*'s success. The innovative part – so to say – was the sincere commitment of the higher-level administration and politics (province) not only to involve the lower levels (municipalities) but to work on an equal playing field.

The third lesson is that the process was dragged on too long. In retrospect, the process should have focussed on the very successful mission-finding phase and ended with the common vision.

This is where the next lesson comes in: This case study shows that many stakeholders were unsatisfied with the subsequent implementation phases. Recommendations include a prioritisation of the goals defined in the mission statement; a focus on the top priorities during implementation phase, a different set-up with smaller territorial scope and more binding character. E.g.: The Rheintal contract (a kind of declaration of intent) was only signed by the mayors not by the municipality council, which weakened the liability once elections lead to a change in political leadership.

The discontent with the implementation phase was taken seriously and a new form of regional cooperation developed, that came into action once the *Vision Rheintal* ended. The “model of cooperating spaces” (*Modell der Kooperationsräume*) is based on cross-community cooperation in smaller, homogeneous spatial units, the so-called cooperating spaces. The cooperating spaces will continue discussion on issues relevant to land use, like the development of regional spatial development concepts, mobilisation of building land and establishment of a land fund, affordable housing and non-profit housing construction, compensation mechanisms between the communities e.g. for intermunicipal business areas or for large settlements, raising awareness of spatial planning issues, among the population and especially for members of local councils and planning committees.

Making out winners of the intervention is easy: all stakeholders agree that the municipalities and their inhabitants in the Rhine Valley benefited the most from *Vision Rheintal*. Also, the spatial planning scene in Vorarlberg as a whole benefited from the process: The process's success inspired other regions - regional development plans are developed in many parts Vorarlberg nowadays. It also manifests itself in the weight that is attributed to spatial planning issues. As one stakeholder put it: "spatial planning found its way into everyday discourse". Making out the losers of the process is more difficult. According to the stakeholders, there are no losers visible publicly. Some neighbouring regions in Vorarlberg feared to be overpowered by the already strong Rhine Valley. Those regions subsequently started their own regional development process, supported by the province Vorarlberg. On the Swiss side, the Rhine Valley regions did not participate in *Vision Rheintal* at the time, which would have been an advantage for the overall regional perspective. At the moment, these regions are working on their own agglomeration program.

4.3.6 Multi-stakeholder assessment conclusions

Considering the paragraphs above, the satisfaction with the process is high - all stakeholders agree, that *Vision Rheintal* met its expectations. *Vision Rheintal*'s biggest footprint was left on the planning and development culture. The conjuring of a common identity and awareness-building in spatial planning issues might not be a tangible result, but it enabled the stakeholders to take action in a coordinated way, looking beyond the own realm and including the regional perspective in their planning decisions.

These decisions manifest themselves in specific actions targeting urban sprawl, services of general economic interest, the attractiveness of public transport, the cooperation in designating industrial sites and business areas, as well as promoting a territorial balanced allocation of low-income housing. Furthermore, the *Vision Rheintal* also influenced Vorarlberg's planning instruments and planning processes.

