Comparative analysis of transnational cooperation forms of the Alpine border region
Germany - Austria.

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Abstract
Transnational rural and urban regions in Europe are currently facing a mix of socio-economic and environmental challenges, including unprecedented cross-border migration, climate change related phenomena such as floods and droughts, and significant changes in the urban-rural landscapes. Addressing these problems requires transnational cooperation and coordination. This paper evaluates different forms of transnational cooperation, with particular emphasis on projects in alpine border region. There are two objectives: to gain a better insight in the suitability of cooperation types in relation to thematic and spatial context; and, to determine if one specific type seems particularly appropriate for the transnational cooperation in the Alpine region and how far the recent Interreg program supports this cooperation type.

The typology of de Vries (2013) theorizes the differences of four primary cooperation forms (LOCUS, EVENTUS, MODUS, CAUSUS), which each have an effect on cooperation instruments and on anticipated results. This typology is useful to classify current cross-border projects in the investigation area and to compare their anticipated and actual process and outcomes based on their cooperation aims. The specific cases which are compared are retrieved from existing online databases (Interreg IV-A: Austria – Germany/Bavaria) and project reports from Austria and Germany. Statistical and qualitative data on those projects are collected using the empirical operationalization indicators from the cooperation typology. These include both basic conditions of the projects (such as funding requirements, initiators and participants) as well as relevant economic, social or environmental aspects.

The number of projects in the Interreg IV-A database alone indicates how dependent the region is on transnational cooperation. We found that these projects primarily rely on EVENTUS and CAUSUS type of cooperation, i.e. cooperation projects with clear outputs (products or services) and with implementation strategies emphasizing societal relevance respectively. In contrast, a LOCUS type, which relies on implementation of strategies with prescribed hierarchically implemented (inter)national standard indicators is hardly present in the Interreg program. With these findings we could also identify certain cooperation deficits and improvement potentials for the Interreg V-A program, such as stronger cross-border project participation of private actors and municipal authorities.

The findings are significant for coordinating future cross-border projects (especially in the field of climate change, globalization and demography). Recognizing that a variety in cooperation styles exist and that these have different effects on anticipated outcomes enables better formulation of funding and incentive strategies for regions.
Introduction

Alpine regions are struggling in particular with socio-economic and environmental challenges. Different interest in land like mountain farming, soil conservation, water management, natural and cultural preservation and protection, sustainable tourism, transport, etc. lead to conflicts in the alpine land use that slow down or even prevent sustainable development. Topographic orientation related to exposed sites and limited usability and accessibility of land as well as low population density make regional development even more difficult in an economic, social and environmental way. Especially tourism is in many Alpine regions an important economic development factor and the preservation of alpine nature, landscapes and attractively essential for its existence. Another challenge are political boundaries that cut the alpine region. According to the Alpine Convention (2016) the Alps cover nearly an area of 191,000 sq km within seven countries: from Slovenia, Italy, Austria, Lichtenstein, Swiss and Germany until France. Large parts of the Alpine regions are located in border regions, regions that are classified as peripheral regions at the external borders of the states. These regions located at transnational transversals are often characterized through economic problems and migration (Miosga, 1999). That is why the development of these regions, urban as well as rural, require sustainable, promising transnational coordination and cooperation. Cooperation is also necessary in regard of the demographic development. Although the alpine border region is generally an area with a dynamic population development there are several regions with negative growth rates (e.g. Lungau, Garmisch-Partenkirschen) (Europäische Territoriale Zusammenarbeit, 2007). Demographic development of a region is well connected to the different economic development of the regions. In view of the scarcity of land, the political situation and demographic development, land management beyond the borders is necessary (Europäische Territoriale Zusammenarbeit, 2007).

The debate about what the concepts of ‘coordination’ and ‘cooperation’ in the public sector, and in the context of multilateral projects, entails, is not new. However, this debate is regularly revived as new contexts require adaptation of previous conceptualizations of its forms and associated activities. A crosscutting reference about coordination in public administration is the book of Chisholm (1989:65), who refers to coordination as “mechanisms through which communications take place and solutions are sought and implemented”. In other words, coordination is an interactive and operational activity of communication and implementation, but it is also a normative activity of solution seeking and choosing of priorities among possible solutions. These solutions are addressing problems of public sector accountability at large, or of public sector organizational efficiency and service provision, for example (Webb, 1991). When treated as a public organizational problem, coordination is an activity which connects organizational structure (formal or informal) to organizational tools (including technology).

In the debate of why the concept of ‘coordination’ and ‘coordinated cooperation’ changes over time, Pollitt (2003) for example argues (in the context of the emergence of new concepts such as ‘joined-up government’) that coordination has essentially become a ‘manifestation of one of the oldest preoccupations in the field of politics and public administration – the co-ordination of policymaking and administration (Pollitt, 2003). Aspects of the changes in the conceptualization include that coordination can be linked to an end-state characterized by minimal redundancy, incoherence and lacunae (Peters, 1998). In addition, coordination can be linked to the associated processes of decision making and shaping new working relationships (Mulford and Rogers, 1982). These changes extend the traditional view on coordinated cooperation as simply related to an ideal type structure or hierarchy, which typically results in a categorization of bureaucracy as opposed markets, networks or relationships (Alexander, 1993; Keast and Brown, 2002; Painter, 1981). The current notion is therefore that coordinated cooperation deals with all of those aspects, yet
that depending on the type of domain and area of interest coordination can take specific forms with associated symbolic or linguistic artefacts. This demand for cross-border cooperation has also been detected by the government of the countries and the European Union (EU), which implemented agreements (Alpine Convention) and specific funding programs (Interreg) to support cross-border cooperation and development in Alpine regions.

