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## Article

# Shaping territorial agri-food systems through social innovations: The example of Valposchiavo, Switzerland

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Agrifood system between global and territorial vision – Research article

## Shaping territorial agri-food systems through social innovations: The example of Valposchiavo, Switzerland

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**Abstract.** Territorial agri-food systems can be characterized as social innovations that challenge corporate food governance. These systems involve a diverse array of actors operating at the local level, with the shared objective of promoting locally sourced and environmentally sustainable products. To gain deeper insights into the interplay of social innovation and territorial governance, we investigated the case of Valposchiavo, Switzerland. In this unique setting, diverse actors have initiated an innovative approach to territorial development, emphasizing the revalorizing of local resources. To unravel the intricacies of the development process, we applied the territorial social innovation framework, specifically tailored for analyzing the role of social innovations within Valposchiavo's territorial agri-food system. Our research incorporated existing interviews and supplemented them with problem-centred interviews conducted in the field. Results underscore that the development approach of *100% Valposchiavo* constitutes a territorial social innovation. This innovation is evident in the formation of diverse local collaborations, establishing novel multi-actor settings within the territorial agri-food system, with an emphasis on collective values aligned with organic agriculture. Our study also identifies an innovative territorial governance approach aimed at obtaining certification as an organic region in the future. This signifies a proactive step towards creating a sustainable and certified organic framework to institutionalize territorial agri-food system.

**Keywords:** social innovation, agri-food systems, agri-food networks, territorial governance, organic regions, Valposchiavo.

**JEL codes:** Q, R.

### HIGHLIGHTS

- *100% Valposchiavo* constitutes a territorial social innovation that challenges established corporate food governance structures.
- The Valposchiavo territorial agri-food system prioritizes the revalorization of local resources by strengthening values-based supply chains initiated by local actors.
- At the governance level, the territorial agri-food system is shaped by local multi-actor collaborations establishing a comprehensive strategy for achieving certification as an organic region in the longer term.

## 1. INTRODUCTION

Recent debates (Bosworth *et al.*, 2020; Neumeier, 2012; Bock, 2016) emphasize the role of social innovation in territorial development, stressing the social dimension for successful rural development. Social innovation is herein defined as a set of processes propelled by social collaboration and learning, aimed at addressing unmet social needs (Bock, 2016: 4). An example of social innovation would be alternative food networks (AFNs), conceptualized as networks challenging corporate food governance by offering new ways of production and consumption of food (Vercher, 2022). A more recent manifestation of AFNs are territorialized agri-food systems, highlighting the spatial importance of AFNs. Instead of reducing the perspective on single initiatives, as AFNs tend to do (Lamine *et al.*, 2018), territorial agri-food systems adopt a holistic perspective, starting from the entire territory with its local specificities and a diversity of initiatives. Territorial agri-food systems aspire to embrace “*the diversity of actors involved in the production, processing, distribution and consumption of food products at the territorial scale who aim at favouring local and ecological products*” (Lamine *et al.*, 2018: 4). The active involvement of diverse actors shaping such systems is referred to as local agency (Lamine *et al.*, 2018). Scholars (Lamine *et al.*, 2018; Vercher, 2022; Sanz-Cañada and Muchnik, 2016) have explored small-scale approaches of AFNs as expressions of territorial agri-food systems. On a larger scale, we also consider organic regions as a form of territorial agri-food systems, as this novel approach aligns with the values of organic farming for territorial development (Stotten and Froning, 2023; Packer and Zanasi, 2023).

In Valposchiavo, Switzerland, a dynamic group of actors has initiated an innovative territorial development approach known as *100% Valposchiavo*, driven by social collaboration with an emphasis on revalorizing local resources (Stotten and Froning, 2023; Stettler and Mayer, 2023). This contribution aims to elucidate the role and significance of social innovations within the approach *100% Valposchiavo* as a territorial agri-food system. Our hypothesis is that the territorial agri-food system of Valposchiavo represents territorial social innovations. In addressing the limited conceptual frameworks exploring social innovation processes (Bock, 2016), we apply the theoretical framework territorial social innovation (TerriSI), developed by Vercher (2022), to analyze the actions that make up these social innovations. We ask: How does the territorial agri-food system of the development approach of *100% Valposchiavo* constitute a TerriSI?

We proceed as follows: In Section 2 we present the concept of territorial agri-food systems, in Section 3 we

explore the need for a conceptual framework investigating territorial social innovations. In Section 4 we provide material about the case study region and the methods applied. In Section 5 we describe and discuss the territorial agri-food system, focusing on diverse actor constellations that give rise to innovative social relations and practices. Finally, these findings are synthesized in the context of the research question and conclusions are drawn in Section 6.