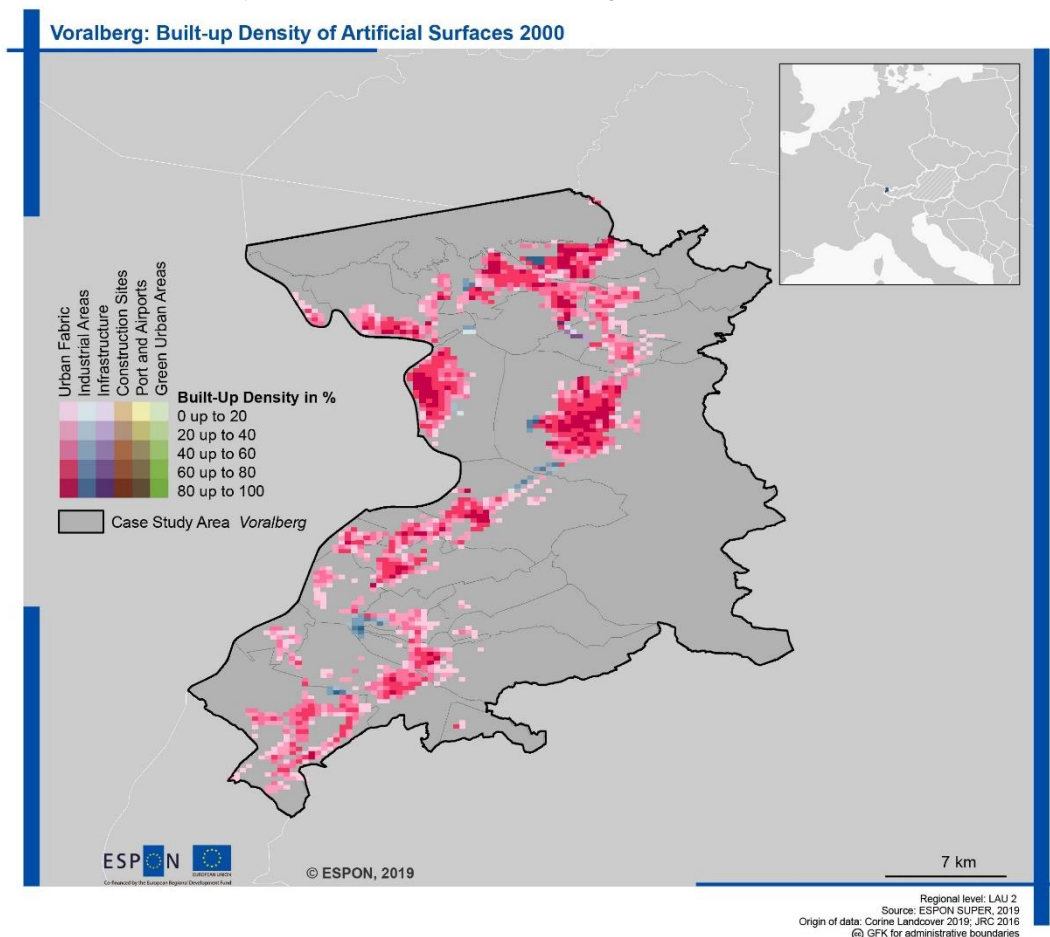
Although most of these effects can be associated with either of the three dimensions of sustainability - economy, ecology and equity – and promise long-term effects, the stakeholders are very clear on their perception, that the *Vision Rheintal*'s main success lies in its sustainable transformation of the planning and development culture in Vorarlberg in general and in the Rhine Valley in particular. It is this transformation that makes this intervention a best practice example, from which other regions or processes can learn from.

Nonetheless, the stakeholders agree that the process had even more potential. More courage to prioritise the goals, an earlier focus on the implementation in smaller territorial units and more binding commitments from the municipalities are some of the recommendations that can be deduced from the experience.

4.4 Conclusions

The Rheintal has experienced a massive change over the past 50 years. From 29 scattered and spread out separate municipalities, the valley has seen the formation of a fairly dense urban ribbon stretching from Bregenz to Feldkirch. This situation is clearly visible in the following map showing the built-up density of artificial surface in 2000 – 4 years before the intervention was implemented (Map 4.1).

Map 4.1: Built-up Density of Artificial Surfaces in Vorarlberg in 2000



Considering the stakeholders' statements and the reviewer's assessment what conclusions can be drawn from this Case Study?

First, *Vision Rheintal* had a good timing. The challenges it was supposed to tackle were apparent enough for the stakeholders to take the matters seriously. At the same time, there was still enough leeway to allow the stakeholders to find common ground and prepare their actions advisedly.

Second, in relation to the aforementioned: the constellation of stakeholders was appropriate. The process involved all levels of politicians and encouraged them to work on an equal playing field to find common ground. Those responsible had enough courage and prudence to enter this process ready to compromise. This basis fostered good collaboration between – and strong

political backing by - the municipality and provincial level, a necessary foundation for regional cooperation and sustainability of decisions.

Third, the process design and coordination were done exceptionally professional and the process extraordinary for the time being. The innovative element was the process itself, its formats and tools, its focus on bringing the different stakeholders together, forming a common vision of what the region should look like in the future and promoting theme-oriented discussion to find ways to reach that goal.