This paper evaluates different forms of transnational coordinated cooperation with a particular emphasis on projects in the alpine border region of Austria and Bavaria. The basis for this evaluation constitutes the project data base of the European cross-border cooperation funds: Interreg IV-A Austria – Germany/Bavaria. The core two questions which we pose to this databases is:

**Which coordinated transnational cooperation types occur in the Alpine region and the Interreg program, and how suitable are each of these types for the specific thematic and spatial development context of this region.**

With the unpacking of the implementation of coordinated cooperation types in this specific context one can generate a further insight in the effectiveness and appropriateness of coordinated cooperation in the context of regional development in general.

The approach to the evaluation is as follows: From the database it is possible to categorize different coordinated cooperation styles and types. For this categorization we used the typology of de Vries (2013). The investigation of these projects delivers a better understanding of the suitability of specific cooperation types in relation to thematic context. Strength and weaknesses of these cooperation projects within Interreg IV-A will be evaluated. The paper analysis deficits of the program for cross-border cooperation and investigate if these deficits continue in the new Interreg V-A program Austria – Bavaria/Germany (2014 – 2020). Results show alpine border regions (communities) as well as government where cooperation is urgently needed and how cooperation in alpine region takes place to support a successful cross-border dialog and secure the future of a transnational urban and regional sustainable development.

First, we provide a short summary of the current development context in Europe in which the alpine projects play a role. This explains the conventional and traditional view on transnational coordinated cooperation. Then, we provide an alternative view based on a different categorization of the concept and the associated instances of ‘cooperation’. Third the paper declare the research methodology that lead to the conclusion of the work. Forth the paper presents the result how different cross-border projects are dispersed in different cooperation types. The subsequent discussion section analyzes the results, with a particular emphasis on how to qualify the strengths and weaknesses of each of the cooperation types for alpine cross-border development. Finally, the conclusion section recaptures the main findings in view of the main research question.

### Context of Austrian – Bavarian Alpine border region in relation to European cross-border cooperation goals


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1 Cross-border associations for joint development
supported by the Interreg Cooperation Fund called 1990 by the European Regional Development Fund into existence. The European Community Interreg funding programs stand for “European Territorial Cooperation”. The program supports cross-border cooperation of EU and non-EU countries and is part of the structural and investment policy of the European Union. Interreg follows three standards (standard A: cross-border cooperation; standard B: transnational cooperation and standard C: interregional cooperation) that mainly differ from the funding regions. The paper considers for its investigation the Interreg IV-A Austria – Germany/Bavaria program. The program period 2007 to 2013 supports the cross-border cooperation of the Austrian-Bavarian border region. Objectives of the program are reduction of the border-related barrier-effect; intensification and reinforcement of transnational cooperation; increase of livelihood and attractiveness of border regions; increase of competitiveness and development of a transnational economic area (Interreg IV-A, 2013). This paper only will consider projects participated by Bavaria (Upper Bavaria and Swabia) Vorarlberg, Tyrol, Salzburg and Upper Austria.

As mentioned in the introduction the alpine border regions have to deal with numerous environmental, social and economic challenges that do not stop at country border. That makes joint cross-border solutions and the support of such cooperation so important, like the Treaty of Lisbon and the Gothenburg strategies already requires. Aim is to “…tackle common challenges identified jointly in the border regions and to exploit the untapped growth potential in border areas, while enhancing the cooperation process for the purpose of the overall harmonious development…” (European Commission, 2015).

The Austrian - Bavarian border is 822.5 km and according to the delamination of the office of the Government of Upper Austria (2014) includes an area of 56,000 km² with 5.9 million people living in this area. The alpine region has a great responsibility in stabilization and explanation of regional economy (especially tourism), in acting as recreation area for urban population and for preservation of a sensitive ecosystem. 60 million day guests and 330 million overnight stays and customized transport system demand a good management and network system (Job et al., 2014).

To meet this demands, close cooperation with neighboring countries is necessary. That is also visible through the specific characteristics of the alpine region: winding of valley often enable a better accessibility to neighbor countries; climate, profile and history leads to similar demands on regional development; the supply and demand of tourism infrastructure and service extend beyond the borders. To cooperate in these domains different cooperation types and strategies must be implemented and joints structures developed and established. Current developments favor cooperation between Austria and Bavaria through open borders, same currency, low price gaps, similar living expenses, existence of similar landscape features, same language and culture, as well as similar quality criteria (Job et al., 2014).

Cross-border cooperation has the potential to join interest and development potentials of alpine border regions on both sides. It leads to know-how exchange and a better relation between those two countries (Selke, Hitterloher, 2001). It is important to see borders not as development barriers but as areas with great opportunities for networking and regional development.

Theory of inter-agency cooperation

In the context of evaluating the role of cooperation in multilateral alpine projects, the cooperation typology of de Vries (2013) is useful. Although this typology was primarily designed to distinguish cooperation types when coordinating information and communication technologies (ICT) among multiple public agencies, the basic differentiation into coordination types is justified by the fact that actual professional (practice-based) actions and associated symbolic or linguistic artefacts are employed in different ways depending on the coordination and cooperation aims. The resulting (practice-based) typology differentiates four primary coordinated cooperation forms, which each have an effect on cooperation instruments and on anticipated results. Table 1 shows the four primary types of cooperation. The types are
differentiated on the type of questions why the cooperation was deemed needed, the primary aims of the cooperation activities, the primary goals set to support coordinating actions, the types of instruments or tools used to enact the cooperation, the fundamental assumptions and expectations underneath the actions, and the type of symbolic and linguistic artefacts which become apparent and visible when this cooperation type is implemented.