## 2. RESEARCH CONTEXT: TERRITORIAL AGRI-FOOD SYSTEMS

Within the global capitalistic economic hegemony, corporate food governance dominates agricultural and food systems, conceptually framed as the corporate food regime (Jakobsen, 2021; Friedmann and McMichael, 1989). It is characterized by a power shift from manufacturers to transnational (agribusiness) corporations, strong financialization and privatization of the entire agri-food sector (Jakobsen, 2021), and a limited agency of local actors within alternative food systems (Stotten, 2024). One important consequence of the corporate food regime is the integration and interconnectivity of rural areas – as places of agricultural production – into global, large-scale, and distanced supply chains and capitalistic market structures (Jakobsen, 2021), leading to a *globalized countryside* (Woods 2007: 492). What is described as “food from nowhere” (McMichael, 2005; Campbell, 2009) can be understood as a *disembedding* (Polanyi, 1973 in Ermann *et al.*, 2018: 41) of rural agri-food systems as well as traditional livelihoods. It leads to the erosion of social cohesion of communities (Ermann *et al.*, 2018). The opposing concept of “food from somewhere” Campbell (2009) captures the call for regionalization of agri-food systems that are perceived as socially and ecologically more embedded in social structures of communities and contribute to the socio-economic well-being of communities (Campbell, 2009: 313; Ermann *et al.*, 2018). Additionally, following Schermer (2015), the “food from here” approach amounts to a de-commodification of food that reveals new forms of agency in food chains. One expression of this approach are AFNs (Renting *et al.*, 2003; Ermann *et al.*, 2018; Lamine *et al.*, 2012), understood as close producer and consumer networks, often initiated through local civic engagement and aimed at democratizing the agri-food system (Lamine *et al.*, 2018; Vercher 2022). In AFNs local actors initiate novel forms of rather short and closed food supply chains in a given territory (Renting *et al.*, 2003) to increase the resilience of agri-food systems and to main-

tain rural livelihoods (Lamine *et al.*, 2012; DuPuis and Goodman, 2005).

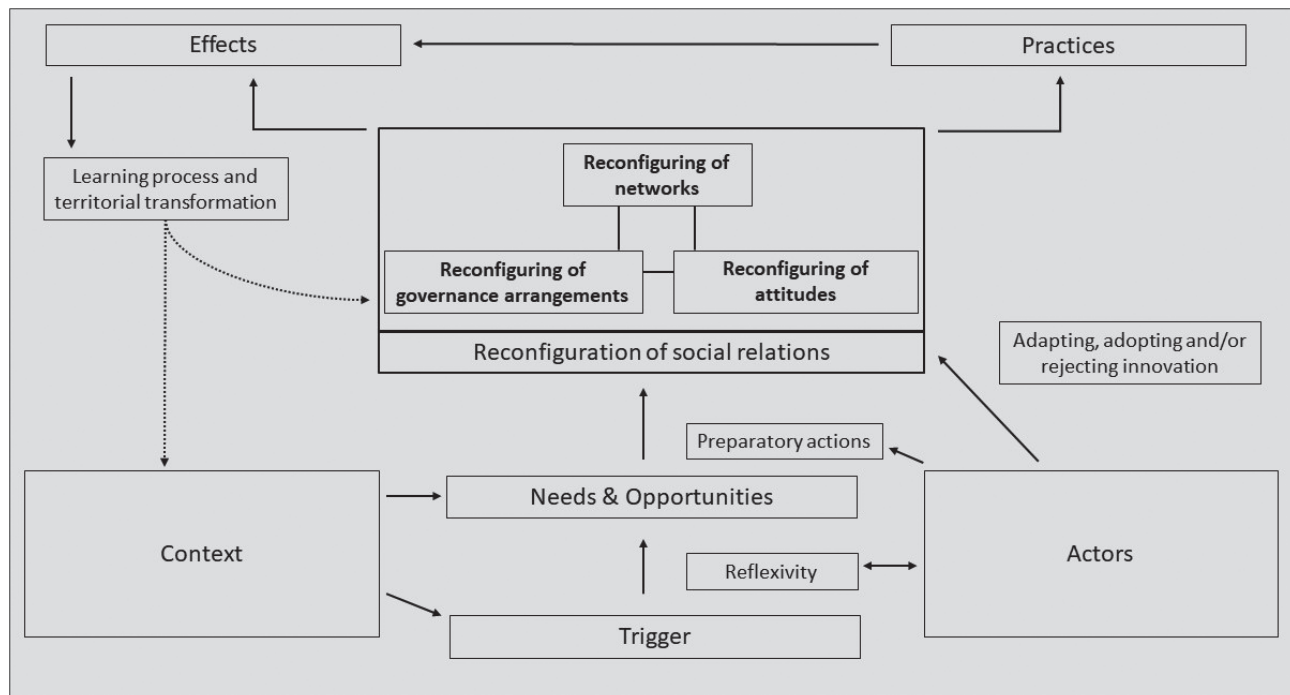
Similarly, so-called *quality food networks* emerge in the context of what is referred to as a “quality turn” in agri-food studies, with initiatives of local brands and geographic indications offering alternatives to the corporate food regime (Lamine *et al.*, 2018; Watts *et al.*, 2005). While the analysis of both alternative food and quality food networks tends to capture only individual initiatives or products, territorial agri-food networks also take distinctive characteristics of territories, traditional place-based farming systems, and cultural identities of a territory into account as essential for achieving sustainable rural development (Lamine *et al.*, 2018; Lamine *et al.*, 2012). Further, territorial agri-food networks are integrated with other activities in the territory, such as landscape conversation, tourism, or education (Lamine *et al.*, 2012). They encompass diverse actors that combine mostly organic production based on values and principles of organic agriculture with agro-ecology to strengthen local, organic values-based supply chains (Lamine *et al.*, 2018; Vercher, 2022; Stotten *et al.*, 2018). These values-based supply chains are part of the holistic understanding of a territorial agri-food system approach that further aims to strengthen territorial rural development in general (Lamine *et al.*, 2012; Lamine *et al.*, 2018). This territorial development can be spatially institutionalized through the creation of organic regions (Stotten and Froning, 2023). Conceptually, Lamine *et al.*, (2012) stress that territorial agri-food systems rely, first, on a diversity of initiatives that form networks and, second, on appropriate governance mechanisms that support these (p. 232). Further, the wider active involvement of actors, which is a form of reconfiguration of social relations and practices, is evident in AFNs and can improve territorial agri-food systems in general. These new relations and practices are therefore crucial for social innovation processes, referred to below (Vercher, 2022).