Forth, awareness raising is an important ingredient to change the planning culture in the long term. The broad participation process raised awareness for spatial planning issues and the advantages of intercommunal cooperation. The goal of joint, coordinated spatial planning on regional level stands firmly, even 15 years after the commencement of *Vision Rheintal*. This effect has also been noticed in the evaluation of the *Vision Rheintal*. It states that "There is a clear awareness among the state and municipalities that joint, cross-municipal cooperation and planning are essential for the future.⁶" This attentiveness to spatial issues and the will to cooperation are probably the most important prerequisites for sustainable land use planning.

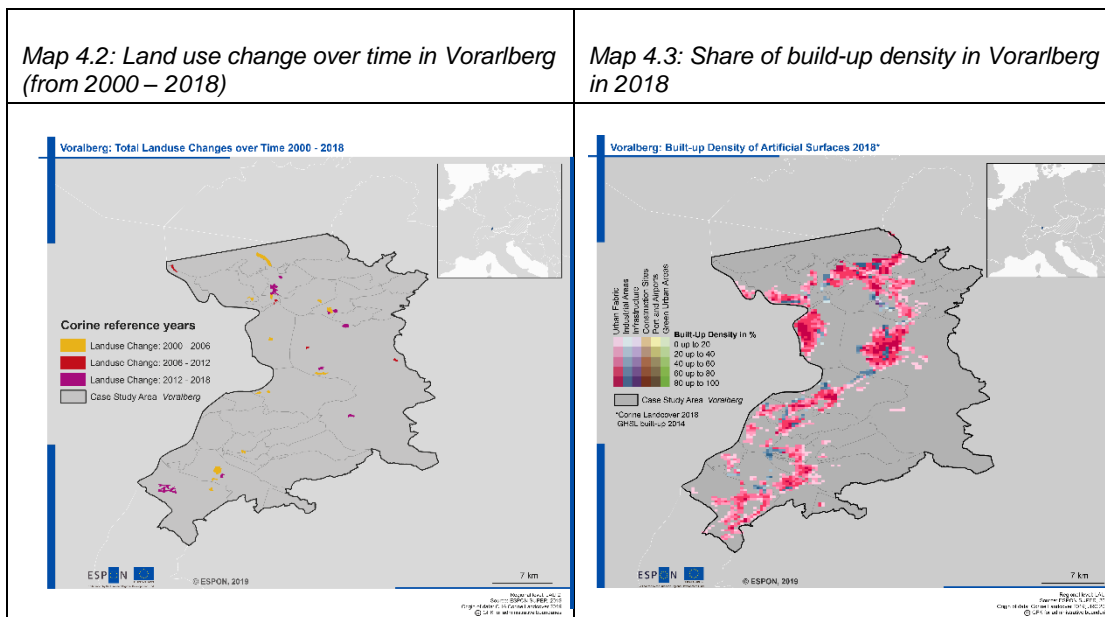
Fifth, the mission finding phase is very important to the sustainability of regional cooperation. The region with its inherent heterogeneity and many stakeholders has to find common ground on what they want to achieve in the future. This phase is hence characterised by identifying and analysing challenges, gathering data, and developing a common understanding of specific topics. This common understanding is henceforth a driving force for further implementation and sustainable change.

Sixth, what works for the mission finding phase does not necessarily work for the implementation phase. The development of a holistic vision for the entire region asks for a different set-up than the focused implementation of specific projects. The later benefits from a clear prioritisation of goals, more binding commitments, and a smaller territorial scope. The "*Modell der Kooperationsräume*", the follow up program of *Vision Rheintal* tries to respond to these needs (but is not subject of this case study). Consequently, if the process is to be copied, there should be a clear end to the mission finding phase and a new process set up for the implementation.

At last, *Vision Rheintal* produced long-term effects. The intervention aimed at translating its "visions" to tangible results, fighting the pressing problems of increased land use and traffic growth. The intervention produced some worthwhile results, urban densification in the surrounding area of two train stations, more attractive public transport, cooperation in allocating industrial zones, influencing spatial planning regulations and instruments to foster sustainable

⁶ Danczul (2017) Modell der Kooperationsräume. Zukünftige gemeindeübergreifende Zusammenarbeit in der Raumplanung im Vorarlberger Rheintal. Page 6f http://www.vision-rheintal.at/fileadmin/VRuploads/PDF/Vision_pluspdfs/Updates_2018/Modell_der_Kooperationsra__ume.pdf (last accessed 25.11.2019) Translation by the author.

land use – to name a few. Compensatory measures like the those deployed by the province when jointly deciding on the location of a new business zone, or housing subsidies naturally support the decision-making. As can be seen in the maps below ongoing land-use changes could not be completely prevented in the case study area (Map 4.2). Especially an increase in industrial areas can be observed (Map 4.3). However, as stated before, the most important long term effect is to be found in the awareness-raising for spatial planning issues and the change of planning culture – more tangible results are to follow.