<table>
<thead>
<tr>
<th>Cooperation type</th>
<th>LOCUS</th>
<th>EVENTUS</th>
<th>MODUS</th>
<th>CAUSUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary question initiating cooperation</td>
<td>Where is the need for practical coordinating action?</td>
<td>What is the intended practical result of the coordinating action?</td>
<td>How should the coordinating action take place?</td>
<td>Why should coordinating action take place in which specific context?</td>
</tr>
<tr>
<td>Primary aim of cooperation actions</td>
<td>Aligning activities at different administrative levels</td>
<td>Aligning production steps to ideal-type results</td>
<td>Aligning chains of activities</td>
<td>Aligning results with contextual needs</td>
</tr>
<tr>
<td>Types of goals set to support the cooperation actions</td>
<td>Transposition of central ideas to local implementation</td>
<td>Formulating and evaluating of end results</td>
<td>Business re-design and re-engineering of processes</td>
<td>Adaptation, cultivation of goals in line with societal needs</td>
</tr>
<tr>
<td>Type of instruments used</td>
<td>Legal/ institutional enforcement</td>
<td>Layers of cooperation agreements</td>
<td>Standardization of types</td>
<td>Awareness building</td>
</tr>
<tr>
<td>Assumptions</td>
<td>Straightforward hierarchical relations and unproblematic compliance when transposing</td>
<td>Transparent principle-agent relations, and non-conflicting agreements</td>
<td>Smooth business processes and unproblematic compliance with standards</td>
<td>Transparent social relations and willingness to change</td>
</tr>
<tr>
<td>Symbolic and linguistic artefacts</td>
<td>Uniformity, standards, one solution for all locations</td>
<td>End results, products, services</td>
<td>Integration, smoothening of inter-relational bottlenecks, working together</td>
<td>Outcome, acceptance, participation, societal relevance</td>
</tr>
</tbody>
</table>

Table 1: Coordination types (adapted from de Vries 2013)

In framework of the specific evaluation of the alpine projects the latter aspect (symbolic and linguistic artefacts) can be further detailed with regard to typical stakeholders, initiators, distribution of funds, symbolic and linguistic artefacts occurring in cooperation objectives and types of instruments used. Table 2 provides the basic differences between the cooperation styles which allows the empirical qualification of current projects. The table gets further adapted during the research process to suite the cooperation forms in the alpine region better.
Table 2: Basic differentiation between cooperation types for the empirical comparison of projects

Methodology

In the context of the Interreg IV-A Austria – Germany/Bavaria database 76 projects were evaluated, and for each the cooperation type was assessed. Projects with insufficiently project descriptions, outside the project region (alpine region within the states Upper Bavaria, Vorarlberg, Tyrol and Salzburg and Upper Austria) and micro projects that are separately listed in an Interreg database were not considered in this evaluation.

The selection of the funding programs Interreg IV-A: Austria–Germany/Bavaria bases on its funding priority on sustainable cross-border regions development and their extensive project data base (see Interreg, 2013b). Database and project reports comprises the last funding period 2007 – 2013. Quantitative and qualitative data on these projects are collected in a excel database and analyzed in accordance with the empirical operationalization indicators from the cooperation typology (see table 2, chapter 2.3). The projects are evaluated with regard to their stakeholders and initiators, funding amount, development field and projects objectives and instruments. Information are researched through the Interreg project database and different on line project documentations.
The data analysis of the transnational projects helps to assign the cases to the defined cooperation styles: LOCUS, EVENTUS, MODUS and CAUSUS based on De Vries, 2013 (see table 1 chapter 2.3). The allocation to these cooperation styles occurs mainly through the evaluation of the objectives and instruments of transnational cooperation projects. The LOCUS cooperation types describes projects in a top-down hierarchy. Decisions are made and tools developed on a higher administrative level and transferred to a lower level. The type is hardly flexible and active on different administrative levels. The EVENTUS cooperation type describes projects with a specific and clear defined target. It usually consists of aligned productions steps and cooperation agreements. The MODUS cooperation type peruse the aim of develop general model, system or plans for a region. Here a strong interaction between regional actors is important that leads to a defined process and structure for regional development. The CAUSUS cooperation type describes projects that follow a general objective with social, economic or ecological improvements in a region. Here the implementation of different stakeholders and general awareness building in respect of a topic are important. The classification into cooperation styles delivers a view on cooperation forms in transnational project and their meaning for border regions. For a statistical analyses project data is transferred in graphs that allows a fast overview and interpretation of the results. Thereby not only the absolute number of cooperation types are evaluated but also similarities and differences in their content. Information about the amount of funding, stakeholder, project leader and project fields are correlated with the project models.

Despite the comprehensive research the approach do not capture the entirety of cooperation project in the alpine border region. Nevertheless the database of the funding program Interreg IV-A: Austria – Germany/Bavaria is representative and extensive with projects in different fields (social, economic and ecological).

**Results**

Figure 1 presents the frequency of each of the cooperation types of the evaluated projects in the Austrian-Bavarian border region within the Interreg IV. Most cooperation projects within the Interreg IV-A program rely on EVENTUS (29 projects) and CAUSUS (26 projects) cooperation types, whilst a lower number employ a MODUS type (20 projects) or LOCUS type (just 1 project).

