



SHERPA
Rural Science-Society-Policy
Interfaces

MAP Position Paper

TOWARDS SUSTAINABLE &
RESILIENT VALUE CHAINS



SHERPA has received funding from the European Union's Horizon 2020
Research and Innovation Programme under Grant Agreement No. 862448.

Authors

University of Pisa | Sabrina Arcuri and Sabrina Tomasi

Contributors

All the members of the MAP Tuscany, MAP Montagna Toscana-MOVING, and MAP Casentino

Citation: Arcuri, S., Tomasi, S. (2022) MAP Position Paper (Tuscany, Italy) - Towards sustainable and resilient value chains.

DOI: 10.5281/zenodo.7351156

Paper finalised in November 2022

Find out more about the Multi-Actor Platform in Tuscany, Italy!

<https://rural-interfaces.eu/maps/italy-tuscany/>

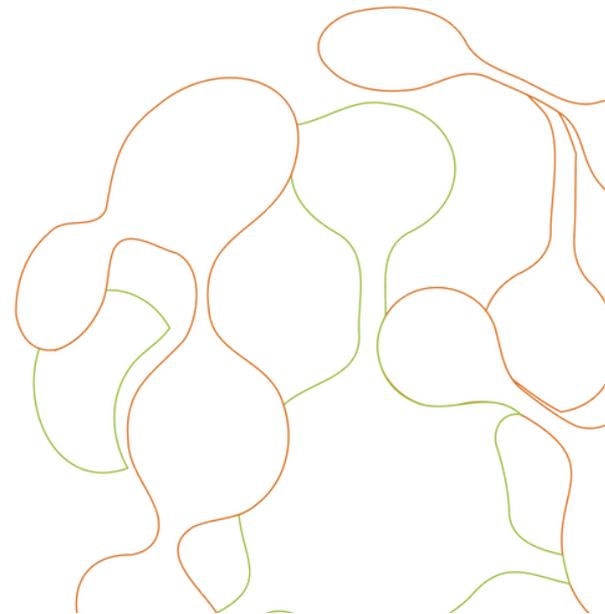
Find out more about the Montagna Toscana-MOVING Multi-Actor Platform in Italy!

<https://rural-interfaces.eu/maps/italy-montagna-toscana/>

Find out more about the Multi-Actor Platform Casentino in Italy!

<https://rural-interfaces.eu/maps/italy-casentino/>

Disclaimer: The content of the document does not reflect the official opinion of the European Union. Responsibility for the information and views expressed therein lies entirely with the author(s).



Summary and key messages

This position paper summarises the results from the work carried out in the third MAP (Multi-Actor Platform) Cycle by three MAPs in Tuscany (Italy). The reason for selecting 'Sustainable value chains' as a topic in all three MAPs is the strong interest in, and/or long experience of, this topic by the MAPs members. This position paper is based on desk-based research carried out by the MAPs' monitor and facilitator, as well as on stakeholder engagement activities carried out in the MAPs.

Consistent with the themes pointed out by Bognar and Schwartz (2022), the needs identified – either specific or generic – range from creating job opportunities in mountain areas from sustainable value chains, especially if these are integrated with other activities in the area and have a recognised cultural, social and environmental value, to education and training that primarily consider available human capital and local knowledge, and stressing the importance of wider community goals pursued through value chain and territorial initiatives.

Multiple initiatives are ongoing in the MAPs' regions that may adapt to respond to the specific contexts, actors and goals across the different territories. Their sustainability in the long-term, the success in achieving their goals and capacity to scale-up and scale-out will also, ultimately depend on the adequate support from all level institutions, from the regional to the EU level, including research institutions.

To this purpose, a set of recommendations for future research and policy have been developed, which will need further discussion and refinement, and are stated as such:

- **Provide long-term funding:** project-based funding constraints do not allow to go beyond short-term goals and limit the latter to the requirements of calls for funding rather than the other way around.
- **Increase funding flexibility** to address – and adapt to – a variety of governance instruments, and contexts or, when there is no room for flexibility, provide a fix for mitigating the effects of exclusion.
- In calls for funding and more in general, **promote and incentivise a culture of collaboration**, rather than competition, between different municipalities, departments and/or initiatives: competition could, especially in fragile areas and smaller municipalities, contribute to a further exacerbation of disparities.
- **Streamline administrative procedures for accessing funding and other services and provide guide and support when this is not possible:** smaller rural municipalities have hardly access to the same competencies and human resources needed to address some administrative tasks and paperwork.
- **Provide incentives for the continuous training and education of rural operators** (e.g. businesses, public officials, teachers, healthcare operators, etc): investing in the provision of advanced services (e.g. e-health, online platforms) is wasted if targeted users are not put in the conditions to fully exploit their potential.
- **Develop and promote the use of data on the actual needs and costs of service provision in rural areas**, in collaboration with research institutes, with a view to the future development of specific criteria for access to basic services in rural areas.
- **Design measures for facilitating access to funding** to territorial entities operating at the rural-urban interface, **to incentivise collaboration** between urban and rural areas and the adoption of cross-boundary, city-region approaches in future initiatives.
- **Set the ground for specific initiatives for land and natural heritage management:** promote the creation of municipal and inter-municipal land banks and inventories of abandoned buildings

(e.g. drying stoned buildings and mills) and provide incentives for restoration and productive reuse. This could create new economic opportunities by strengthening and expanding the chestnut flour value chain in mountain areas.

- **Increase data collection and availability in rural areas:** governance instruments for sustainable food systems are often based in territorial entities with blurred boundaries, which do not correspond to any government level or territorial unit (e.g. the NUTS level). Data for monitoring their effectiveness are of the essence.
- **Map abandoned/vacant land:** especially in remote areas, land abandonment processes are so severe that the phenomenon goes almost undocumented, resulting in the lack of data on the land available for restoration, reuse, and for renting to potential newcomers. For instance: mapping abandoned chestnut groves – extension, varieties, etc. – could increase the land potentially available and increase of chestnut flour production.
- **Research on the nutraceutical value and organoleptic characteristics of traditional products** (e.g. PAT, local varieties), which could provide a further element of differentiation from similar products. Better knowledge of local varieties could support producers in the chestnut flour value chain in the assessment of the flour quality and increase their credibility.
- Provide incentives for the setting up collaborative research projects (university-farmers) could foster the farmers' adoption of new technologies, and the experimentation of complementary and alternative crops (participation in alternative value chains).
- **Engage with – and broaden – the networks already in place in the areas under investigation:** it is necessary to support existing initiatives and invest in their continuity beyond EU projects, avoiding overlaps and waste of resources.
- **Support policymakers in developing data on the needs and costs of service provision in rural areas,** with a view to the future development of specific criteria for access to basic services in rural areas. Progress on the development and operationalisation of a right-based approach to basic access to services, beyond performance criteria, is necessary to ensure no one is left behind.

1. Introduction

SHERPA (Sustainable Hub to Engage into Rural Policies with Actors) is a four-year H2020 project (2019-2023) with 17 partners. The project aims at gathering knowledge that contributes to the formulation of recommendations for future policies relevant to EU rural areas, and it does so by creating a science-society-policy interface which provides a hub for knowledge and policy. 41 Multi-Actor Platforms (MAPs) form the science-society-policy interface in SHERPA. The MAPs are setup and run in 20 European countries, plus one at the EU-level. Each MAP is composed by actors from the spheres of science, society (civil society and business) and policy (public officials and politicians).

This position paper summarises the work carried out in the third MAP cycle in the three MAPs run in Tuscany, Italy. It starts with an overview of several sub-topics related to sustainable value chains, in order to clarify the meaning of the different concepts as identified in scientific literature, and position the initiatives identified under such umbrella concepts. The paper continues by illustrating in detail the case of the MAP Montagna Toscana, the functioning of which is linked to a successful local synergy between SHERPA and sister project MOVING H2020. The work within the MAP Montagna Toscana allowed to zoom in a specific value chain (VC) in a mountain marginal area: the chestnut VC in Alta Versilia (Northern Tuscany). This part of the work is broken down in specific sub-themes selected from Bognar and Schwartz (2022).

Chapter 4 of the position paper encompasses the MAPs needs, existing actions and initiatives, and recommendations for future research and policy. The needs section draws mostly from the MAP Montagna Toscana, as it involved actors from a specific value chain, but with a focus on the PAT – Traditional Agri-food products of Tuscany, recognised by the Ministry of Agriculture. The section on existing interventions and actions follows, providing an overview of available governance instruments, relative legislation, and specific cases in place in, or relevant for, local rural contexts.

