

**Ghost Towns In The Making**  
Addressing Depopulation And Marginalization In  
Piemontese Mountain Communities

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# Abstract

Although the title alludes to the paranormal this thesis questions the tangible aspects of an abandoned place. The study is concerned with the reasons of population decline but most importantly with finding the most adaptable way to re-urbanize and reterritorialize these marginalized places.

There are three categories of ghost towns identified by the reasons of abandonment; ghost town by disaster, ghost town by planning and focus of the study will be around the third category ghost town by decline. This category usually involves an urban profile described as small town or village that was performing acceptably with agriculture, pastoral or mining as common economic activities. The depopulation is gradual and takes multiple decades , with specific reasons concerned with resource exhaustion, searching for job opportunities in the city or as a consequence of industrialization. In Piemonte the majority of ghost towns where agrarian/pastoral villages and were gradually abandoned for a more lucrative promise of life in the city or as a consequence of structural damages after WWII.

The year of 2020 has seen a disrupted city life which was a repercussion of the decreed social distancing. The regulations of social distancing were

designed to reduce the contamination through direct or indirect contact, as a consequence it has transformed the physical, mental, occupational, social and environmental aspects of people's lives. These changed circumstances point to practical improvements of the planning and design of living communities. Already the pandemic has accelerated a range of pre-existing trends in the digital workspace. The world is experiencing an increasing flexibility within the labour market which will allow more freedom for individuals to choose the type of urbanity that best suits their preferred lifestyle.

This thesis seeks to salvage the lost values of depopulated alpine communities in piemonte using the momentum and the leverage of the new lifestyle compelled by the quarantine of 2020. In this model the abandoned towns will undergo an urban renewal and regeneration process to be able to attract new residents and become more socially economically and ecologically viable.

## Keywords

Mountain Marginalization - Counterurbanization - Ghost Town - Mountain Heritage - Teleworking

## Riassunto

Sebbene il titolo alluda al paranormale, questa tesi mette più in discussione gli aspetti tangibili di un luogo abbandonato. Lo studio si occupa delle ragioni del declino della popolazione, ma soprattutto di trovare il modo più adeguato per riorganizzare e riterritorializzare questi luoghi emarginati.

ci sono tre categorie di tipi di fantasmi identificati dai motivi dell'abbandono; città fantasma per disastro, città fantasma per pianificazione e focus dello studio sarà intorno alla terza categoria città fantasma per declino. Questa categoria di solito coinvolge un profilo urbano descritto come piccola città o villaggio che si stava comportando in modo accettabile con l'agricoltura, la pastorale o l'estrazione mineraria come attività economiche comuni. lo spopolamento è graduale e richiede più decenni, con ragioni specifiche legate all'esaurimento delle risorse, alla ricerca di opportunità di lavoro in città o come conseguenza dell'industrializzazione.

In Piemonte la maggior parte dei paesi fantasma erano borghi agrario / pastorali e vennero gradualmente abbandonati per una più redditizia promessa di vita in città o in conseguenza di danni strutturali dopo la seconda guerra mondiale.

L'anno 2020 ha visto uno stravolgimento della vita cittadina che è stata una ripercussione del

decretato allontanamento sociale. Il regolamento di allontanamento sociale è stata progettata per ridurre la contaminazione attraverso il contatto diretto o indiretto, di conseguenza ha trasformato gli aspetti fisici, mentali, occupazionali, sociali e ambientali della vita delle persone. Queste mutate circostanze indicano miglioramenti pratici della pianificazione e progettazione delle comunità viventi. La pandemia ha già accelerato una serie di tendenze preesistenti nello spazio di lavoro digitale. Il mondo sta vivendo una **crescente flessibilità nel mercato del lavoro** che consentirà agli individui una maggiore libertà di scegliere il tipo di urbanità che meglio si adatta alle proprie esigenze.

Questa tesi cerca di recuperare i valori persi usando lo **slancio** e la **leva** del nuovo stile di vita costretto dalla quarantena.

In questo modello le città abbandonate subiranno un processo di rinnovamento e rigenerazione urbana per diventare sussidiarie residenziali, economiche ed ecologiche di un nucleo sociale ed economico; la città.

### Parole Chiave

Marginalizzazione della montagna - Conturbanizzazione - Città fantasma - Patrimonio della montagna - Teleworking

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# 01

## Backgrounds

*“And one morning we passed by a strange city.*

*A city that overlooks a bygone greatness.*

*Yards creep insatiable on her borders.*

*Sprawled between the Nile in the west and the mountain sanctuary in the east.*

*Her trees naked, her streets hollow.*

*Her doors and windows are locked, like shut eyelids.*

*Life does not pulsate within her, nor does movement meander inside her.*

*On top of her silence is perched, over her hangs melancholy, and signs of death loom in her corners.”*

*Naguib Mahfouz, Dweller in Truth  
describing Amarna Ghost Town (built 1346 BC - abandoned 1332 BC)*

## Introduction

This study aims to reverse the depopulation and ongoing desertification of Val Varaita by means of urban regeneration and renewal. The teleworking revolution forced on the world of office labour is supporting the premise that improving the living environment in the valley will lead to new permanent residents in the area and put a stop to the growing abandonment as it has been proven that living in the city is no longer necessary for having a career.