### 3. CONCEPTUAL FRAMEWORK: TERRITORIAL SOCIAL INNOVATION

Theoretically, this article draws on the concepts of rural and territorial social innovation (SI) (Bock, 2016; Vercher, 2022). Applied in complex and multidisciplinary settings, SI serves as a governance practice by policymakers but more recently also as a theoretical concept in research (Moulaert *et al.*, 2017; Neumeier, 2012). These diverse contexts complicate a general definition (Bock, 2016; Secco *et al.*, 2017), but in the most common understanding SI is seen “[...] as a motor of change root-

ed in social collaboration and social learning, the response to unmet social needs as a desirable outcome, and society as the arena in which change should take place.” (Bock, 2016: 4). SI is considered closely associated with local development initiatives and civic action of communities that collectively promote new or improved values, behaviours, and practices (Bock, 2016; Vercher, 2022; Neumeier, 2012). Vercher (2022) therefore highlights SI as a “process of reconfiguration in social relations that leads to new forms of action and enables the satisfaction of collective goals, whose main result is the creation of social value (p. 3). Generally SI generates beneficial outcomes that tackle negative impacts of globalization like marginalization or market pressures on rural communities. SI is able to improve the socio-economic situation of communities, for example, through the provision of small-scale sustainable products and services, novel forms of business and initiatives, as well as through the support of new information and communication technologies (Barlagne *et al.*, 2021; Bock, 2016). In addition, SI has intangible effects, such as social inclusion, capacity-building through new collaborative networks, or stronger community resilience (Vercher, 2022; Barlagne *et al.*, 2021). Importantly, the concept of SI centres on local agency with current rural development approaches like the neo-endogenous development (Ray, 2006), as both concepts are oriented on local community and citizen engagement. Simultaneously they also acknowledge exogenous and external factors, resources, and networks as crucial for ensuring sustainable rural development of communities (Bosworth *et al.*, 2020; Bock, 2016; Chatzichristos *et al.*, 2021).

To overcome criticism of SI as just a buzzword and a rather vague, broad concept (Bock, 2016; Schermer and Kroismayr, 2020), sound theoretical frames are needed to conceptualize and grasp the processes of SI (Neumeier, 2012; Bock, 2016). Recently Vercher (2022) has proposed such a conceptual framework (Figure 1) for analyzing SI processes with a specific territorial focus, which he calls territorial social innovation (TerriSI). He argues that “through the generation of new social relations, communities can implement diverse practices, unleash other types of innovations, and deliver effects in unexpected domains [...]” (p. 4) and thus achieve a territorial dimension of the social innovation process. The analysis of TerriSI processes in a certain community starts with *triggers* based on the economic, socio-cultural, and environmental context of a specific territory. They can be understood as positive or negative impulses that activate initial action based on specific needs and opportunities of the territory. Both needs and opportunities depend on the constellation of diverse actors

**Figure 1.** Conceptual framework of territorial social innovation (TerriSI) after Vercher 2022, simplified.

involved in the SI process. Central to the concept is an analysis of the reconfiguration dimensions of social relations between the actors. This includes, first, the reconfiguration of networks; second, the reconfiguration of attitudes; and, third, the reconfiguration of governance processes. While the first one focuses on emerging new actor constellations and the role of different actors, the second highlights changing attitudes and perspectives the actors develop. The reconfiguration of governance processes includes new forms of coordination and organization within the new network. For empirical investigation, social innovation processes in AFNs with a explicitly territorial focus are rare (Vercher, 2022). One notable exception is their application in the context of an AFN on the island of Ibiza, Spain, which revealed that social innovations with a strong territorial dimension significantly contribute to the improvement of AFNs (Vercher, 2022). Building on Vercher's (2022) framework, this article extends the analysis beyond a single AFN to encompass the numerous initiatives and actors that form *100% Valposchiavo*.