![Figure 1. Evaluated number of cooperation types within Interreg IV Austria-Germany/Bavaria](image-url)
The identified LOCUS cooperation project comprises the production of a spatial development strategy that should be implemented on local, regional and national level. Most projects of the EVENTUS cooperation type are following the improvement of touristic and mobility infrastructure in the investigation area. In transnational cooperation hiking paths are developed or improved, joint exhibitions designed, tourism attractions, employees and technologies enhanced as well as the efficiency of the regional traffic improved. Other EVENTUS type projects follow the development and implementation of training and education concepts. Alpine cross-border projects following the MODUS cooperation type are mainly aiming for alternative business models, cross-border transport models, research cooperation models or joint database-models for health system, tourism and traffic management. Projects following the CAUSUS type in the alpine border region are amongst others initiatives that support women entrepreneurs in the region, knowledge exchange of health organizations to improve the health system and pilot testing for sustainable land cultivation. It is the second most cooperation type found in the Austrian-Bavarian border region.

In addition to the basic categorization in cooperation types, we categorized the domains of cooperation into economic, social, and/or ecologic. This provides information if one development domain is remarkably present in the alpine border region and if a specific cooperation type corresponds to that domain.

![Fields of cooperation](image)

Figure 2. Fields of cooperation

Figure 2 shows that most projects can be considered economic development oriented projects, with a primary focus on tourism improvements in the alpine border region. The absolute numbers reflect that numerous projects do not only follow a single development domain but aim for secondary improvements in the ecological, social and/or economic domains simultaneously, even though the integrated nature of the execution and coordination activities of such projects may not be explicitly mentioned.
Furthermore, when connecting the cooperation types to cooperation domains, a fairly equal distribution emerges apart from the LOCUS type (Figure 3). This is at least remarkable, and would at first suggest that there is no significant relation between the domain and the cooperation type, as there is no significant difference between the types. Still, economic aims outweigh the cooperation projects in the alpine region. Least present are the ecological or environmental objective. When evaluating the content of the projects in more detail one can categorize further into projects which pursue joint educational initiatives, resource efficiency or online marketing. Project with a social approach include for example participation possibilities for young people in regional planning processes and the improvement or implementation of joint care facilities for families, old people or addicted people. Projects with an ecologic aim are mostly connected to sustainable tourism, awareness building or sustainable living and housing. As mentioned various projects are following more than one development field as for example a social and economic aim: improvement of the accessibility of infrastructure and mobility for seniors in the region as well as the expense of touristic offers to an older (new) target group of the region. This project follows an economic (tourism) and social aim through better accessibility of pavements, shops, offices, public transport (offers). Connected to this improvements the region wants to call attention on their “senior-friendly environment” and to attract new tourism group, the older people.

Another categorization of projects is the relation between the amount of EU and national funding and its correlation with the cooperation types. Projects were distributed in three categories: small project funding (project funding less than 100,000 €), medium project funding (project funding between 100,000 and 750,000 €) and large project funding (project funding more than 750,000 €). Following this classification most Interreg projects are categorized to a medium funding (67%). The other projects are relatively even spited to small funding (14%) and large funding (18%). Figure 4 shows the distribution in relation to the four cooperation types.

*Figure 3. Cooperation fields within the different cooperation types*
This analysis indicates that there is indeed a variety of funding schemes depending on the coordination type. The EVENTUS type seems to be much more corresponding to smaller funding schemes, whereas the other types correspond much more on medium size funding schemes. The larger funding schemes are only significant when employing EVENTUS and MODUS. Remarkable is further that the single LOCUS type corresponds to medium sized funding, where one would expect larger funding (given the hierarchical and national nature of LOCUS type of coordination). From the 20 MODUS cooperation projects of the Interreg database no small project funding takes place. Projects that required a larger funding amount include amongst others the implementation of regional electronic guest cards for tourism and marketing evaluations or transnational educational programs for tourism, care or health. Most of these large projects were supervised by federal and some communal organizations. Medium size projects differ wildly from joint touristic marketing strategies to joint emergency centers or mountain rescue teams and are supervised by actors of the federal, communal and local level as well as by Christian institutions (Caritas). Small project funds are linked to events for knowledge exchange (workshop, seminars), joint exhibitions and improvements of existing hiking trails, projects that are mostly lead by federal but also communal and municipal institutions.

A next attribute of the projects concerned the leadership (lead organizations) of the Interreg projects. A distinction between project leader from federal, communal, municipal, private and Christian institutions was chosen. This distinction should show if cooperation in regional alpine areas are mainly led by regional organizations or who are the key actors that lead projects in the border regions. Federal institutions include governmental and non-governmental institutions like hospitals, universities and other federal or national managed organizations. Communal institutions can be waste management associations, rural district authorities and communal tourism associations that are managed on communal level. Municipal institutions can be municipal tourism associations, municipal authorities or operator of local infrastructure (e.g. cableway).
Most of the projects are led by federal institutions (57%) followed by communal institutions (25%), municipal institutions (12%), Christian institutions (5%) and last private institutions (1%). These distributions can also be found in most of the cooperation types (see graph 5). In three of four types federal organizations are the very dominant lead institution for cross-border projects. Only EVENTUS cooperation types has a nearly comparable amount of communal institutions leading the projects next to federal organizations and also a comparably high percentage of municipal led projects. In the MODUS cooperation types municipal institutions as project leaders are not present at all. Private project leaders are nearly nonexistent in all cooperation types. Only one project in the MODUS cooperation type was led by a private association. Christian organizations are present in nearly all types (disregarding LOCUS) and seem to play a far more prominent role than private firms for example.