2. Current situation based on background research and evidence

Multiple initiatives have been implemented in Tuscany in recent years, either bottom-up or top-down, meant for promoting the development of territorial food systems and local value chains. Many of them can be related to distinct bodies of scientific literature, e.g. under the thematic domains of quality food networks and Geographical indicators (GIs), rural and food districts, alternative food networks (AFNs), and (sustainable) value chains.

Alternative food networks (AFNs) are generally referred to networks aimed at linking producers and consumers in a direct relationship and/or at a local scale, and include diverse initiatives, such as farmers' markets, Community Supported Agriculture (CSA), box schemes, Solidarity Purchasing Groups, farm shops, making it difficult to provide a clear definition (Lamine et al., 2019; Tregear, 2011; Brunori et al., 2008). Besides the critique to the industrialised, mainstream agri-food system, a focus on the role of consumers in the governance of local food systems have led some authors to propose the concept of Civic Food Systems (Renting et al., 2012).

Initiatives falling under the quality food networks are often linked to local brands, and origin products, e.g. GIs (Tregear et al., 2007). These involve producers' organisations, cooperatives, retailers, and other supply chain actors in developing marketing and distribution systems value chains based on specific quality products (Belletti and Marescotti, 2007). Having a strong link with the territory of origin, and with the specificity of the resources used in the production process, including local culture and traditions, origin products have a strong potential as a lever of rural development, provided that at the various stages, from actor mobilisation to marketing, the actors operate within a coordinated local strategy (Belletti and Marescotti, 2007).

The term 'rural district' has emerged since the 1990s in the Italian agricultural economic literature, borrowing from Becattini's concept of 'industrial district'. As the term 'industrial district' emphasises the relationship between clusters of small businesses and the communities to which they belong, so does the concept of rural district, which broadens it further to include networks of enterprises, the civil society and the natural environment (Brunori and Rossi, 2007). The specificity of the rural district is related "to the particular relationship between local actors and the environment that is embodied in their 'contextual knowledge', which lies at the foundations of practices that produce and reproduce cultural landscapes, typical food, and rural heritage" (Brunori and Rossi, 2007, 186). Promoting agricultural entrepreneurship, multifunctionality, and all other activities which contribute to the overall territorial image – tourism and craft; natural resources; art, archeology and architecture, and culture more in general – are the targeted aims of rural districts (Belletti and Marescotti, 2003). The academic success of the concept of rural and quality agri-food districts has contributed to its experimentation in practice (Belletti and Marescotti, 2003; Pacciani, 2003).

The Horizon 2020 MOVING Project Conceptual Framework (Moretti *et al.*, 2021) provides some definitions of the concept of Value Chain (VC), considered the *meso* level perspective between the individual firms and the *macro* level (the economic system). As the VC concept is a complex one, Moretti *et al.* (2021) refer to two definitions. The first definition takes a managerial point of view and refers to the "supply chain": the VC is therefore "the network of organisations that are involved, through upstream and downstream linkages, in the different processes and activities that produce value in the form of products and services in the hands of the ultimate consumer" (Christopher & Peck, 2004). The second definition, by the European Commission (2018), takes a development approach and is described as the "series of steps from the initial production to the final consumption and the actors involved at each stage. The activities/operations of these agents are geographically localised. They identify products, financial and information flows between actors and areas" (European Commission, 2018). According to MOVING conceptual framework (Moretti *et al.*, 2021), the key elements in the VC are the actors involved and their activities, the set of relationships and links in place among them and the consequent deriving network, aimed at producing value from and for the final consumer. Consequently, a key element in the VCs is the social practice underneath these relationships. When analysing the sustainability of a value chain, two elements need to be considered together: vulnerability (consisting of: 1) exposure to a hazard, 2) susceptibility to it, 3) adaptive capacity to the shock or the stress generated by the hazard), and resilience (self-organisation, learning and adaptation in response to changing conditions). All these elements need to be considered under the socio-ecological system's concept (McGinnis & Ostrom, 2014), based on the interaction (regulated by norms and rules) between human systems and ecological systems. The latter provide services for the first, and generate outcomes, such as: economic value, as well as ecosystem services, landscape, wellbeing, livelihoods, cultural value (Ostrom, 1990; 2009; McGinnis & Ostrom, 2014) (Figure 1).

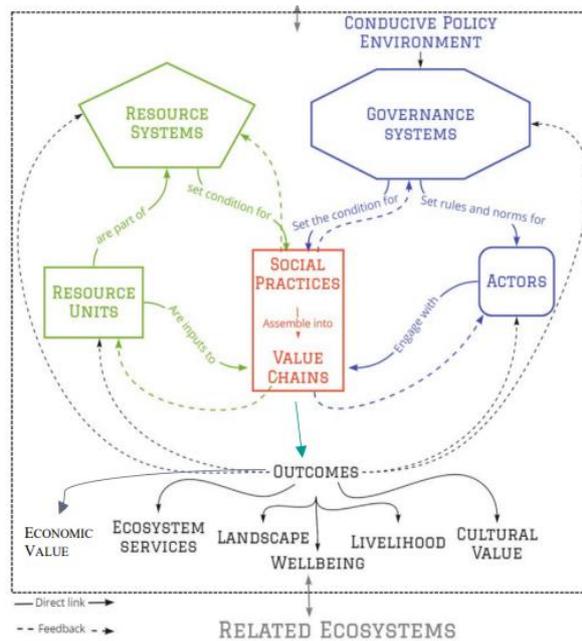


Figure 1 - The MOVING conceptual framework.

Source: Moretti *et al.* (2021)

Focus on the MAP Montagna Toscana and the chestnut VC in Alta Versilia

The MAP Montagna Toscana, activated during the third SHERPA cycle, focuses on the chestnut flour VC and overlaps with the MAP from the Northern Apennines of the MOVING H2020 project. This MAP is located in

between the Apuan Alps and the Northern Apennines¹. The area has a high level of vulnerability caused by land abandonment and climate change. Local inhabitants are confronted with the typical difficulties of mountainous region, above all the lack of essential services and infrastructures. The region is, however, close to the marine area of Versilia and at not-too-long distance from the main service centres (up to 20 minutes by car). Such a localisation has so far implied that Alta Versilia is not included in the categorisation of inner areas, according to the definition of inner areas from the National Strategy for Inner Areas (Barca *et al.*, 2014). Far from being just a matter of categorisation, the inclusion/exclusion from the regional map of inner areas has so far influenced the distribution of dedicated public incentives and funding to support essential services provision and new opportunities for small entrepreneurs and inhabitants in the area².

The municipalities of Seravezza and Stazzema are, among the others, especially suited to chestnut production. Chestnut production and/or transformation in this area are mainly carried out by family small farms, and the VC is quite short. The actors involved in the VC are usually about 40 people, 5% of which are young women. In the processing stage (the “*metato*” and at the “mill”) the activity is mainly run by men (95%), whereas a good gender balance characterises the other stages. The chestnut groves, the *metati* and the mills are usually ancient and are inherited by the current small farmers from their parents and grandparents or have been made available by acquaintances/inhabitants of the area that used to do the same job in the past. Together with the mill and *metato*, local inhabitants transmitted the traditional know-how and related knowledge. Box 1 provides a detailed description of the chestnut VC in the MAP region.

Box 1 - The chestnut flour VC in Alta Versilia

Stage 0. Preliminary and continuous activities

Continuous cleaning of the ground is crucial because the producers believe that a well-maintained ground is a key factor for the upcoming stages. A preliminary activity is also the collection of chestnut wood for the *metato*. Chestnut pruning is also pivotal. It requires skills and know-how and ability in terms of tree climbing. The majority of the interviewees prefer more sustainable practices that avoid the complete cut of the branches, to preserve the tree's health.

1. Chestnut collection

Collection of chestnut fruits is traditionally done manually and usually starts in October. In Alta Versilia, chestnut flour is made with a mix of different varieties of chestnuts that also have different ripening times. For this reason, the collecting phase is iterative and repeated a few times. In this stage, there is a preliminary sorting and selection of the best fruits. Some of the interviewees underlined that women are faster and more precise than men when it comes to this activity.

2. The drying stage

It lasts about 40 days. This operation is done in small buildings known as *metati*. The *metato* is a two-floor stoned building. The ground floor contains the fire source (usually a four-year dried chestnut firewood), while on the upper side raw chestnuts are piled-up and receive heat and smoke from below. The smoke gives a particular taste to the final product. The drying practice requires certain skills and experience, especially with the lack of new technologies. The person responsible for the *metato* and the drying process must be able to control the appropriate amount of fire and ensure the best dispersion of humidity to ensure an ideal dried fruit. A well-dried fruit facilitates the peeling and grinding practices. As both practices are done manually, another selection round of the best fruits precedes these practices. This further selection is very important as a bad chestnut influences the flour flavour, as well as good management of the fire, as also the smoke influences the final product.