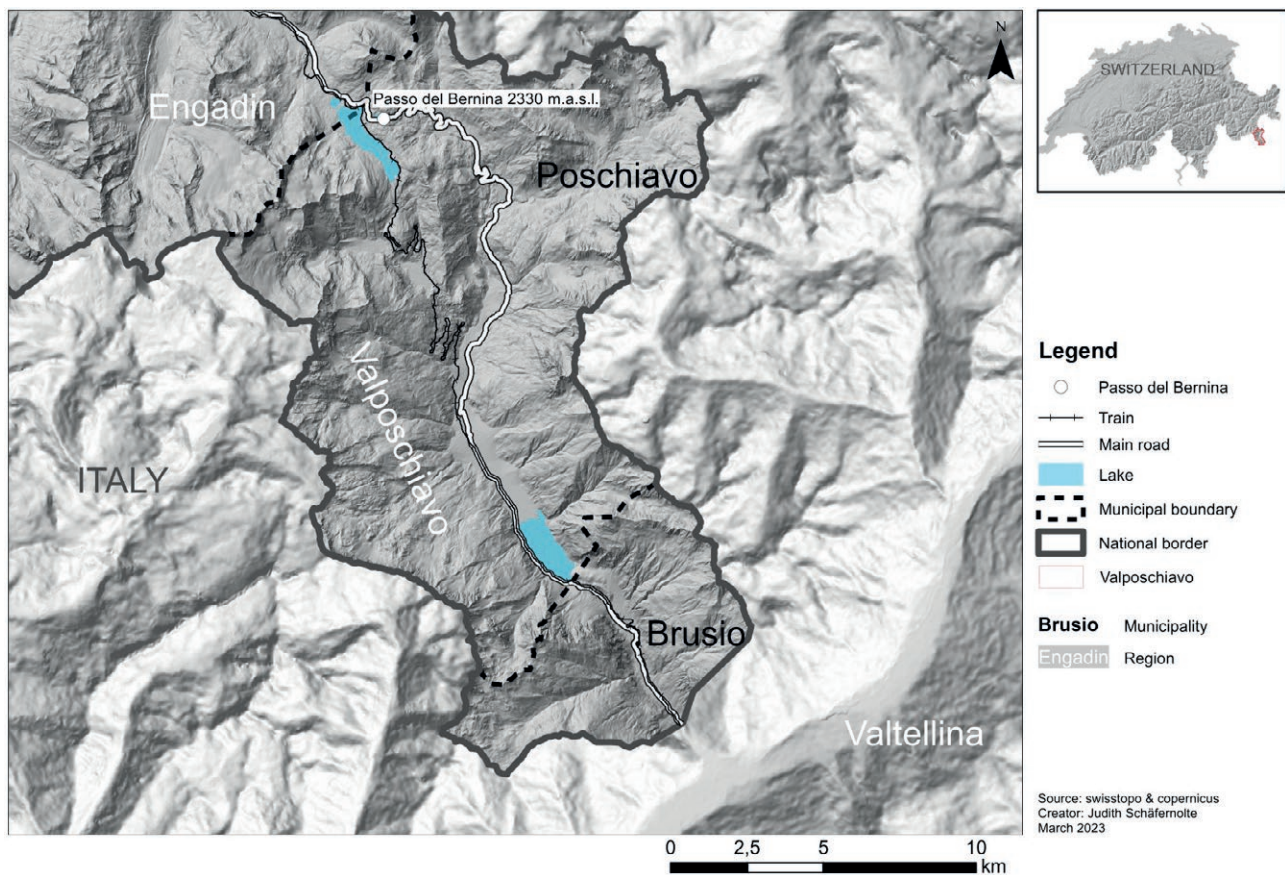
#### 4. MATERIAL AND METHODS

Our research findings were obtained by a study using the framework of values-based modes of production and

consumption in a contemporary food regime, as outlined in the project (<https://foodalternatives.at/>). Within this context, the Valposchiavo case study provided valuable insights in the territorial organization of organic regions (Stotten and Froning, 2023). A brief summary of the materials and methods is presented here while more comprehensive information can be found in the corresponding publication (Stotten and Froning, 2023).

##### 4.1. Case study area

Valposchiavo, located in the southern part of Switzerland in the canton of Grisons and bordering on the Italian region of Lombardy, covers the communities of Poschiavo and Brusio, which form the political district of Regione Bernina (Figure 2). The region's distinct geography and topography, ranging from over 3,000 m.a.s.l. to 553 m.a.s.l. in the south, create microclimates conducive to diverse farming systems (Semadeni *et al.*, 1994; Lentz, 1990). While traditional farming systems, including mixed crop farming with animal husbandry and arable farming, remain integral to the socio-economic well-being (Lentz, 1990), there is an ongoing shift towards organic agriculture (BfS, 2021). The local hydro-power company *Repower*, as well as the company *Rhaetian Train*, which operates the Bernina train line, are major employers in the valley (Regione Bernina, 2016;

**Figure 2.** Map of Valposchiavo, created by Judith Schäfermolte.

Regionalentwicklung OBV, 2015). Moreover, the *Rhaetian Railway*, part of the train line between Thusis in Switzerland and Tirano in Italy, is a UNESCO-certified cultural world heritage site. This status contributes to the local tourism focused on soft tourism options, particularly in the summer season (Stettler, 2021; Semadeni *et al.*, 1994). The cultural identity of the population is heavily influenced by its border location to Italy, by multilingualism (Italian-speaking majority in the valley), the local importance of cultural heritage, and a historically ongoing exchange introducing external perspectives and new ideas into the valley.

#### 4.2. Overview of regional development initiatives

The *100% Valposchiavo*, a territorial development strategy established in the past two decades (Howald, 2015), involves several initiatives and projects led by local actors in agriculture, tourism, the hospitality trade, and regional planning. Its primary objective is to revalorize local agri-food supply chains and enhance the

socio-economic well-being of the community (Luminati, 2021; Pola, 2020). A pivotal milestone was the formation of an Agricultural Compensation Fund Group in 2012, joined by the local hydropower company, the municipalities, and farmers associations (Pola, 2020), jointly dedicated to strengthening the local agri-food sector (Luminati and Rinallo, 2021).

Guided by the ongoing implementation of the regional development project (PRE<sup>1</sup>) since its initiation in 2012 (Beti *et al.*, 2014), this approach has a threefold strategy: First, a marketing concept is employed; second, a B2B marketing platform is established to enhance collaboration along the agri-food supply chains; and, third, an overarching coordination is maintained (Beti

<sup>1</sup> PRE stands for *Projekt für Regionale Entwicklung* (project for regional development), which is a national funding scheme to support Swiss agriculture and rural development in mountain regions. The main aim is to increase the added value in the agricultural sector across several supply chains in a certain region. More information: PRE / Projekt Regionale Entwicklung <[https://www.blw.admin.ch/blw/de/home/instrumente/laendliche-entwicklung-und-strukturverbesserungen/laendliche-entwicklung/was\\_ist\\_ein\\_pre.html](https://www.blw.admin.ch/blw/de/home/instrumente/laendliche-entwicklung-und-strukturverbesserungen/laendliche-entwicklung/was_ist_ein_pre.html)>.