In addition to the project managers the type of stakeholders involved in the project was categorized. Figure 6 shows the different types of stakeholders in relation to the four cooperation types. The classification of stakeholder referred their statutory mandates for regional development: political and administrative institutions (such as actors of the federal, communal and municipal level as well as the public administrations and authorities, primarily aiming for economic development and stability), educational institutions (public and private universities and colleges mainly interested in research and science), non-government organizations (NGOs; primarily engaged in the social and ecological advocacy) and economic actors (including associations, chambers and commercial firms, primarily related to the tourism sector).
As Figure 6 shows most involved project members are from the political and administrative organizations. In some projects these are even the only participants. Since many of the projects aim to improve tourism development, economic actors the second category of noticeable contributors in the Interreg projects. Both stakeholder groups can also be connected to EVENTUS, MODUS and CAUSUS cooperation types. Educational institutions are however only stronger present with regards to the MODUS and CAUSUS types, and less in the EVENTUS types. NGOs are less present in the MODUS types and more present in the EVENTUS and CAUSUS types. In general there is no Interreg project where all four stakeholder types are cooperating. In only few projects three stakeholder groups work together.

The last categorization of project attributes concerned the instruments used in each project. Much of this information was not obvious from the project descriptions in the database. Some descriptions referred, hence a comprehensive detection was difficult and would require a detailed empirical analysis of each project. Still, however, most common instruments and tools employed include workshops, exhibitions, excursions, seminars and conferences, joint database development, public relations (PR) and marketing strategies. Further instruments related to the projects are the development and construction of infrastructure. Especially in the projects employing a MODUS cooperation type analysis and evaluation tools are often used. Furthermore, the CAUSUS projects do not implement any instruments for development and construction of infrastructure at all. This assessment may however also be due to the nature and definition of the cooperation types.

Discussion
Our discussion in this section evolves around the characteristics of the effective implementation of each of the cooperation types in the context of the Interreg project in the alpine border region. We evaluate the presence, strengths and weaknesses as well as their role in alpine cross-border region between Austria and Germany/Bavaria. This evaluation derives a comparison with the recently started Interreg V-A program (2014 to 2020), and the projected cooperation types herein.

The EVENTUS type is most frequently employed within the Interreg program. It is obvious that the reason for the EVENTUS type being most present is linked to the Interreg program action field 1.2 of priority 1, which aims to improve and increase the competensiveness of
regions through innovation and cooperation. This action field decidedly indicates the improvement of products, processes and services. Furthermore the EVENTUS cooperation type seems to be particular suitable for cross-border activities especially regarding tourism infrastructure. Finally hiking and cycling trail as well as traffic infrastructure takes place in a transnational manner which require cross-border cooperation. Next to touristic infrastructure particular the implementation of joint exhibitions seems to follow large demand in the alpine border regions. Exhibitions are result of the joint historical background and similar natural conditions or challenges of the region. It is further no surprise that most projects within the EVENTUS type take place to increase the economic development when considering that tourism is the main stage of development for most regions in the alpine area. Many of these tourism projects are also linked to a strong social aspect. Through improvement of the infrastructure and service for tourists also the public services for local population increase. Underrepresented however, are projects with ecological aim in the EVENTUS type. Reason can be the funding priorities of Interreg that insufficiently refer to environmental measures or the EVENTUS framework that might not be suitable to fund projects with ecological aims. This key finding can be highlighted in the CAUSUS type as well. Since neither restriction in the amount of funding nor in the stakeholder improvement can be identified for EVENTUS cooperation types, the second option will be excluded. The introductory section of this paper already referred to the responsibility of alpine border regions to obtain their sensitive environment for attractively, biodiversity and nature. Here appears an important need for action to increase activities in respect of environmental development goals. A further conspicuousness in the EVENTUS type can be found in the composition of stakeholders. Although stakeholder from administration and policy level are most present, other stakeholder are also taking part in cooperation projects. Underrepresented however, are educational institutions. Reason can be the general idea behind the EVENTUS types that implements very practical project that might not need necessarily extensive research studies and educational institution participation. Accordingly, here no specific need for action is seen. With regard on the project leaders there is one significance that also can be found in the other cooperation types: the absence of project leaders of private institutions. Since this characteristic can be found in all cooperation types it shall be assumed that the lead of Interreg cooperation projects for private companies is not attractive for whatever reason.

Since the Interreg IV-A program highlights also the increase of competitiveness of SMEs in the border region there still seems to be a gap between the objectives and the effective implementation of the program. Therefore further funding support for project lead for private organizations or also technical support is needed.

In general the EVENTUS cooperation types is very present in the alpine border region and seems to be a successful cooperation type. The EVENTUS cooperation type is responsible for implementing concrete infrastructure, services and use of services in a region and therefore is an important type for improving the cross-border region. It can be supported through funding programs that enable a broad stakeholder participation of different level and profession and the implementation possibility of concrete project ideas (products, services, use of services).