¹ From an administrative perspective, the MAP covers the area of the Municipalities' Union of Alta Versilia, namely Camaione, Massarosa, Seravezza and Stazzema, in the province of Lucca.

² The data refer to 2020, when only the municipality of Stazzema was included in the list (Category D – Intermediate). For the new programming period 2021-2027, Tuscany Region recently updated the map of the regional inner areas (2022a).

3. The grinding stage

In the area, few functional mills available receive the dried and peeled chestnut to be ground into flour. Similarly, for this stage, experience and specific skills are needed by the operators. In addition to controlling the dried chestnut conservation conditions (mainly the temperature and humidity of the mill building), millers must take good care of the millstone's sharpness and cleanliness while grinding.

4. Selling the chestnut flour

Most of the interviewees affirmed that their flour is sold even before it is produced, as the demand is higher than supply. The farmers can count on loyal customers with whom they entertain trust relationships and whom they reach through word of mouth. The medium price of their chestnut flour is between 13-15 EUR/Kg. They mainly sell to non-local customers (especially from other Italian regions or other Tuscan areas). Being each VC stage conducted manually, the price is made considering the time, the know-how implicated, and the human effort, in addition to the high quality of the chestnut flour itself, which is also related to the fact that the production is traditionally made, and, for this reason, each step is highly controlled (e.g. the repeated chestnut selection phases, by hand). The production is almost totally organic, even though the producers do not have official certifications. In terms of packaging, some of the farmers made sustainable choices, by using plastic-free materials. Moreover, those of them who are members of the Bioeroi Association (see Table 3) add to their label the Bioeroi label, which underlines the origin and high quality of the Alta Versilia chestnut flour.

3. Position of the Multi-Actor Platforms

During the third MAP cycle, different streams of work were carried out in the MAPs (Annex 1). The present Position paper provides a summary and draws from both desk-based research and stakeholder engagement activities – mainly interviews and workshops – to identify the needs emerging from the MAPs, the initiatives and actions in place in the MAPs regions, and main recommendations for research and policy. In particular, the chestnut flour VC has been analysed in the MAP Montagna Toscana, according to the MOVING conceptual framework based on Moretti *et al.* (2021). The data gathered allowed the researchers to collect useful insights for the present position paper, as many contributions referred to the sustainability and resilience of the considered VC. The interaction with the VC actors and connected stakeholders allowed highlighting needs related to the sustainability, resilience, and adaptive capacity of the VC. These are illustrated in the section 4.1., highlighting several sub-themes identified as relevant for rural areas by Bognar and Schwartz's (2022).

3.1. Identified needs

Theme no.1: strengthening the role of producers in the VC

Need for building on sustainable VC to create job opportunities in mountain areas, especially if these are integrated – or have the potential to integrate with – other activities in the area and have a recognised cultural, social and environmental value

The closeness of the Alta Versilia mountainous area to the seaside tourism destination of Versilia makes the latter an attraction especially for local young workers. These workers prefer seasonal employment in the hospitality sector rather than working in the forestry sector during the autumn and winter season. Considering the high risk of depopulation and economic stagnation, the MAP expressed **the need to retain young people and to create employment opportunities for them, in order for them to live and work in the area**. Moreover, the area is mainly suited to marble quarries exploitation: on the one hand, this represents an employment opportunity for the inhabitants; on the other hand, many of the locals perceive this economic activity as having a negative impact on the mountainous environment and do not feel that this could be a sustainable solution for the future of the area. There is a need to find a dialogue between these dichotomic visions: **the chestnut VC, even if only partially, is perceived as having a potential**

role in revitalising and giving a sustainable chance to the mountain region. For instance, **chestnut groves provide communities with a range of ecosystem services**, such as CO2 sequestration, soil preservation, water flow, mushroom, and comestible fruits provision, etc.

In addition, there is a strong socio-cultural value associated with this activity: the chestnut VC had significant cultural and historic importance for the area. Nowadays, it still owns a well-preserved **cultural heritage**, which revealed decisive in terms of **social empowerment**, through cooperation and trust among actors and preserved traditional knowledge. In addition, some of the farmers are included in the Regional List of seeds savers (*coltivatori custodi*) for chestnut, as they support the **preservation of the genetic resources from different chestnut varieties** at risk of disappearance and contribute to maintain the knowledge attached to such varieties. **The revival of abandoned chestnut groves (and recovery of abandoned assets) may create employment opportunities** and increase chestnut yield that implies higher flour production, forest ecosystem preservation, well-maintained mountainous landscape. The chestnut VC could have a role also for the rescue of the abandoned marble caves, through the establishment of new chestnut groves. This solution could also prevent landslides and hydrogeological risks. Finally, the knowledge and consolidated tradition in the use of the chestnut tree can promote **forest management as a tool for climate change mitigation**.

Need for increasing chestnut producers' market power through participation in alternative supply chain models

The chestnut flour VC is linked with other VCs: the most immediate and important is the chestnut honey VC. Honey production in general and chestnut honey have been practiced by locals for centuries. The two VCs show a good example of symbiosis, beekeepers find refuge in the chestnut forests during the transhumance from the seaside to ensure the survival of their beehives. The beehives installed within the chestnut groves dramatically increase pollination, therefore ensuring better yield, while the chestnut provides the honey with some organoleptic characteristics like all other forest tree species. Moreover, this symbiotic relationship stimulates the increase of biodiversity.

Chestnut flour production activity does not usually represent a full-time job. This means that during the year chestnut farmers are involved in other working activities. Being a seasonal activity, it has a specific timing and being a small production, mainly family-led, it does not guarantee economic sustainability to the family for the whole year. For this reason, the actors in the VC associate this activity with others, mainly related to multifunctional agriculture. For instance, some producers include **hospitality and social farming** in their offer (e.g.: agrotourism and didactic farms), or complement their income through **other agricultural productions, livestock breeding and sheep farming**. Others are experimenting with beer production by cultivating high-altitude **hop**. A cooperative company operating in the area associates agricultural productions (including chestnuts) with the provision of **agroforestry services**, such as renovating mountain paths, pruning chestnut trees, tree felling, restoration of dry-stone walls. In some cases, interviewees affirmed that they perceive chestnut production as a hobby, as they work mainly in other fields. Some proposals for **new potential circular economy activities** came up during the interviews: e.g. **bio-fuel production** deriving from the wood waste from the mill processes.

Need for tailored services of education and training, primarily considering available human capital and local knowledge

The chestnut VC is characterised by traditional and manual activities. A noteworthy element is that the knowledge required to conduct the practices at the harvesting and processing level is mainly learnt by transferring it from one generation to another without taking part in any kind of course. Most of the actors took knowledge from the elders, either their parents or grandparents or by volunteering for training at other mills and drying buildings. When it comes to pruning the trees, many of the interviewees referred to one of the producers in the area who has the required expertise: **peer and collective learning are very**

common in this area. The producers informally organise themselves to meet up and exchange technical knowledge. Moreover, they take as a reference point the Bioeroi Association (see Table 3), which aims at creating a local network for the empowerment of social ties and for creating an active community that also cares about territorial protection. Through word of mouth, **Bioeroi organised themselves in terms of education and training.**

Need for enhancing resilience and adaptability through responsive capacities, stressing the importance of wider community goals pursued through value chain and territorial initiatives

Some of the interviewees affirmed that their commitment to the chestnut VC is also related to the **willingness to preserve and reactivate an economic activity at risk of disappearance**, which also has a cultural value for the area. This VC can be described as resilient. Even though it cannot represent a full-time job for the farmers involved, for the majority of them, it allows pursuing relevant and beneficial community goals, namely:

- (i) It allows **strengthening social ties at the local level**: some VC stages are perceived as socially relevant, as collective moments to spend a happy time together. As an example, the collection of wood or of chestnuts is usually made by groups of people (friends, family) who during the day eat together in the forest and spend quality time surrounded by nature. When the *metato* is working, the producers who bring chestnut for drying usually also bring some food, as they consider the *metato* a meeting point for partying and staying together while waiting. The same occurs at grinding stage, at the mill. The feelings associated with these stages are positive: happiness and friendship, the pleasure of being together are among the most mentioned aspects.
- (ii) It represents a way for **environmental and biodiversity preservation** through cleaning, maintenance and restoration of the forest and the related paths, and an opportunity to give new life to ancient buildings taking advantage of the funding from the Union of Municipalities.
- (iii) It is a way to allow the **conservation and appreciation of intangible cultural heritage**, thanks to trans-generational knowledge exchange.
- (iv) It facilitates the **establishment of a collaborative environment among farmers**. All of the interviewees mentioned the total lack of competition among farmers. On the contrary, the majority of the interviewees stressed the high level of collaboration in the several VC stages e.g. peer learning to reciprocally transfer knowledge and know-how; reciprocal help and support. Here are some examples: when a producer is no longer able to absorb the demand for chestnut flour (as its flour is already taken), they ask other producers; the *metataro* receives an amount of chestnuts from the farmers in exchange for the drying service; in case more than one mill operate in the area, the farmers may decide to bring their chestnuts to be ground to the different mills, to provide economic support to all of them.
- (v) There is a **potential for experimentation and integration of innovative alternatives and complementary sustainable VCs**.