*et al.*, 2014; Luminati and Rinallo, 2021). In 2015 the local tourism board *Turismo Valposchiavo*, in collaboration with agri-food associations, launched the territorial brand *100% Valposchiavo*. This initiative, with various dimensions, focuses on revalorizing regional, traditional, and typical products from Valposchiavo through a certification scheme (Howald, 2015).

In addition to these practical initiatives, local actors affiliated with an educational training and knowledge centre have devised a long-term strategy, called *Smart Valley Bio*, with the objective of certifying the valley as an organic region (Beti *et al.*, 2014). The strategy aims to transition the agricultural sector to organic production while strengthening smart landscape management (Beti *et al.*, 2014). One core aspect of the strategy is the *Community Hypermap*, a participatory digital tool designed to raise awareness about the cultural landscape's value, pointing out specific socio-cultural and historic characteristics (Luminati, 2021).

#### 4.3. Methodological approach

To analyze the various facets of the social innovation process, we employ the theoretical framework TerriSI developed by Vercher (2022). This framework highlights “reconfigurations of social relations” as the primary process of TerriSI. Uncovering these reconfigurations requires a qualitative methodology. Therefore we reanalyzed the comprehensive data obtained for the territorial organization of organic regions.

Initially a document analysis (Bowen, 2009) involved the examination of publicly available video interviews (Bandtel, 2015) produced with local and external experts during the scientific “Forum – Origin, Diversity, and Territories” on the theme “Breakdown and rebound of territorialized food systems”<sup>2</sup>. Transcripts were provided by the forum. As a follow-up step in our research methodology, we undertook a secondary analysis of qualitative data (Heaton, 2008; Ruggiano and Perry, 2019). This involved the analysis of an interview transcript conducted with an expert in the context of another research project (Stettler, 2021). Because of challenges in contacting this individual and an alignment

of research objectives, we opted to reuse the existing qualitative material, emphasizing efficiency in existing resources and research funding (Heaton, 2008). Building on this explorative groundwork, we conducted in-depth, problem-centred interviews (Bogner *et al.*, 2009) with five experts in January 2023, supplemented by one expert interview online. Additionally, brief informal interviews with stakeholders, such as bakers, a pasta producer, restaurants, hotels, and farmers, were documented in protocols (Gray and Jensen, 2022) for subsequent evaluation (see Appendix). All interview transcripts were anonymized by the authors, however, for experts representing public bodies their function was not anonymized.

The data obtained from the video interviews, the existing interview, and self-conducted interviews underwent a descriptive evaluation through qualitative content analysis according to Mayring (2015). The coding process, facilitated by the software MAXQDA, had previously been executed for the initial study in Valposchiavo (Stotten and Froning, 2023). For this article's specific focus on social innovation, we extracted codes from the existing dataset that deal with social innovation aspects. Employing the TerriSI framework with specific focus on the process of “reconfiguration of social relations” (Figure 1), we applied these codes to the framework for further interpretation.