The CAUSUS is the second most occurring cooperation type. The Interreg IV-A program defines several priorities that lead to projects of the CAUSUS cooperation type that one can be surprised that the CAUSUS type is not even more present: improvement of economy framework conditions (action field 1.1); improvement of regional and local tourism (action field 1.2); improvement of cross-border labor market trends (action field 1.3); improvement of accessibility (action field 2.3); optimization of the care and health services (action field 2.4); improvement of regional identity (action field 2.5) are all Interreg targets that imply an CAUSUS cooperation approach. Most CAUSUS cooperation projects in the Austrian - Bavarian border region take place to improve the regional cross-border care infrastructure. This development is result of the demographic situations in the mainly rural cross-border region. Many infrastructures are faster accessible through the neighboring country than within the own borders. For this reason an evaluation of services on both sides of the border and its better connection is necessary. Accessibility of services is not the only cooperation
topic but also the knowledge exchange and training of regional specialists. Most of these CAUSUS cooperation type follow an economic target. This trend is equal as in the EVENTUS type described and explainable in respect to the important role of tourism development in the alpine region. Interreg funded projects take as well place for improvement of identity. Here towards older population groups the focus is on younger generations. Young people gets involved in regional planning process or they are given an understanding for regional job opportunities – a development approach that is important for the economy and stability of a many regions and clearly follows the Interreg targets.

More interesting is again a look on the project leaders of the CAUSUS cooperation type. While the general stakeholders participating in the CAUSUS cooperation type are almost balanced the lead of the project is often taken by federal institutions, some communal institutions and only few municipal and Christian institution. Private institutions are again, similar like in the EVENTUS, missing. This leads to the inevitable questions why project leaders on a municipal level are not stronger implemented although many projects take place on lower level. The trend can be explained by regional tourism, education, care and health service that are mainly federal leaded. Since project leaders are also often project initiators nevertheless there should be the consideration if organizations on municipal level might need more information, support or incentives to implement CAUSUS cooperation types into the Interreg funding program.

In general the CAUSUS type seems to be next to the EVENTUS type a very successful cooperation type that should experience continued support in the Interreg programs. The CAUSUS cooperation type is responsible for the sustainable development of whole regions to its economic, social or ecological good. It can be supported through funding programs that enable a stakeholder and project leader involvement on all levels and fields. It is important that the project goals are accepted by all partners and that they make compromises. Since whole regions are developed, it is most important to include also private institutions to guarantee effectiveness and sustainability.

The MODUS cooperation type is apart from the EVENTUS and CAUSUS types an often implemented type within the Interreg projects. The number of MODUS cooperation type is especially reduced to the Interreg priorities and its action fields “innovative or improved processes or services” (action field 1.2), “sustainable networks and cooperation structures” (action field 2.1) and “expansion of cooperation, capacities and joint use of infrastructure” (action field 2.4). Most MODUS cooperation type of the Interreg IV-A funding period are implemented for data exchange and joint database models (in the field of land use, traffic and risk prevention). This trend can be explained through the long separated data management structures on both sides of the country and the need for exchange and fusion though cross-border initiatives. Some caution is however necessary with this inference. The data fusion is still not always easy since the countries often work with different technical systems and legal regulations which require an extensive project implementation.

Related to the strong focus on tourism MODUS cooperation projects also implement the development of marketing strategies for cross-border regions. Since today borders are political barriers that tourist can easily cross, it is important to develop these transnational regions through joint marketing strategies. The MODUS cooperation type offers the greatest differences in projects. Further funded MODUS cooperation projects are business, transportation or cooperation models, emergency networks and joint training models. The reason for this variety can be that MODUS cooperation types often can be previous projects before an EVENTUS, CAUSUS or LOCUS type takes place. On the other side a MODUS cooperation project also can arise through a CAUSUS or LOCUS project that detect needs for specific regional models. That makes their field of application very broad.

The results also show that the MODUS cooperation project is not suitable for smaller project funds and require more extended funding (at least medium funding here defined with a minimum of 100.000 €). The higher funding amounts for these cross-border cooperation types can be justified through the already mentioned different systems, instruments, legislation and policy of both countries. The evaluation of the stakeholder implemented in the
MODUS cooperation projects reflect the need to implement often educational institutions into the planning processes that support other institutions with the development of suitable models or systems. The variety of stakeholders in the MODUS cooperation type is the highest of the four types and shows its complexity. The distribution of the project leaders suggests the political interest in such cooperation types. Most project leaders are from federal institutions apart from communal representatives other organizations are hardly present for this type. Private project leaders are again totally missing in this cooperation type, although their interest in cross-border cooperation must be relevant. Here is again a reference to the general funding condition of Interreg.

The MODUS cooperation type is a very important cooperation tool for cross-border development. The MODUS type generates cross-border approaches, systems and models that are basis for data exchange and further cooperation projects. Further implementation of MODUS cooperation types can be supported through sufficient funding amounts, transparency, clear legal regulations and the implementation of numerous stakeholders.

The LOCUS cooperation type is only employed in one project example, hence no comparative analysis is possible. Nevertheless there can be assumptions made, why this cooperation type is nearly not representative in the Interreg IV-A program. The LOCUS cooperation type includes projects with a more top-down approach. Central governments ordering local governments how to exclude. The priorities and action fields of the Interreg program however, following more the idea of a bottom-up concept – project approaches that are developed in cooperation with regional stakeholders. References to the importance of participation of various types of stakeholders are highlighted in different parts in the Interreg operational program (2007), too. Therefore it can be considered that the LOCUS cooperation type follows an approach that is not primarily supported in the Interreg program. Nevertheless it can be assumed that for specific cooperation development the LOCUS type can be important. The need is especially relevant when standardized legal and administration approaches are required which enable a smooth cooperation between administrative organizations. This is not always possible when opting for MODUS cooperation types.