When it comes to the transferability of the *Vision Rheintal* experiences, it is clear that the process was designed specifically for the situation of the Rhine Valley municipalities. There are however many areas across Europe which functionally belong to one region but do not share a common identity, hampering efficient and sustainable solutions in spatial planning matters. The process design might not appear as innovative today as it did back then, but it can serve as a guideline on important steps along the way.

4.5 Implications for sustainable urbanization and land use

This case study sought to illuminate the black box of development practices within a particular territory in Europe, focusing on a particular intervention which changed, or attempted to change, these practice to more sustainable ends. The primary source material was in-depth interviews with stakeholders directly involved in decision-making on spatial development, on crafting or applying the intervention, or both. Through their candid explanations, it was possible to provide a nuanced, and often critical, account of the origins, mechanisms and impacts of the intervention. As can be read above, the results show stakeholders in agreement on some issues and disagreeing on others.

The purpose of this final section is to give voice to the case study researchers by asking them to specifically reflect on the key questions posed to the project at its inception. The ideas and opinions expressed in this final section – printed in italics – are, therefore, solely those of the authors.

To what extent can the observed land-use changes in the case be considered sustainable?

The region of the Rhine Valley in Vorarlberg (Austria) has experienced a massive change over the last decades. The increase in land take resulted in a fairly dense urban settlement area. That's one of the reasons why spatial planning always played a central part in this area. As a response to this uncontrolled building activities, the green-zoning plan was introduced in 1977. Due to this regulation, almost half of the valley are protected against building activities.

To what extent were trade-offs avoided between economic, ecological and social values (e.g. urban green spaces in densifying areas)?

Even though the economy plays an essential role in the region, the Vision Rheintal tried to find a compromise between different values – by offering an open participatory process between various stakeholders. The economic dimension was i.a. covered by measures dealing with the development and the assessment of new industrial sites. Locations for future regional industrial areas were identified. The planning was carried out jointly with the communities concerned. In this process not only industrial sites were considered, also the important function of landscape for ecology, agriculture, and recreation was taking into account.

Was there a tension between sustainability at different levels of scale (e.g. a locally sustainable development having unsustainable attributes at the regional level)?

From the outset it was clear to the responsible stakeholders that Vision Rheintal needed to be a joint project of the province and the municipalities, breaking with existing hierarchies and instead working out results on equal footing.

In general, all participants were in favour of the process. The process was described as being transparent and fair, including a variety of different stakeholders and considering different sustainable attributes. Tension was only perceived between the interest groups within the process (ecology vs economy) and some mayors of little municipalities were afraid of being overpowered by the bigger cities in the regions.

To what extent is there a correlation between urban form (e.g. high-density contiguous urbanisation versus low-density scattered development) and sustainability?

As a polycentric area, the Rhine Valley combines different characteristics of urban and countryside areas. Different services (of the economy, culture, education, and administration) are distributed across various municipalities but can be used by the entire region.

How much impact did various interventions have in producing sustainable urbanisation and land-use outcomes?

One project within the Vision Rheintal was to identify alternative areas in order to avoid additional rezoning of green areas. For this purpose, experts from various fields discussed and identified various possible compensation areas for maintaining a green network for the nature, like economical use of already existing building sites.

To what extent were place-based approaches and territorial cooperation responsible?

One of the main characteristics of the Vision Rheintal was the extensive involvement of the different municipalities. One important aspect in this regard was to bundle industrial sites at particular suitable locations – independent of municipal boundaries.

To what extent were financial, fiscal and economic mechanisms responsible?

The province's support to balance out the lost tax income for those municipalities, that "missed out" on industrial and business zones was most probably a major leverage.

How sustainable are the measures themselves over time?

The "green-zoning value compensation" initiative which was introduced approx. 50 years ago should preserve green areas in the long-term. However, some exceptions exist for new operational sites. In this regard, it is essential to consider suitable locations for industrial sites in order to avoid an uncontrolled economic growth and land-take in the region.