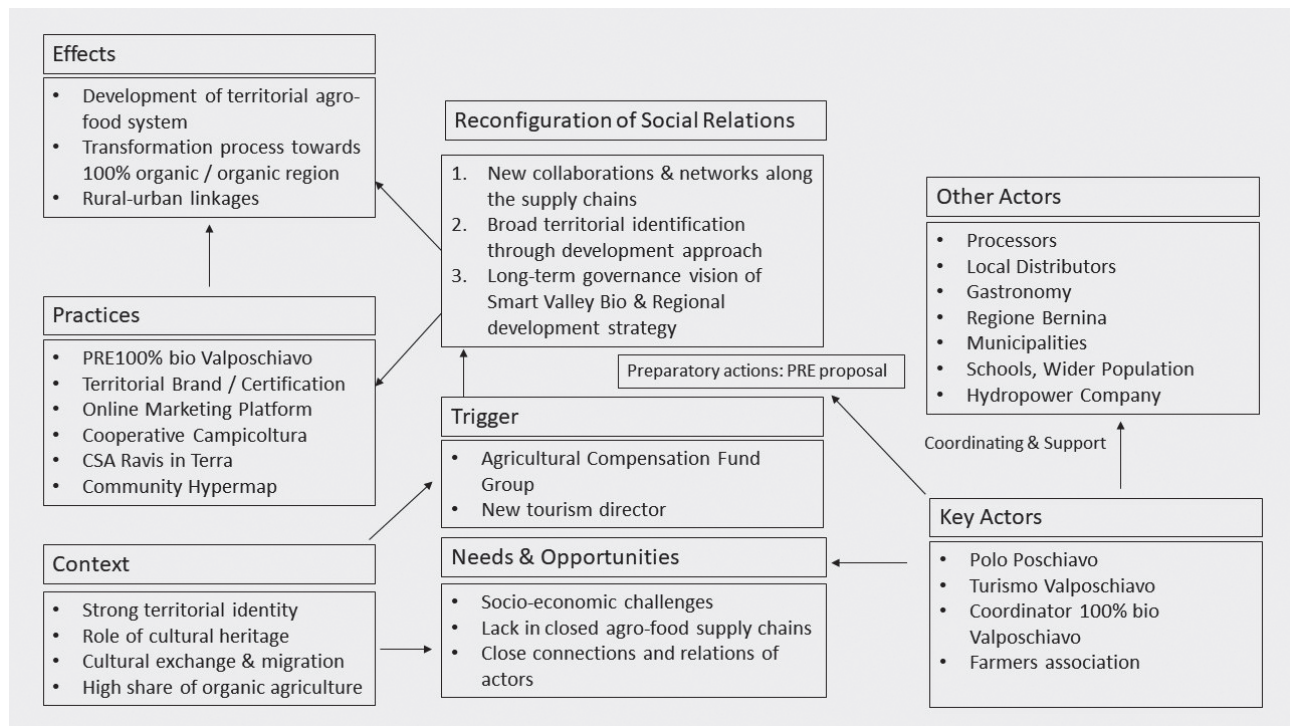
## 5. RESULTS AND DISCUSSION

In the following section we present and discuss our results within the framework of TerriSI as suggested by Vercher (2022) (Section 3, Figure 3). The individual subsections below explore the pivotal elements of the TerriSI framework.

### 5.1. Context, needs & opportunities of the territory

As a peripheral and remote mountain valley, Valposchiavo is facing demographic changes, such as an aging population, youth outmigration by young people, and diverse socio-economic challenges. This, coupled with the general decline in mountain agriculture (MacDonald *et al.*, 2000; Semadeni *et al.*, 1994), highlights the need to rejuvenate the local agri-food system. Despite strong social ties, demographic changes and outmigration has led to decreased farming activities and a lack of local collaborative agri-food supply chains (Semadeni *et al.*, 1994; Howald, 2015). In addition, Valposchiavo possesses unique characteristics that can serve as opportunities for innovative agri-food initiatives. The

<sup>2</sup> The forum Origin, Diversity and Territories is an international scientific platform on the interactions between cultural and biological diversities and the sustainable territorial valorization of products and services whose quality is linked to their origin. The videos were recorded by scientists of the Forum during the event held on 13-15 October 2021, in Valposchiavo Switzerland. More information: <https://origin-for-sustainability.org/en/page-daccueil-en/>. Videos are publicly available online: [https://www.youtube.com/watch?v=runP\\_q9rIYk&list=PLhCbJMRU6mEeEbiZ8vll9f2eFvN2YJvuA&index=8](https://www.youtube.com/watch?v=runP_q9rIYk&list=PLhCbJMRU6mEeEbiZ8vll9f2eFvN2YJvuA&index=8)

**Figure 3.** TerriSI process of the 100% Valposchiavo, following Vercher 2022, created by the authors.

local population's strong ties to the cultural landscape, marked by diverse farming activities and aesthetic landscape patterns (Schirpke *et al.*, 2019), presents potential for territorial innovation.

The rich intercultural exchange in Valposchiavo is evident in traditional agri-food products, influenced by historic relations with neighbouring Valtellina, Italy. Examples include the traditional pasta dish *Pizzocheri*, or the Valposchiavo cheese, showcasing the historic and territorial value attributed to local agri-food products. Another opportunity for territorial innovations lies in Valposchiavo's cultural heritage, exemplified by *UNESCO World Heritage* certification of the Bernina train line in 2008 (Pola, 2020), or the restoration of traditional farming systems on terraced drystone walls.

Ongoing migration from Valposchiavo for work or education, coupled with strong social ties, leads to some individuals returning to the valley (Gracheva *et al.*, 2019; Bausch, 2014). Returnees bring external knowledge, fostering social innovation (Florida, 2002; Bausch, 2014), exemplified by key contributors shaping the development of 100% Valposchiavo. The high organic farming rate, exceeding 90% in 2022, initiated by Bio-Pioneers 40 years ago, presents a significant opportunity for territorial innovation in the agri-food sector (Darnhofer, 2005).

## 5.2. Triggers

In response to identified needs and opportunities, the TerriSI (Figure 3) in Valposchiavo's agri-food system is encapsulated in the initiative known as 100% Valposchiavo as illustrated in Figure 3 and detailed by Stettler and Mayer (2023). The impetus for this innovation can be traced by to a 2004/2005 study on local organic agriculture, which revealed a notably high percentage of organic farms. This study inspired efforts to increase the prevalence of organic farming and products while enhancing added value within the valley. In 2012 the establishment of an Agricultural Compensation Fund Group marked a deliberate move by local actors to strengthen the agri-food sector on a territorial level. Financial support from the local hydropower company played an important role for the later development process.

The collective decision to pursue an integrated and territorial approach involving various actors and sectors, rather than a mere compensation payment, can be understood as a trigger within the TerriSI framework (Figure 3). This initiative, in collaboration with experienced local actors in regional development, evolved into the PRE 100% (bio) Valposchiavo proposal. Simultaneously, a new external tourism director in Valposchiavo



farmers for the further transition to organic production. Together these three actors embody strong social capital that spills over to other actors, such as farmers, processors, distributors, acting as what Böcher (2009) calls regional promoters (also Bosworth *et al.*, 2020). At the same time they wield considerable influence in the valley, actively participating in and shaping numerous development initiatives (Bosworth *et al.*, 2016).