Theme no.2: trust between VC stakeholders

While Garfagnana can count on the aggregative role of a dedicated association of chestnut producers (*Associazione Castanicoltori della Garfagnana*) working as a consortium (e.g. it promoted the recognition process towards PDO certification), and Lunigiana producers are involved in the Rural District of Lunigiana, the area of Alta Versilia is less structured. Local producers there are mainly relying on the strength of informal social ties and on the aggregative role of a the Bioeroi association. Both the association and the relationships of trust occurring in the area are important in terms of horizontal coordination. In addition, in March 2022, the Slow Food Chestnut Community of Alta Versilia was founded in Seravezza (see Table 4).

As for vertical coordination, most of the interviewees affirm that they feel **abandoned by the public sector**. On the one hand, as **Alta Versilia is not (totally) recognised as a marginal inner area**, the stakeholders feel that the public institutions do not support them enough in their forestry activities. They argue there is **lack of dedicated incentives**, e.g. to restore and maintain the paths clean, to clean the chestnut groves or even to access those chestnut groves that are located in high-slopes and are now mostly abandoned. Some of the interviewees expressed **the need for more public support to make new lands available, e.g. through a land bank**. This would increase farmers' productivity as they could count on the availability of more chestnut groves, while also representing a way to enhance forest management services and provide job opportunities in these sectors. Positive feedback from this could affect the whole VC and lead, for instance, to the restoration of other abandoned buildings (*metati* and mills). Another issue is related to physical access to the forests and transport difficulties along the VC, which reveal time-consuming for the farmers involved.

Need for improving vertical coordination, through administrative support and streamlined procedures

The Union of Municipalities is the main public authority of reference for chestnut farmers. Farmers positively recognise the personal commitment of especially one of the representatives, for the many attempts to identify funding opportunities and for opening calls for projects dedicated to the mountain. The RDP is among the few public funds for which the local stakeholders can apply. Although recognising the opportunities deriving from such financing programmes, the interviewees report **several difficulties due to bureaucracy and financial barriers**, that especially small farms can hardly manage, e.g. the need for beneficiaries to make the expenses in advance, the amount of time needed for the application and writing projects. In this regard, **the lack of internal expertise or external support in writing projects** prevents many farms from applying.

Theme no. 3: verifying and communicating sustainable practices and outcomes

Chestnut growers from Alta Versilia connect being sustainable to carrying out **traditional farming practices**, also guarantee, for the interviewees, of a higher quality for the products. Innovation in the processes is not considered an added value: for instance, through the use of new technologies such as machineries to streamline chestnut collection, optical sensors and thermometers to support the selection and to assess the level of humidity in the *metato*. In their view, the fact that certain activities are conducted manually represents an opportunity to exercise a higher control on the production stages, which also influence the quality of the final product. **Innovation** is mainly related to the adoption of more **sustainable packaging** solutions and the adoption of **social networks** as a channel to reach customers.

Need for adequate standards within supply chains and labelling schemes

Chestnut flour from Alta Versilia is well-known among the customers as a high-quality product and has been recently recognised for its high-quality in local and regional contests. According to farmers interviewed, its sweet flavour derives from the **combination of different chestnut varieties** and on the producers' ability in the application of traditional practices. The **high involvement of human expertise** in the selection of chestnuts in all stages, time, work, and fatigue dedicated to all selection phases, represent the competitive advantage, strongly influencing the **quality of the product**.

As for the application of standards in the supply chain, stakeholders state that, being mainly tradition-driven, **the chestnut flour VC does not follow specific standards**, but it is mostly based on **common sense** and on the **know-how of the human capital involved**. Moreover, most producers describe their **product** as **totally organic**, as it is collected in the forest and free from any kind of pesticides. Nevertheless, none of them applied for the European organic certification (or any other kind or related label).

Farmers interviewed recognise the **potential role of research institution in enhancing their knowledge of the organoleptic characteristics of the chestnut** varieties used for producing their chestnut flour. However, if on one hand this could help gain a better recognition of the flour quality, on the other hand they expressed their fear about the use of this knowledge as a constraint. As the production is vintage-dependent, farmers would be reluctant to follow any restrictions about a specific amount of each variety to include in the processing stages, and in general to apply for **official certifications or take part in specific labelling schemes**. Other constraints are related to the limited amount of produce, and seasonality of the chestnuts. Some chestnut certification disciplinarys allow farmers to sell their products only after a certain date, without taking into consideration variables, such as climate conditions, which could anticipate the fruits ripening and access to the market.

The case of PAT: Traditional Agri-food Products of Tuscany (Prodotti Agroalimentari Tradizionali Toscani)

About 460 food products are included in the regional list³ of Traditional Agri-food Products of Tuscany (PATs) by the Ministry of Agriculture. These products are not identified by a Designation of Origin (PDO/PGI⁴), but represent a considerable heritage of culture, skills, and flavours (Regione Toscana, 2018). Tuscany Region has made a commitment towards the promotion of the PAT, acknowledging their potential role in leveraging wider social and economic benefits for the territories where their production occurs, and the SMEs involved. Quality, of raw materials and the final products, is a determining factor along with the uniqueness of PATs, which depends on the combination of specific environmental and historical-cultural conditions (Alberti, 2020). In addition, more research would be needed to investigate the nutraceutical potential and health-related value of PATs, to provide a further element of differentiation from similar products.

A recent survey by CIA- Agricoltori Italiani (Alberti, 2020) found that the main market outlets for the PAT are the following:

1. Direct sale: 70%, divided among fresh markets, farmers' markets, direct sale on-farm and dedicated shops
2. Restaurants, retailers and specialised-deli shops: 40%, of which 26% declared selling their products in the national market and especially in border regions
3. Cooperatives of producers: 8%
4. Catering services: 6%, especially fresh produce
5. Large retailers: 4%

One of the main limitations to the promotion of PATs is related to their commercialisation being connected to dedicated valorisation initiatives for each individual product, and **the necessity for collective initiatives**. Most producers involved in PAT's production are indeed small farms, not always able to afford specific investments for communication unless they take part in producers' networks, VC strategies or wider territorial strategies.

The survey (Alberti, 2020) showed that in cases when initiatives of valorisation were not in place, it was more difficult to retrieve data on availability and quantities of such products (especially products of more common use or from producers more widespread on the territory). Conversely, PAT producers with a more restricted production area (e.g. a municipality, a province or a specific geographical area) have tended to build relationships and form networks with other producers, eventually leading to the promotion of all the territory where these foods are grown. In addition, local institutions have contributed to the promotion, supporting initiatives such as fairs, festivals, and other dedicated events (Alberti, 2020). Among the needs identified, the survey emphasised **training and education needs of producers and other supply chain**

³ A complete and updated list is available at [Regione Toscana PAT](#)

⁴ Tuscany exhibits a total of 31 products and 50 wines with the PDO/PGI quality certification (Regione Toscana, 2018).

operators involved in this market segment. Investing on quality products entails **knowledge on the characteristics of the product, on the type of market and available commercial channels, marketing strategies and tools, and communication strategies.**

It is worth highlighting how the Tuscany Region is currently establishing a Centre for Training and Competences on Traditional Agri-food Products (PAT) (*Centro delle Competenze per la valorizzazione e promozione dei PAT*), the design of which has been involving a long and articulated participatory process with the involvement of different stakeholders.

3.2. Existing interventions and actions

MAPs acknowledge that networks of local actors (municipal authorities and union of municipalities, civil society organisations, businesses, etc.) are better positioned to deliver territorial and rural development goals. To this purpose, regional legislation provides a set of governance arrangements available to local actors to select the most suitable instruments for achieving their goals. In some cases, regional legislation anticipated national laws and regulations, e.g. the first regional law regulating Wine routes in Tuscany dates back to 1996, while the national law came in 1999. In other cases – e.g. the pilot experience of the District of Maremma⁵ – the practice was one-step ahead of the legislation, providing a reference for codification into national law. The latter eventually came in 2001, within the Agricultural Act (Toccaceli, 2012).