The analysis and evaluation of the Interreg projects do not necessarily show the success of implementation of the projects and development of a region. Therefore it cannot be assessed finally which type is the most suitable for the transnational cooperation in cross-border regions. It depends mainly on the objectives but also context, field and content of the project cooperation. The successful development of the cross-border region Austria - Bavaria seems to be dependent of a general good mix of the four cooperation types, whereby individual approaches should still be improved. The main improvement aspects found within this evaluation are:

- There should be more project leader from private organizations. Private organizations are important actors especially for regional development which place demands on the regional development. Private organizations should be motivated and supported to be initiative and cooperative in cross-border projects and more sustainable public-private-partnerships implemented.
- Especially in CAUSUS cooperation types but also in the other types there should be a stronger focus on a municipal project lead. Municipalities are well informed about the local situation, and well connected to the interests of population and important stakeholder. Therefore municipalities should more often play a key role in regional cross-border projects.
- Ecological aspects seems to be underrepresented in most cooperation types (especially in MODUS and CAUSUS). In regard of the sensitive and unique nature of the alpine region and the high pressure through land use and tourism there should be a stronger focus on environmental development for cooperation projects.
- Even if the LOCUS cooperation type is hardly present in the Interreg projects there should be further initiative to support projects also on a central government level.
For sustainable development it will become more necessary to adapt different political, legal and administrative structures.

Further to these identified gaps one could identify exists a number of strengths within each of the cooperation types, such as:

- The number of projects itself says a lot about cross-border cooperation motivation and funding possibilities. It shows that funding programs like Interreg are well received and needed.
- Most projects have a good variety of stakeholders from different field and profession. For sustainable and successful development different stakeholders with their individual know-how, abilities and resources should work together for a sustainable development in the alpine border region.
- Even if not analyzes more in detail the results show a great diversity of different cooperation instruments that enable qualitative results and successful implementation. It is necessary that project stakeholders know about different project instruments and their successful implementation. Less experienced stakeholder should learn from more experienced ones.
- All fields (economic, social, ecological) are implemented in the cooperation types. On one hand it shows the diverse approaches, on the other hand that no cooperation type is linked to a specific cooperation field. This is important to achieve different objectives in different fields of cooperation.
- Cooperation takes place on all administrative levels regardless of coordination type.

**Cooperation types in view of the current Interreg V program**

The Interreg V-A 2014 - 2020 program Austria – Germany/Bavaria is the follow-up program of Interreg IV-A. The program was developed and approved in cooperation with the participating countries Upper Austria, Salzburg, Tyrol, Vorarlberg, Swabia and Upper Bavaria. According Interreg for the program about 54.5 million Euros (Interreg, 2016) are available to fund three focus areas with overall seven specific program aims:

1. Extension and improvement of transnational research-, development- and innovation capacities.
2. Preservation and protection of environment and facilitation of resource efficiency.
3. Support of cooperation for legal and administrative issues and the cooperation between civil society and institutions.

To which extent can these aims be reached when considering the findings on the cooperation types? First of all, as the results section describes, economic development has the highest priority in all the Interreg projects. This is on the one hand a strength of the Interreg IV-A program, since it support the economic development in the alpine border region strongly, which is a challenge in in sparsely populated areas and areas struggling with demographic problems like negative growth rates. On the other hand this focus can lead to a disadvantaged development in the social and especially ecological field. The funding focus of the current Interreg V-A program balanced these inequalities better. It still has a focus on the economic development but put the focus of ecological and social targets more in focus. Example therefore is the priority 2 of Interreg V-A: target are the preservation and protection of the nature and promotion of the resource efficiency. In the Interreg V-A program tourism development is not only funded to increase the economic basic conditions but also to contribute preservation and protecting of natural and cultural resources and landscape for a sustainable development. However development of tourism in a solely economic perspective plays only a minor part. Next to the economic and ecological aspects the social dimension of cooperation projects become as well more important. Interreg V-A program has target the closer cooperation between social intuitions to improve the structure and quality of supply of social services. Social aspects are considered and promoted. Hence the ecological, social and environmental aspects and their interlinkage become more important in the current
Interreg program and the cooperation field of the Interreg projects may shift in the LOCUS, EVENTUS, MODUS and CAUSUS cooperation types.

However, the improvement of the economic development will maintain an important aim of the Interreg program for alpine cross-border regions which is necessary responding to current challenges. The way of increasing economic development is different defined in the action fields of Interreg IV-A. While Interreg IV-A program mainly focuses on improvement of the competitiveness of regions through innovation and cooperation, the current Interreg program focus more on the cross-border cooperation between educational intuitions and the improvement of development and innovation capacities (priority 1). Private actors become next to the universities and research facilities more important for sustainable development of the alpine cross-border regions. This is an important modification since the analysis shows some stakeholders are much underrepresented in the implementation of projects within the Interreg IV-A program. The reason of underrepresented stakeholders (especially for project lead) may also be linked to the complex and expanded Interreg application process.