An illustration of renewed collaboration in the local agri-food network is the production of *100% Valposchiavo* Ravioli. Three individual small agri-food businesses have joined forces, using local flour from revived organic grain production by the *Campicoltura* cooperative, local vegetables, and pursuing a nose-to-tail strategy. A range of ravioli variations are produced, certified with the *100% Valposchiavo* brand, and distributed in local stores. Restaurants and hotels participating in the *Charta 100% Valposchiavo* serve these ravioli as one of their local dishes. This product exemplifies how novel agri-food initiatives facilitate renewed collaboration. Another project showcasing community involvement is the local community-supported agriculture (CSA) (see also Figure 4). Initiated by a group of female farmers aiming to collectively produce local, organic vegetables, the CSA involved a group of 20 prosumers. Although currently paused because of organizational issues, it exemplifies Valposchiavo's capacity to initiate not only innovative quality food networks with formal support (PRE, territorial brand) but also civic, more informal networks akin to typical AFNs (Lamine *et al.*, 2018).

In addition to internal networks, robust distribution networks exist for certain local agro-food companies, along with close collaboration at a political level in alpine-wide networks<sup>3</sup>. These elements signify that Valposchiavo's development approach aligns with a neo-endogenous development model (Stotten and Froning, 2023; Ray, 2006).

### 5.5. New attitudes and identification

The local production of typical agri-food products is a reconfiguration and renewal of old practices and knowledge, garnering strong support from actors along the agri-food supply chains and the wider population in alignment with *100% Valposchiavo* approach. Several actors attributed their share to using territorial and local resources to the impact of the territorial brand and the supportive structure provided by the PRE. This reorientation fosters closer relations between producers and

consumers (Renting *et al.*, 2003), facilitated by an online marketing platform (B2B) connecting local agri-food actors, a crucial professionalization aspect in the light of AFNs (Vercher, 2022). Moreover, the long-standing emphasis on organic farming, now propelled by the PRE, aligns with an integrated and holistic development (Luttikholt, 2007; Darnhofer, 2005). Tourism in Valposchiavo deliberately opted against large tourist infrastructure, redirecting their focus to agri-food products, culinary experiences, and soft tourism activities, reflecting an attitudinal shift within the TerriSI framework (Vercher, 2022). Lastly, the preservation of cultural heritage plays a crucial role, as Valposchiavo actors promote traditional products and renew old farming techniques within the SI process.

### 5.6. New coordination and governance structures

In the context of *100% Valposchiavo*, local actors have developed coordination mechanisms and introduced new governance structures. First, the PRE is coordinated by an association committed to ensuring the project's sustainability and long-term success. The president of the political unit *Regione Bernina*, and responsible for general regional development in Valposchiavo, plays a dual role, facilitating political acceptance and backing the wider territorial development approach (Böcher, 2009; Bosworth *et al.*, 2016). This linkage to governance levels promotes the transformation towards organic farming and integrates organic values at the governance level. Second, the innovative agri-food system is embedded in a broader territorial strategy for rural development aimed at certifying Valposchiavo as an organic region or *Smart Valley Bio*. Starting from a long-term vision, actors around the *educational training centre* have initiated this approach to reach 100% organic farming and integrate various initiatives and projects, including the territorial brand, into a comprehensive strategy for the entire valley. Instead of a top-down implementation, the wider population actively participates through the so-called *Community Hypermap*. Therein, school kids and individuals digitally archive their territorial perspectives, ideas, and wishes. This tool, along with the online marketing platform (B2B), exemplifies the supportive role of ICT in social innovation processes (Barlagne *et al.*, 2021). Moreover, a diverse group of local actors recently launched *Perspective 2040*, a regional development strategy that integrates projects, initiatives, and networks. This includes a monitoring scheme to provide a tangible basis for certifying Valposchiavo as an organic region in the future.

<sup>3</sup> For instance: CIPRA / International Commission for the Protection of the Alps; EUSALP / EU Strategy for the Alpine Region

## 6. SYNTHESIS AND CONCLUSION

In this contribution, we explored how the territorial agri-food system in Valposchiavo creates territorial social innovations (Vercher, 2022). Our findings reveal that the development approach of *100% Valposchiavo* can indeed be regarded as a territorial agri-food system (Lamine *et al.*, 2018). Rooted in a spatial and territorial context, it emphasizes local identity and culture, highlighting traditional agri-food products and the origin of resources from the valley. This spatial importance, characterized by specific territorial attributes, is consistently expressed, notably through the territorial brand. In line with Lamine *et al.*, (2018), the territorial agri-food system, rather than a singular AFN, has spurred various initiatives on both practical and governance levels. Beyond the formal certification scheme for the territorial brand, initiatives have emerged, such as the CSA initiative, the grain cooperative, and the predominantly organic place-based farming systems. In addition, the integration of activities beyond farming, including landscape conservation, tourism and education, is evident in the territorial agri-food system of *100% Valposchiavo* (see also Lamine *et al.*, 2012). The soft tourism model and the *Community Hypermap* exemplify this integration. The characteristics of *100% Valposchiavo* as a territorial agri-food system also indicate territorial social innovations in line with the TerriSI framework proposed by Vercher (2022).

The foundational elements crucial to this endeavour are the unique territorial context, the diverse constellation of the actors, and the identified needs and opportunities (Figure 4). The aforementioned key actors have adeptly leveraged the territorial context, aligning it with existing needs and opportunities. The realization of this synergy, achieved through collective and participatory efforts to revalorize existing resources within the territory, forms the core of TerriSI's social relations reconfiguration (Figure 3, Vercher, 2022).