We hereby provide an overview of the multiple governance configurations, meant as a summary of existing interventions and actions carried out at the Tuscany regional level. We therefore refer to regional (and national) legislation, identify available instruments, and investigate specific cases (initiatives, projects) in, or relevant for, local rural contexts. The list is not to be considered as exhaustive.

3.2.1. Food districts and other regional initiatives

In Italy, the Food District model has been established by Law no. 205/2017 to provide additional resources and opportunities for the revitalisation of territorial food supply chains. As a strategic tool aimed at fostering territorial development, cohesion and social inclusion, Food Districts promote the integration of agri-food activities characterised by territorial proximity. Food safety, food waste, and environmental goals are also targeted by Food Districts. The Food District model is also aimed at revitalising the experiences of formerly existing rural districts, as well as at encouraging new initiatives through the possibility of accessing dedicated funding. It is possible to obtain recognition as Food Districts for: quality rural and agri-food districts⁶; organic districts; districts located in urban or peri-urban areas characterised by a significant presence of agricultural activities for social and environmental development purposes; districts characterised by agricultural activities integrated with other territorial activities. Recognition of the Food Districts takes place through the Regions and Autonomous Provinces, which provide communication to the Ministry for Agriculture, Food and Forestry (MIPAAF), responsible for updating the National Register of Food Districts. 36 Food Districts have been identified by the Tuscany Region and included in the National register of Food Districts. These currently encompass 9 rural districts, 1 organic district, 21 wine, oil and flavour routes, 5 food communities (MIPAAF, 2022).

Rural districts (*distretti rurali*)

Integration of agriculture and other local activities is the cornerstone of rural districts, whereby the production of specific goods (food, crafts, ...), a homogeneous territorial dimension (not necessarily corresponding to

⁵ The pilot experiences occurring in Italy *ante legem* were the rural districts of Piedmont and Tuscany (Maremma).

⁶ Regulated by the Italian Agricultural Act (Legge di orientamento, decreto legislativo nr. 228 del 6 Aprile 2001, art. 13), <https://www.parlamento.it/parlam/leggi/deleghe/01228dl.htm>

administrative units), and a shared historical identity are all components of a pool of tangible and intangible endogenous resources needed for triggering rural development processes.

Under Regional Law no. 17/2017⁷, rural districts are economic-territorial systems with the following characteristics:

- a) agricultural production in line with the natural endowment of the territory and significant for the local economy;
- b) homogeneous historical identity;
- c) consolidated integration between rural and other local activities;
- d) production of goods or services of particular specificity, consistent with the traditions and natural endowment of the territory (authors' own translation).

Rural district is indicated as the most suitable instrument in the case of Lunigiana, in Northern Tuscany. The Rural District of Lunigiana, started in 2008, has recently undergone a revitalisation process, epitomised in the economic-territorial plan (PET): *"[t]he strong idea of the District is the valorisation of territorial capital through the implementation of the Sistema Lunigiana. The District, avoiding overlapping with other existing initiatives, will work to favour collective action between institutions, civil society and enterprises aimed at strengthening the unitary identity... [It will work] through the integration of territorial areas, sectors of economic activity and agri-food chains, by strengthening the relations between institutional, economic, and social actors operating in the area. The Rural District will be an instrument to favour and enhance the exchange between actors and create the conditions for amplifying already existing projects and actions and producing new ones. Where it is not specifically necessary, the District will avoid operating as an agency of projects"* (authors' own translation from Unione di Comuni Montagna Lunigiana, 2020, p. 11).

Bio-districts (*distretti biologici*)

'Encouraging Member States to support the development and the implementation of 'Bio districts': Action 14 of the Action Plan for Organic Farming of the EU explicitly mentions bio-districts as a tool for achieving the F2F target of 25% of agricultural land dedicated to organic farming.

Under Regional Law no. 51/2019⁸, bio-districts are defined as territories with a marked agricultural orientation, and where the local food production system displays the following characteristics:

- a) Cultivation, rearing, processing, preparation and marketing of *organically produced* agricultural products;
- b) Protection of typical local production and methods of cultivation, rearing, processing, and the integration of agriculture with other activities;
- c) Attention to the territorial identity and landscape characteristics of the places;
- d) Criteria of environmental sustainability, for the conservation and improvement of agricultural land, and the protection of agrobiodiversity (authors' own translation).

The most recent Law No. 23/2022⁹ established that bio-districts include 'local production systems, also of inter-provincial or inter-regional nature, with a marked agricultural orientation, and where are significant:

1. The cultivation, rearing, processing and food preparation, within the territory identified by the bio-district, of organic products in accordance with the relevant regulations in force;

⁷ Legge regionale 5 aprile 2017, n. 17 Nuova disciplina dei distretti rurali

⁸ Legge regionale 30 luglio 2019, n. 51 Disciplina dei distretti biologici

⁹ Law No. 23 of 9 March 2022.

2. Organic primary production in a supra-municipal territory, i.e. including areas belonging to several municipalities (authors' own translation).

In addition, integration with other economic activities beyond agriculture will be pursued by bio-districts, and the participation of local authorities and research institutes is encouraged, as it is also recommended that all participants adopt green policies meant for protecting biodiversity and the environment.

Communities for food and agro-biodiversity (*Comunità del cibo e dell'agrobiodiversità*)

Italian Law n. 194/2015, art. 13, establishes "Food Communities", defined as "agreements among local farmers, seed savers/custodian farmers, solidarity purchasing groups (GAS), schools, universities, research centres, organisations for agro-biodiversity conservation, school canteens, hospitals, catering industries, restaurants, retailers, food processing SMEs, and public bodies". General aims of a Food Community are to promote studies on agro-biodiversity and to raise awareness on the role that agro-biodiversity might play as a pivotal element of traditional local culture. In addition, a Food Community aims also at encouraging the creation of networks of small producers, processors, and retailers within ad hoc short food supply chains, intended to the promotion of such local products. National Law n. 194/2015 also establishes the National Registry of agro-biodiversity, the National Network of agro-biodiversity and routes/itineraries for the promotion and valorisation of biodiversity of agricultural and food interest. Food Communities are meant as opportunities for setting up multifunctional farms, supporting ecosystem services provision, through the maintenance and dissemination of historical and cultural values of agricultural biodiversity, local knowledge, and traditions (Galli et al., forthcoming). Re-connecting with local citizens is also critical for these farms, to go beyond the "niche" dimension of the consumption of agro-biodiversity products. **Moving beyond a citizens-as-consumers approach** can effectively summarise the idea of the community involvement underpinning Food Communities.

Table 1 – The example of the Community for food and agro-biodiversity in Garfagnana (Tuscany).

The Community for food and agro-biodiversity of Garfagnana

The Community for Food and Agro-biodiversity of Garfagnana, in the Province of Lucca, was established in December 2017 [1], in the wake of the national law n. 194/2015. It aims at (i) enhancing and promoting local agro-biodiversity as a tangible and intangible heritage of agricultural breeds and varieties, customs and traditions, knowledge and flavours, which over the generations have shaped the landscape and culture of the people; (ii) improving the local quality of life, supporting the development of an economy based on solidarity, on the respect of ecosystems and natural balances, and the history and vocation of places; (iii) laying the foundations of a productive, social and environmental organisation model, capable of harmony, well-being and the future (www.comunitadelcibo.it). The Food Community is organised as a multi-actor and network governance arrangement, intended for the coordination of public and private initiatives around the conservation and promotion of local agro-biodiversity. Indeed, one of Garfagnana's main features is its relatively isolated localisation, enclosed between the two mountain ranges of Apuan Alps and the Appennine, which favoured a rich biodiversity and people's strong sense of identity. A rich variety of rare and local varieties of crops, livestock and micro-organisms at risk of extinction constitute the agro-biodiversity tangible and intangible heritage of Garfagnana. Regional Law n. 64/2004, concerning the protection and conservation of agro-biodiversity, had set the ground for the creation of the network of *agricoltori custodi* (seed-savers) and the foundation of the Germplasm Bank for *ex-situ* conservation of local species. Currently, the local Gene Bank collection includes 36 herbaceous varieties (e.g. beans, cereals, tomatoes, potatoes, onions, chard, lettuce and pumpkins), 185 traditional fruit varieties (e.g. apple, pear, fig, cherry, plum, peach trees), and 50 vines.

[1] The Food Community of Garfagnana was established as an association for social promotion (*associazione di promozione sociale* - APS) in 2020.