Economic players might have a lack of resources preventing their participation in such complex and time intensive working structures. This could also be a problem for local communities with less personal and financial resources. The application process of the old and new Interreg program has not changed elementary. Additional funding are not available for these stakeholder groups (funding for the application process). Therefore there might be still little project applicants (leaders) of the private or municipal field in future. Positive however is the additional funding amount of the Interreg V program (from 60% in Interreg IV to 75% in Interreg V). This increase of funding could help municipalities with less financial capacities to participate in cross-border cooperation. Therefore the number of municipal project stakeholders can increase and region with special support need can be better involved in the Interreg cooperation projects. For transnational cooperation regional governance structures are essential and actors on the regional and local level should be addressed clearly. The new priority 3 of Interreg V-A program focuses on the support und construction of transnational governance. Within this new main target there is another approach to close the gap of too little participation of municipalities in CAUSUS cooperation type. Improvement and supporting the construction of regional governance structures can lead to a higher participation of communal and municipal institutions in the regional development in the alpine cross-border region. This modification can contribute to further strengthen of communal and municipal institutions. Coordination, transparency and exchange of knowledge and experiences are useful to consider the needs of all stakeholder within the cooperation types. Building of regional governance structures is also an action field of Interreg IV-A program to improve the attraction of living space in the alpine cross-border region. Nevertheless it has in this funding period a higher status that can contribute the participation of various stakeholders and use their capacities.

This discussion leads to the assumption that the EVENTUS and CAUSUS type still are important for the sustainable development of the alpine border region in future. The results of cross-border cooperation can improve if the projects are using a more integrated approach from the onset, balancing social, ecological and economic aspects. This could be a task of the Interreg secretariat. If employed, it would imply that the LOCUS cooperation type gains a higher priority. This observation seems to be reflected in the new main priority 3 of the Interreg V-A program, namely to implement and improve the cross-border regional governance structures, implying from a more centrally standardized perspective).

Conclusion

The key two aims of this research were to gain a better insight in the suitability of cooperation types in relation to thematic and spatial context (addressed by the question: Which coordinated cooperation types occur in the context of the transnational cooperation in the Alpine region and the Interreg program); and, to determine if one specific type would seem particularly appropriate for the transnational cooperation in the Alpine region (question: how
suitable are each of these types for the specific thematic and spatial development context of this region). With these results it is possible to assess how far the recent Interreg program supports cooperation.

The results and analysis show that the Interreg IV-A program relies primarily on EVENTUS and CAUSUS type of cooperation projects for the alpine border region, hence projects which are led by a predetermined notion of concrete results, or by a predetermined frame of societal relevance. Furthermore, these results and outcomes frames predominantly emphasize economic development outcomes, especially the improvement of tourism. Whilst these findings may not be surprisingly, given that the alpine region in general is strongly associated to tourism, one may also wonder why the economic outcome frames tend to be so dominant as compared to environmental or social ones. Approaches such as joint implementation and improvements of protected area management, species protection, sustainable use of resources, etc. Especially in view of changes and new challenges through climate change that will have partially significant effects on tourism and environment, further improvements could take place.

A second finding, and immediate implication of this first observation, is that there is still some neglect for the protection and conversion of the alpine to a cultural and natural environment. This may require however a much more comprehensive approach, possibly through the execution of more LOCUS type of cooperation projects. Such projects could potentially lay the foundation for more uniform transnational cooperation standards for all regions, regardless of the country context. Administrative and legal cooperation between countries remains a key bottleneck, which is also recognized by the Interreg project V-A program. The new funding guidelines and priorities focus more on an environmental aspects through a particular priority axis within the Interreg specific funding goals.

A third general observation is private institutions are almost missing and also institutions on municipal levels are not always well presented. Despite the fact MODUS and EVENTUS type of cooperation projects would clearly allow such an inclusion of actors, in reality there seems to be some reservation. An additional funding for preparing the Interreg proposal could increase the number or regional leaders in the Interreg projects.

Fourthly, in view of the future, the new Interreg V-A Austria-Germany/Bavaria takes up several weaknesses of the previous Interreg program that lead to a more balanced and effective funding of the cooperation types. The recognition that a variety in cooperation types exist and that these have different effects on anticipated outcomes enables better formulation of funding and incentive strategies for regions in future. An important warning should be addressed however. We did not define any measures or indicators of ‘success’ rates or degrees of any project per se. We only qualified the projects in terms of observable attributes. Moreover, how ‘success’ is defined is inherent of the coordination / cooperation types. For example, one opts for a MODUS cooperation types, because one expects this type to have the best anticipated effects for the purpose of the project. Hence, stating that one type of cooperation style is more successful than another requires another way of measuring success than the basic tenets of the cooperation types themselves. This therefore an additional framework and more empirical evidence.

In order to continue the investigation of cooperation types and its efficiency further empirical study about the manner of execution and the gap between anticipated and effective results of each of cooperation types should be made. Other transnational and multilateral funding programs could be evaluated and compared to show if the actual results are only linked to the Interreg program or if they show a general cooperation trend. Another interesting approach would be the definition of “success-criteria” for he cooperation types to investigate how efficient they support the regional development in alpine cross-border regions. The findings to such a question could the effectiveness and appropriateness of each cooperation type vis-à-vis a variety of sustainable development aims.
References


SELKE, W., HITTERLOHER, C. (2001). The Importance of Transnational Cooperation for German Spatial Planning Policy. Planum Magazine


**Figures**

Figure 1: Evaluated number of cooperation types within Interreg IV Austria-Germany/Bavaria

Figure 2: Fields of cooperation

Figure 3: Cooperation fields within the different cooperation types

Figure 4: Project funding within the cooperation types

Figure 5: Project leader distributed over the cooperation types

Figure 6: Different stakeholder types within the cooperation types

**Tables**

Table 1: Coordination types (adapted from de Vries 2013)

Table 2: Basic differentiation between cooperation types for the empirical comparison of projects