Our exploration has identified three drivers of the reconfiguration of social relations essential to the TerriSI framework. First, diverse actors have formed novel internal as well as external networks and collaborations along the agri-food supply chains. This collaborative effort across different backgrounds (farming, tourism, politics) is a crucial aspect of social innovation processes in general (Bock, 2016; Neumeier, 2012). Moreover, the current development approaches of neo-endogenous development (Ray, 2001) reinforce robust internal and external networks in Valposchiavo for sustainable rural development. In addition to local initiation, external knowledge and expertise, particularly from (re)-

migrated key actors, has introduced creative ideas and perspectives. Second, these networks converge on collective attitudes and values, emphasizing principles like organic agriculture and the significance of cultural heritage. This aspect is not only crucial for the social innovation process (Bock, 2016; Vercher, 2022) but also for territorial agri-food systems (Lamine *et al.*, 2018). Third, new coordination mechanisms and governance instruments have been established by embedding the territorial agri-food system within a wider long-term territorial development strategy aimed at achieving certification as an organic region. This long-term strategy and transformative moment of *100% Valposchiavo* aligns with the needs and ultimate development goals inherent in social innovation processes (Bock, 2016). While specific numerical metrics are unavailable, indicators such as an improved socio-economic situation in Valposchiavo, reflected in higher hotel occupation rates and increased external awareness as well as local support of Valposchiavo's development approach, confirm what Bock (2016) summarizes as "beneficial outcomes" of social innovation processes (p. 4). In this context the territorial agri-food system of Valposchiavo represents alternative pathways compared to the prevailing corporate food governance with its disembedding tendencies (Jakobsen, 2021; Erman *et al.*, 2018).

To conclude, this empirical study reveals how territorial agri-food systems, exemplified by *100% Valposchiavo*, represent a manifestation of territorial social innovation. While these examples demonstrate the concept well, the formalization of governance mechanisms – an important aspect of the reconfiguration process within the TerriSI framework – is still ongoing. These territorial agri-food systems are not yet collectively organized. However, since social innovations inherently involve open learning processes (Bock, 2016), the unclear governance structures and the formation of an organic region should be seen as necessary opportunities for sustainable transformation in the future (Vercher, 2022). While this article has focused on the process of TerriSI as a whole, further research could explore in more detail the reconfiguration processes of social relations to better understand their potential for the social innovation. Research is also needed on how social value, such as identification through local consumption, is created within the community on a more abstract level. We looked at territorial agri-food systems through the perspective of social innovation, with an emphasis on social relations. However, future contributions could explore into the economic aspects to shed light on the product innovations of *100% Valposchiavo*.

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## AUTHOR CONTRIBUTIONS

Conceptualization, P.F., R.S.; Methodology, P.F., R.S.; Formal Analysis, P.F.; Investigation, P.F., R.S.; Writing – Original Draft, P.F.; Writing – Review & Editing, R.S., P.F.; Visualization, P.F.; Project administration, R.S.; Funding Acquisition, R.S.; Supervision, R.S.

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**Appendix.** List of interview participants with explication of functions and type of interview.

| Abbr. | Function                                                                              | Type of interview                              |
|-------|---------------------------------------------------------------------------------------|------------------------------------------------|
| E1    | PRE 100% ( <i>bio</i> ) <i>Valposchiavo</i> , representative                          | Secondary video interview, transcript          |
| E1b   | PRE 100% ( <i>bio</i> ) <i>Valposchiavo</i> , representative                          | Problem-centred interview, transcript          |
| E2    | Municipality of Poschiavo, representative                                             | Secondary video interview, transcript          |
| E3    | Educational training centre, representative                                           | Secondary video interview, transcript          |
| E3b   | Educational training centre, representative                                           | Problem-centred interview, (online) transcript |
| E4    | EM Lyon Business School, professor researched 100% <i>Valposchiavo</i> for many years | Secondary video interview, transcript          |
| E5    | Dairy cooperative, representative                                                     | Secondary video interview, transcript          |
| E6    | Community supported agriculture, founder initiator and farmer                         | Secondary video interview, transcript          |
| E6b   | Community supported agriculture, founder initiator and farmer                         | Problem-centred interview, transcript          |
| E7    | Organic herb farm, founder                                                            | Secondary video interview, transcript          |
| E7b   | Organic herb farm, founder                                                            | Problem-centred interview, transcript          |
| E8    | 100% <i>Valposchiavo Ravioli</i> production, co-founder                               | Secondary video interview, transcript          |
| E9    | Landscape restoration project, founder                                                | Secondary video interview, transcript          |
| E10   | Municipal forestry company, representative                                            | Secondary video interview, transcript          |
| E11   | IT company, co-founder                                                                | Secondary video interview, transcript          |
| E12   | <i>Repower</i> energy, representative                                                 | Secondary video interview, transcript          |
| E13   | Fruit farmer                                                                          | Secondary video interview, transcript          |
| E13b  | Fruit farmer                                                                          | Informal interview, protocol                   |
| E14   | Project development agency, founder                                                   | Transcript offered by Stettler 2021            |
| E15   | <i>Valposchiavo Turismo</i> , representative                                          | Problem-centred interview, transcript          |
| E16   | School Poschiavo, teacher,                                                            | Problem-centred interview, transcript          |
| E17   | Hotel owner                                                                           | Informal interview, protocol                   |
| E18   | Butcher                                                                               | Informal interview, protocol                   |