Wine and taste routes (*Strade del vino e dei sapori*)

Wine routes are thematic itineraries unfolding in territories with a high wine vocation, later developed to include other quality products (becoming Wine and taste routes). These itineraries are encompassed by vineyards and wineries in the first place, but also by natural, cultural and historical attractions, with an integrated approach to the rural tourism offer. In Tuscany, wine and taste routes span over more than 5000 kilometres and include, besides wine and olive oil producers, farms, breweries, food processors (meat, dairies, truffles), restaurants, hotels, agri-tourisms, and other accommodation operators. In their promoters' view, *"they [wine routes] are an instrument for promoting rural development and its territory, and are meant to foster and promote wine tourism as a movement for enhancing wine production within a cultural, environmental, historical and social context"* (www.stradedelvinoditoscana.it).

Community cooperatives (*Cooperative di comunità*)

Community cooperatives are a model for social innovation in which local communities organise themselves to both provide for, and take advantage of, services and goods, through synergies, co-learning and cohesion among the actors involved. They bring together individual citizens, local NGOs and associations, firms and institutions and aim at facing local challenges and solving collective needs through mutuality. Tuscany Region started in 2016 a co-design process – #CollaboraToscana – involving experts, policy makers and communities, that produced a Green Book for collaborative regional policies. On this basis, the Region, in 2018, launched a call for funding for already existing and for future community cooperatives aiming at promoting collaborative projects for the management of common goods, for the provision of tourism, hospitality, cultural, and environmental protection services, for valorisation of local productions, etc., with a total of 24 projects funded.

In 2019, Tuscany Region promoted a new regional law on community cooperatives (LR 67/19¹⁰) aiming at reinforcing the phenomenon and launched a new call for funding (end of 2019). Moreover, at the beginning of 2020, Tuscany Region, ANCI, Centrali Cooperative, the existing community cooperatives and the related municipalities signed a protocol to give birth to a regional network that can act in a coherent way, with shared values and based on common practices. Tuscany Region currently counts on 42 community cooperatives. Among them, some created sub-thematic networks (e.g.: Rete Toscana Capitale Naturale) (<https://coopdicomunita.toscana.it/home>).

Table 2 – The case of Rete Toscana Capitale Naturale

Rete Toscana Capitale Naturale

This community cooperative network (www.retetoscananaturale.it) focuses on the provision of ecosystem services and especially considers those services that concern the responsible management of the natural heritage. They promote a correct and sustainable management of the local natural resources through a collaborative economy. They search for funding opportunities enabling the implementation of new projects and in the establishment of new services and products that can provide new economic opportunities with a positive environmental impact. A first implementation attempt in this context was made through the Castell'Azzara Municipality Ecosystem community cooperative (<https://www.visitcastellazzara.com/>).

Cambio-Via INTERREG (Tuscany Region) and transhumance routes

Tuscany Region is a partner in the Cambio-Via¹¹ project. The main aim of the project is *"improv[ing] public governance and cross-border networking of local communities to protect and enhance the area's natural and cultural heritage by developing common innovative tools, implementing actions to improve the physical and*

¹⁰ Legge regionale 14 novembre 2019, n. 67. Cooperazione di comunità. Modifiche alla l.r. 73/2005: <http://raccoltanormativa.consiglio.regione.toscana.it/articolo?urndoc=urn:nir:regione.toscana:legge:2019-11-14:67&pr=id,x,0;artic,1;articparziale,0> (last access: 3/11/2022)

¹¹ CAMmini e BIOdiversità: Valorizzazione Itinerari e Accessibilità per la Transumanza INTERREG IFM 2014-2020

non-material usability and accessibility of protected areas, parks and sites of interest along the transhumance itinerary, ensuring a strong interaction between historical-cultural and productive peculiarities, sustainable development and biodiversity protection” (Cambio-Via, 2022). The accessibility of transhumance routes, cross-border governance and cooperation, and the promotion of the products and services connected to transhumance are the specific objectives of the project.

Transhumance is a form of pastoralism consisting of the seasonal migration of livestock along migratory routes, carried out in the Mediterranean and in the Alps regions. This ancient practice is also inscribed on the Representative List of the UNESCO Intangible Cultural Heritage of Humanity (UNESCO, 2022). Transhumance is based on mobility and on the extensive use of marginal ecosystems, including mountains and semi-arid lands, contributing as such to the maintenance of landscape and management of natural resources in marginal areas (Nori, 2017). Notwithstanding the increasing appreciation of the transhumance products, pastoral practices are nowadays disappearing, for a combination of causes including both global drivers (rural depopulation, agriculture intensification) and aspects related to the hard working and living conditions of operators, and lack of generational renewal (Nori, 2017).

To promote the products and services connected to pastoralism and transhumance routes, Tuscany Region and all partners in Cambio-Via are exploring the potential instruments available to small businesses, in partnerships with public authorities. The process started with the identification and georeferencing of some transhumance routes along the Tuscan cross-border area. One option currently being considered is the label Olè (acronym for *Oltre l’etichetta*, lit. beyond the label), intended as a tool to foster the market positioning of products and services connected to transhumance, and to communicate their ecosystem value. In detail, the focus is on those ‘custodian communities’ who represent the bearers of traditional practices capable of enhancing natural and cultural heritage, and on the farms and other small businesses producing along the transhumance routes. Such recognition of the economic value of transhumance is, however, all but straightforward: *“since the practice is being abandoned, many enterprises can hardly recognise its role as an economic resource for their territory. It is therefore hard to identify it [the label] as a useful tool for promoting their products and services [...] the label defines an element of differentiation and belonging to a group, but this does not immediately determine the rediscovery of that cultural identity and the creation of a new bond with tradition”* (from interview EXP1).

Table 3 – The case of Bioeroi Association

The “Bioeroi” Association (MAP Montagna Toscana)

The Bioeroi Association’s main goal is to promote, give value and protect, in a sustainable way, the mountain area in which they live and work. To do so, they created a network of stakeholders (among them also artists and artisans) and organised several cultural initiatives at local level. They also promoted an informal label for the chestnut flour. Through their social activity, they also supported the revitalisation of some *metati* and “mills” in the area, taking advantage of small funding opportunities made available by the Municipalities’ Union. Moreover, the presence of the Bioeroi facilitated the revival of chestnut flour production and helped new relationships to emerge and reinforced new ways of collaboration between different actors, where every single one is a pillar, and her/his presence is indispensable for the VC (www.bioeroi.com).

Table 4 – The case of the Slow Food Chestnut Community of Alta Versilia

The Slow Food Chestnut Community of Alta Versilia (MAP Montagna Toscana)

Founded in March 2022 in Seravezza, it involves 13 producers with the aim to promote the local chestnut flour production, give value and preserve the mountain landscape and raise awareness on this matter through cultural projects and events for schools and grown-ups (<https://www.luccaindiretta.it/versilia/2022/03/31/nata-a-seravezza-la-comunita-slow-food-castagno-dellalta-versilia/283563/>)

3.2.2. Food policies and strategies

Tuscany has been an arena for experimenting on urban/local food policies and strategies, since the very first initiative of urban food policy started in Pisa in 2010. Although no longer in place, the *Piano del Cibo* was initiated from the collaboration between the Province of Pisa, researchers from the University of Pisa and the 'Laboratorio Sismondi' research centre (Brunori et al., 2014). To date, three integrated local food policies have been implemented and are still in place in the region: the Intermunicipal Food Policy of the Plain of Lucca (*Piana del Cibo*; see table 1), the Food Strategy of the City of Livorno (*Strategia Alimentare di Livorno*), and the Camaiore Food Quality Agenda (*Agenda per la qualità del cibo di Camaiore*). Even though a central role is assigned to food, food policy promoters emphasise **the food system's close connection with the quality of environment, ecosystems, and land use (from the local to the global level); economic activities, jobs and incomes; culture, lifestyles and well-being; social justice and rights.**

In addition, the regional branch of ANCI (National Association of Italian Municipalities) has launched the call for setting up a Regional Food Policy Board (*Tavolo del cibo regionale*). The initiative was supported by the Regional Authority for Participation, which recently (early 2022) funded a participatory project meant to lay the foundations of the Food Policy Board. Mapping the variety of entities and initiatives actively operating on food-related issues was one of the actions undertaken during the participatory project (Berti and Cattivelli, 2022). Although the architecture of the Food Policy Board is still being discussed, it would ideally encompass representatives from the civil society, businesses, local and regional authorities, and research. The aims underpinning the regional Food Board initiative include gathering and exchanging knowledge on current initiatives, providing a space for stakeholders to network, and exploring opportunities and ways for scaling-up and scaling out.