Do they produce economic benefits?

If the decision of determining an industrial or business site is not based on tax considerations of the municipalities but on other factors (like transportation, distances, available brownfield etc.), the entire region can benefit economically from such measures.

To what extent do they effectively internalize external costs?

The internalisation of external costs is not explicitly addressed. However, when dedicating new industrial sites, green networks and their importance for ecological diversity is taking into account.

To what extent do they enjoy popular support or consensus among stakeholders?

The intervention was designed as participatory process aiming to bring all stakeholders together. The process is described by the stakeholders as being transparent and fair. In addition, all stakeholders assess the process design and coordination as exceptionally professional.

How can urban sprawl be contained and which instruments can be used to do that?

Through the development of a regional perspective and coordinated regional planning discussions on many topics relevant to land use practices can be triggered.

Handling urban sprawl was an important topic and triggered to the process of the Vision Rheintal. Some stakeholders are convinced that due to the vision a stop to urban sprawl was set.

How can the place based approach and territorial cooperation be used?

Participation was THE key element of Vision Rheintal. The intervention was designed as participatory process aiming to bring all stakeholders together to create a common vision for the region. When the Vision Rheintal started in 2004, more than 800 people worked together on a common mission statement and the concept is based on a collaboration of 29 different municipalities. However, one main lesson of the intervention was that it is more efficient to have cooperation with smaller territorial scope, clearer prioritisation of goals, and more binding character.

How can we benefit economically from measures to limit land take/soil sealing?

Like above: If the decision of determining an industrial or business site is not based on tax considerations of the municipalities but on other factors (like transportation, distances, available brownfield etc.), the entire region can benefit economically from such measures.

How can financial, fiscal and economic mechanisms be used to limit urban sprawl?

The Vision Rheintal encouraged the joint designation of industrial sites and business areas in the region. A financial compensation was integrated by the State of Vorarlberg in order to mitigate the profit of a single municipality from the municipal tax the industry would have to pay. This allowed for more variables to be considered when deciding on the location for businesses and industries, like traffic volume etc.

The intervention also manifested itself in the formal introduction of modifications in regulations. New instruments were integrated into spatial planning laws (e.g. spatial planning contracts), including a change of the funding regulations. For example, construction projects from 25 residential units receive subsidies only, if a neighbourhood analysis has been carried out, including the quality of outdoor space, pathways, integration of the project in the urban context, etc.

How can external costs be internalized? For example: at the moment it is often cheaper to develop greenfields instead of brownfields, but the costs of for instance the ecosystem services lost by developing a greenfield are not included in the development costs.

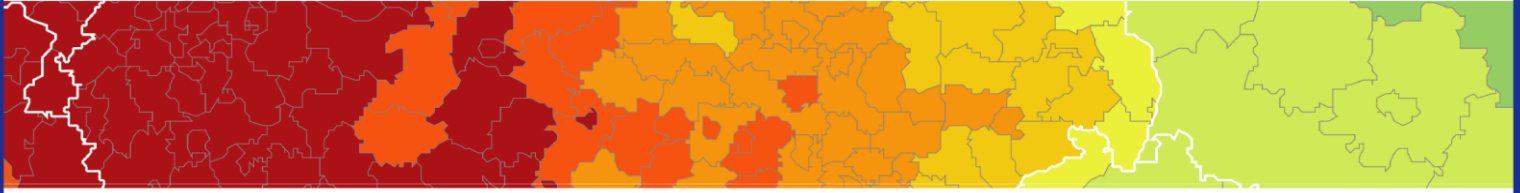
Through economical use of building land (use of already existing building sites, so that no rezoning of green areas is necessary). This could also be integrated into spatial planning laws.

How can green and open spaces in urban areas be maintained for the quality of life, despite the (laudable) effort to densify settlement areas?

By explicitly formulating such targets: One key statement of the Vision Rheintal defines the Rhine Valley of the future as being a region where open spaces are linked to a green network. "The Rhein Valley should also in the future offer a comprehensive supply of open green spaces within the settlement areas. This should guarantee also in the long-term access to agriculture, ecology and leisure sites. It is described as important that inhabitants live close to green spaces, to receive locally produced products and recreation from the landscape."

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