Table 5 – The case of the Inter-municipal Food Policy of the '*Piana del Cibo*'

The Intermunicipal Food Policy of the '*Piana del cibo*'

The Intermunicipal Food Policy (IFP) of the '*Piana del Cibo*' (literally "Plain of Food", from the Plain of Lucca), is a governance arrangement through which five municipalities in the province of Lucca reach out beyond their administrative and functional boundaries to share decision-making powers on food (Arcuri et al., 2022). The process that led to the institutionalisation of the food policy started in 2018, with the signature of the Milan Urban Food Policy Pact by the Mayors Lucca and Capannori (also Chair of the Province of Lucca). A participatory project called CIRCULARIFOOD then started and involved about 300 citizens in the shared definition of the principles and goals eventually enshrined in the IFP Strategy and Plan. In the outset phase, the initiative was supported by the Regional Authority for Participation (www.pianadelcibo.it). The IFP works as a joint management of food policy functions (*gestione associata*) between the municipalities involved, combined with a participatory governance model including: the Agorà (i.e., the open assembly), the Food Council (with both participatory and decision-making aims), and the Assembly of Mayors (the political decision-making body) (Arcuri et al., 2022). Besides being the 1st Italian case of inter-municipal food policy, one additional feature of the IFP is that of including both urban and rural areas, as the five municipalities exhibit different characteristics in terms of dimensions, geography, demography, political relevance, and social and economic conditions.

3.3. Recommendations from the MAPs

3.3.1. Recommendations for future rural policies

- Provide long-term funding: project-based funding constraints do not allow to go beyond short-term goals and limit the latter to the requirements of calls for funding rather than the other way around.
- Increase funding flexibility to address – and adapt to – a variety of governance instruments, and contexts or, when there is no room for flexibility, provide a fix for mitigating the effects of exclusion. For instance, more flexible criteria would allow the area covered by the MAP Montagna Toscana to access funding dedicated to more marginalised contexts; alternatively, a regional fix to the national call for funding could consider the specific conditions and difficulties of excluded areas.
- In calls for funding and more in general, promote and incentivise a culture of collaboration, rather than competition, between different municipalities, departments and/or initiatives: competition could, especially in fragile areas and smaller municipalities, contribute to a further exacerbation of disparities.
- Streamline administrative procedures for accessing funding and other services and provide guide and support when this is not possible: smaller rural municipalities have hardly access to the same competencies and human resources needed to address some administrative tasks and paperwork.
- Provide incentives for the continuous training and education of rural operators (e.g. businesses, public officials, teachers, healthcare operators, etc): investing in the provision of advanced services (e.g. e-health, online platforms) is wasted if targeted users are not put in the conditions to fully exploit their potential.
- Develop and promote the use of data on the actual needs and costs of service provision in rural areas, in collaboration with research institutes, with a view to the future development of specific criteria for access to basic services in rural areas.
- Design measures for facilitating access to funding to territorial entities operating at the rural-urban interface, to incentivise collaboration between urban and rural areas and the adoption of cross-boundary, city-region approaches in future initiatives.
- Set the ground for specific initiatives for land and natural heritage management: promote the creation of municipal and inter-municipal land banks and inventories of abandoned buildings (e.g. drying stoned buildings and mills) and provide incentives for restoration and productive reuse. This could create new economic opportunities by strengthening and expanding the chestnut flour VC in mountain areas.

3.3.2. Recommendations for future research agendas

- Increase data collection and availability in rural areas: governance instruments for sustainable food systems are often based in territorial entities with blurred boundaries, which do not correspond to any government level or territorial unit (e.g. the NUTS level). Data for monitoring their effectiveness are of the essence.
- Map abandoned/vacant land: especially in remote areas, land abandonment processes are so severe that the phenomenon goes almost undocumented, resulting in the lack of data on the land available for restoration, reuse, and for renting to potential newcomers. For instance: mapping abandoned chestnut groves – extension, varieties, etc. – could increase the land potentially available and increase of chestnut flour production.

- Research on the nutraceutical value and organoleptic characteristics of traditional products (e.g. PAT, local varieties), which could provide a further element of differentiation from similar products. Better knowledge of local varieties could support producers in the chestnut flour VC in the assessment of the flour quality and increase their credibility.
- Provide incentives for the setting up collaborative research projects (university-farmers) could foster the farmers' adoption of new technologies, and the experimentation of complementary and alternative crops (participation in alternative VCs).
- Engage with – and broaden – the networks already in place in the areas under investigation: it is necessary to support existing initiatives and invest in their continuity beyond EU projects, avoiding overlaps and waste of resources.
- Support policymakers in developing data on the needs and costs of service provision in rural areas, with a view to the future development of specific criteria for access to basic services in rural areas. Progress on the development and operationalisation of a right-based approach to basic access to services, beyond performance criteria, is necessary to ensure no one is left behind.

Conclusions

During the third MAP cycle, different streams of work were carried out in the MAPs (as detail in Annex 1). This position paper provided a summary, drawing from both desk-based research and stakeholder engagement activities. It identified a (non-exhaustive) set of needs emerging from the MAPs, primarily from the MAP Montagna Toscana whereby the chestnut flour VC was analysed and from the regional case of the PAT (Traditional Agri-food Products). The needs emerged were in line with some of the themes pointed out by Bogнар and Schwartz (2022), and often 'bridging' between these themes. It is worth emphasising the (i) need for building on sustainable VC to create job opportunities in mountain areas, especially job opportunities that are integrated with other activities in the area and have a recognised cultural, social and environmental value; (ii) the need for increasing chestnut producers' market power through participation in alternative supply chain models; (iii) the need for tailored services of education and training, primarily considering available human capital and local knowledge; (iv) the need for enhancing resilience and adaptability through responsive capacities, stressing the importance of wider community goals pursued through value chain and territorial initiatives; (v) the need for improving vertical coordination, through administrative support and streamlined procedures; and the need for adequate standards within supply chains, certification, and labelling schemes.

This position paper moved on to present an overview of initiatives and actions in place in the MAPs regions, as the MAPs acknowledge that networks of local actors (municipal authorities and union of municipalities, civil society organisations, businesses, etc.) are better positioned to deliver territorial and rural development goals. A set of governance arrangements available to local actors are available at the national and regional level, and local actors are in many cases exploring what are the most suitable instruments to achieve their goals. Among the regional initiatives illustrated, there is recently a great deal of interest in all the different forms that food districts may take – from rural and bio-districts to food communities – and in food strategies and policies, implemented primarily at the municipal and inter-municipal level.

Many initiatives are ongoing in the MAPs regions. Their long-term sustainability, outcomes, and opportunity to scale-up and scale-out depend also on whether they will have the adequate financial, technical, and administrative support from the regional to the EU level, including from research institutions.

Acknowledgements

The authors thank all the MAP members and colleagues who participated to the MAPs' activities and contributed to data collection. The authors acknowledge the colleagues Michele Moretti, Tarek Allali, Manola Colabianchi and Francesco Felici, who have facilitated and coordinated the work of the MOVING MAP Alta Versilia, for their collaboration throughout the process, and Chiara Mignani, for her support in data collection.

References

- Arcuri, S., Minotti, B., & Galli, F. (2022). Food policy integration in small cities: The case of intermunicipal governance in Lucca, Italy. *Journal of Rural Studies*, 89, 287-297.
- Barca, F., Casavola, P., Lucatelli, S. (2014). Strategia nazionale per le Aree interne: definizione, obiettivi, strumenti e governance. Ministero dello Sviluppo Economico, Dipartimento per lo Sviluppo e la Coesione Economica, Unità di Valutazione degli Investimenti Pubblici.
- Belletti, G., & Marescotti, A. (2011). Origin products, geographical indications and rural development. Labels of origin for food: *Local development, global recognition*, 75-91.
- Berti G., Cattivelli V. (2002), Report Finale "Tavolo del Cibo della Toscana. Attivazione della Piattaforma di confronto e dialogo e mappatura delle pratiche e delle politiche locali del cibo". Progetto finanziato dalla LR 46/2013.
- Bognar, J., Schwarz, G., (2022). Towards sustainable & resilient value chains. SHERPA Discussion Paper. DOI: 10.5281/zenodo.6778048
- Brunori, G., & Rossi, A. (2007). Differentiating countryside: Social representations and governance patterns in rural areas with high social density: The case of Chianti, Italy. *Journal of Rural Studies*, 23(2), 183-205.
- Brunori, G., Di Iacovo, F., & Innocenti, S. (2014). Il progetto del cibo nella provincia di Pisa: un elemento costruttivo dello spazio pubblico della bioregione, 247-263. In: Alberto Magnaghi (ed.) *La regola e il progetto. Un approccio bioregionalista alla pianificazione territoriale*. © 2014 Firenze University Press.
- Brunori, G., Rossi, A., & Guidi, F. (2012). On the new social relations around and beyond food. Analysing consumers' role and action in Gruppi di Acquisto Solidale (Solidarity Purchasing Groups). *Sociologia ruralis*, 52(1), 1-30.
- Christopher, M., & Peck, H. (2004). Building the resilient supply chain.
- European Commission. (2018). Value Chain Analysis for Development (VCA4D), Methodological Brief - Frame and Tools. Version 1.2.
- Galli, F., Rovai, M., Arcuri, S., Belletti, G., Marescotti, A., Oostindie, H., Reinhard, H., Keech, D. (forthcoming). Community Partnerships for Ecosystem Services provision and rural-urban synergies. In: Partidario, M. R. (ed). *Role of Ecosystem Services in Enabling Rural-Urban Synergies*. Springer Nature.
- McGinnis, M. D., & Ostrom, E. (2014). Social-ecological system framework: initial changes and continuing challenges. *Ecology and Society*, 19(2). <https://doi.org/10.5751/es-06387-190230>
- Ministero delle politiche agricole alimentari, forestali e del turismo (MIPAAF). (2022). DIPARTIMENTO DELLE POLITICHE COMPETITIVE DELLA QUALITÀ AGROALIMENTARE IPPICHE E DELLA PESCA DIREZIONE GENERALE PER LA PROMOZIONE DELLA QUALITÀ AGROALIMENTARE E DELL'IPPICA UFFICIO POLITICHE DI FILIERA (PQAI III). Elenco distretti del cibo, 14.2.2022 - TOSCANA Retrieved from: www.politicheagricole.it.
- Moretti, A., Brunori, G., Grando, S., Felici, F., Scotti, I., Ievoli, C., Belliggiano, A. (2021) MOVING Conceptual Framework (Draft to EC July 2021). Retrieved from: https://www.moving-h2020.eu/wp-content/uploads/2021/09/D2.1-Conceptual-and-Analytical-Framework_draft.pdf.
- Nori, M. (2017). Migrant shepherds: opportunities and challenges for Mediterranean pastoralism. *Journal of Alpine Research/ Revue de géographie alpine*, (105-4).

- Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge university press.
- Ostrom, E. (2009). A General Framework for Analyzing Sustainability of Social-Ecological Systems. *Science*, 325(5939), 419-422. <https://doi.org/10.1126/science.1172133>.
- Toccaceli, D. (2012). *Dai distretti alle reti: i distretti in agricoltura nell'interpretazione delle regioni e le prospettive verso il 2020*. Rete Rurale Nazionale, luglio 2012. Retrieved from https://www.qualivita.it/wp-content/uploads/new/2013/01/RRN_Distrettiretiweb1.pdf
- Tregear, A. (2011). Progressing knowledge in alternative and local food networks: Critical reflections and a research agenda. *Journal of rural studies*, 27(4), 419-430.
- Tregear, A., Arfini, F., Belletti, G., & Marescotti, A. (2007). Regional foods and rural development: The role of product qualification. *Journal of Rural studies*, 23(1), 12-22.
- Regione Toscana (2020). Libro Verde #COLLABORATOSCANA. Per un'agenda regionale sull'economia collaborativa e i beni comuni. LabGov. Available at: <https://collabora.toscana.it/documents/2653136/2693130/Libro+verde+%23COLLABORATOSCANA.pdf/485b347a-7a60-e227-13bd-dd87d4a1a9c3?t=1582905430030> (last accessed: 3/11/2022).
- Regione Toscana, 2022. EU Programming period 2021-2027. Territorial strategies for Tuscany inner areas: http://www301.regione.toscana.it/bancadati/atti/Contenuto.xml?id=5320043&nomeFile=Delibera_n.199_del_28-02-2022-Allegato-A (last accessed: 20.10.2022)
- UNESCO (2022). Transhumance, the seasonal droving of livestock along migratory routes in the Mediterranean and in the Alps, <https://ich.unesco.org/en/RL/transhumance-the-seasonal-droving-of-livestock-along-migratory-routes-in-the-mediterranean-and-in-the-alps-01470>.
- Unione dei Comuni Lunigiana <https://unionedicomunimontanalunigiana.it/wp-content/uploads/2020/07/Progetto-Distretto-Rurale-Lunigiana-1.pdf>

Annex 1 - Methodology used by the MAP

MAP Tuscany – This MAP is made up of actors belonging primarily to the Tuscany regional level (NUTS-2). Multiple initiatives are ongoing at this level, involving different participatory processes and projects. During the third MAP cycle, the facilitator and monitor have been attending meetings, workshops, events online and in presence which were relevant for the present Position paper. The choice of taking stock of ongoing initiatives and projects was dictated by the need for avoiding overlaps between similar activities from different projects, which could result in participation fatigue for the actors involved. The facilitator and monitor complemented these activities through desk-based work in relation to the region covered by this MAP.

MAP Casentino – This MAP concerns a specific area, a sub-region compared to MAP Tuscany. While the MAP's activity was successfully initiated, the DAP drafting phase was followed by a period of stalemate after which it was difficult to re-establish a continuous relation. The MAP will be hopefully reactivated in the next cycle. Most desk-based work carried out by the facilitator and monitor remains anyway still valid for this MAP.

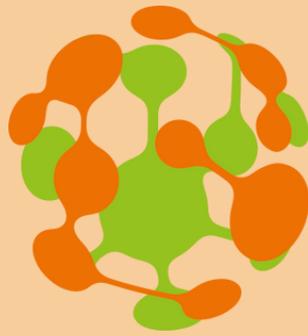
MAP Montagna Toscana – Different stakeholders take part in this MAP, centred on a specific VC. The main actors are farmers, millers, and drying building managers ("metatari"). Additionally, there are local authorities' representatives, that mainly work for the Municipality Union. Some of the chestnut farmers are both producers and *metato* managers. In total, so far and as part of the MOVING project, a total of 36-40 participants have been involved in the MAP activities. The MAP mainly consists of agricultural companies, producers and producers' associations, but also other categories are represented: e.g.: policymakers, researchers, non-agricultural businesses, NGOs, civil society.

The project's kick-off dates back on June 14th, 2021 (15 participants) while the first Participatory Workshop on vulnerability analysis of land systems (14 participants) took place on the 16th of October, in presence, in Cardoso di Stazzema (LU). During the current MAP cycle, there have been several opportunities to facilitate and animate the group of stakeholders involved in the VC.

- 1) The research group from the University of Pisa, both involved in the SHERPA and in the MOVING projects, had the opportunity to interview, in-depth, several actors from the area, for an extended VC analysis. From February to March 2022 the research team performed a series of individual and group interviews. The team interviewed 16 stakeholders: 1 public authority, 10 agricultural businesses, 5 producers/members of producers' associations, respecting the gender balance: 8 men and 8 women. The results allowed the researchers to analyse the characteristics and assess the sustainability of the VC.
- 2) Moreover, during the third MAP cycle, UNIPI also organised several workshops:
 - a. One was dedicated to chestnut honey's alternative and complementary VC. From the workshop, it emerged the need to raise awareness for more sustainable and fair consumption habits, starting from the schools, and to preserve the sustainability of such productions. Indeed, as stressed by the producers involved, the presence of honeybees in the chestnut grove, for pollination purposes, increases the chestnut production from the trees and enhances the biodiversity around. This workshop was held online on the 12th of May 2022, online, and hosted about 20 participants.
 - b. On June 24th, 2022, the research team organised a workshop aimed at the participatory appraisal of vulnerability and performance of the VC activity. It took place in Cardoso di Stazzema, to discuss with the actors involved in the MAP about the value chain assessment. 20 participants took part in it.
 - c. The most recent workshop, held on October 14th, 2022, was dedicated to high school students, and focused on the future of mountain areas and on how young generations can contribute to ensuring it in a sustainable way. In the beginning students from the last year, 3 different high schools from Versilia (specialising in Agriculture, Hospitality and Mechanics)

listened to 4 testimonies: 2 people working in the mountain hospitality field; 1 agroforestry cooperative representative and 1 representative from the Municipality Union. Some contents emerged: the importance of agriculture and of typical food productions, such as the chestnut flour; of social ties and caring actions; of the correct management and preservation of the forest; of circularity, cultural awareness, and respect (both from inhabitants and from tourists); and of a political long-term vision that integrates the valorisation of both mountain and seaside. The stakeholders launched some challenges that students had to deal with in an exercise in which they had to imagine what would happen in the future (in 2040) through their contribution as youngsters.

All these activities enabled the researchers to gather data, allowing the description of the value chain and of the related ecosystem.



SHERPA
Rural Science-Society-Policy
Interfaces

www.rural-interfaces.eu



SHERPA has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 862448. The content of the document does not reflect the official opinion of the European Union. Responsibility for the information and views expressed therein lies entirely with the author(s).