This thesis is developed through diving in different topics which together form the premise on which the hypothesis is resting. The layout of the concepts is organized by presenting the worst case scenario of depopulation first following that site specific concepts of urban deterioration and abandonment are presented in an effort to understand the precise problems of this area, consequently strategies of repopulation are explored as an attempt in studying a resolution to the previously mentioned issues. The first topic is depopulation in its extreme form namely ghost-towning. As it is described later on the term ghost town carries many definition and intricate categorizations. Additionally the study exhibits best practices of ghost town interventions and their evaluations. Diving further into the specific case of the site the topic presented next is directly related to the issue of ghost towns; marginalisation and fragility in mountain communities. This phenomenon can be described as the a stage preceding a ghost town. It outlines the characteristics of mountain communities which fall under the fragile and marginalized category, the problems which lead to deterioration and strategies to limit the effects of marginalization. In efforts of resolving the issue of abandonment while benefiting from the potential of the mountain communities the study explores the trend of turnaround migration explaining the reasons of abandoning the city for a simple rural life, the stakeholders involved and how they contribute to solve the marginalization problem, additionally the study describes the ways the Covid-19 Pandemic has affected this trend and

what are the requirements needed to augment this phenomenon and capitalize on it. Furthermore it is important to highlight the ways it applies to mountain communities. Last but not least is the presentation of the Teleworking revolution experienced in the decade and amplified aggressively by the Covid-19 Pandemic. This work presents definitions and differences between the different concepts of Teleworking, advantages and disadvantages for employers and employees, and exploration into office building its redundancy and the concept of replacing it with examining the drivers behind turnaround migration understanding the fragility and marginalization issue in mountain communities exploring teleworking considerations learning about the factors behind ghost towns examining the drivers behind turnaround migration understanding the fragility and marginalization issue in mountain communities exploring teleworking considerations learning about the factors behind ghost towns innovative Co-working spaces (CWS), the future of commuting, and home office considerations.

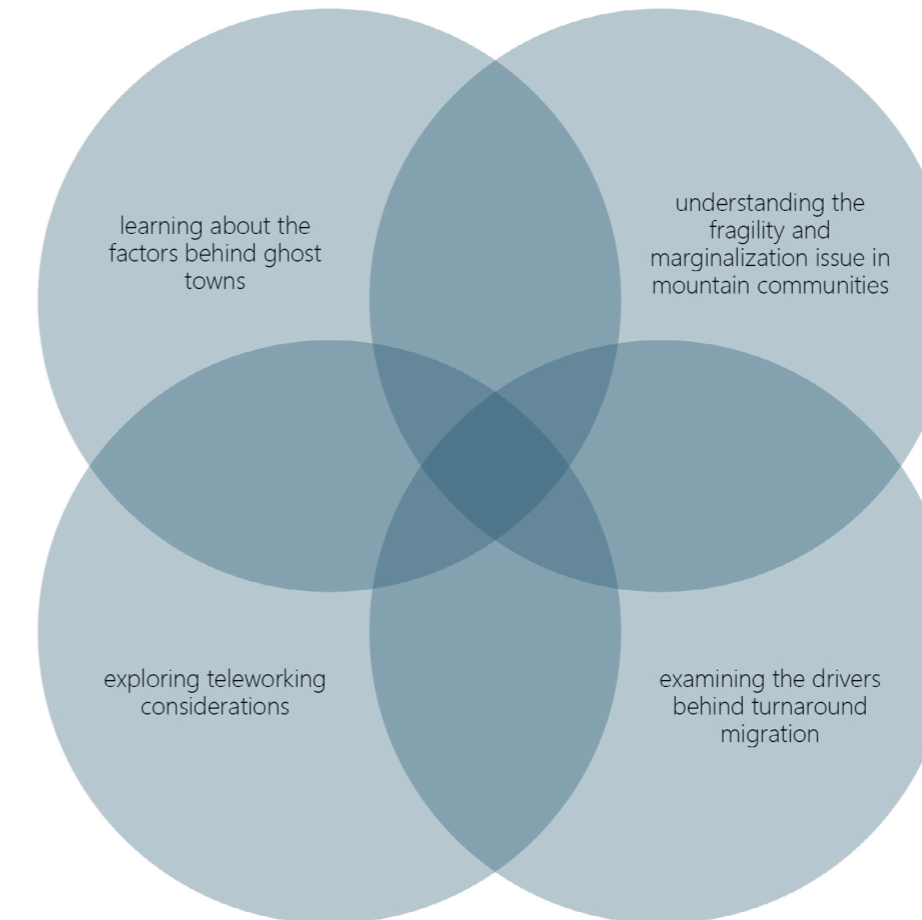
By presenting these concepts the aim is to prove that ghost-towning is an imminent threat to mountain towns and communities which fall under the fragility and marginalization threat. Through the understanding obtained by studying the best practices of ghost town regeneration, issues and strategies behind fragile and marginalized mountain communities, counter-migration premises and requirements for a beneficial teleworking lifestyle, this thesis intends to use this information to create an integrated design concept tailor-made with the existing condition of the study area and how it related to the discussed topics.

The result of the thesis will be an urban planning proposal on two scales. A Valley-scale intervention showing enhanced interdependence between the communities inside the valley and creating a pull from the plains of piemonte to the valley which will result in autonomy and self-sufficiency for the valley. A community-scale showing each of the five chosen communities of Val

Varaita outlining four main guidelines; augmenting the identity of each town, improving liveability, introducing creative functions, and restoring and regenerating existing assets. These four pillars of the design will attract permanent residents, part time inhabitants and a larger count of visitors which are vital for the economic viability of the towns and the valley.

Located in the southern Piemontese Alps, the study area Val Varaita has been chosen after a study and comparison of the Population trends in the last 30 years of the Piemonte regions. The municipalities chosen for the regeneration plan were selected according to their varying functions and urban layouts as well as their steadiness of the decrease in population values.

The methodology in researching the population trends of the municipalities of Piemonte was conducted by collecting population data for four different readings from the Italian National Institute of Statistics (ISTAT) and linking them to geographic data of the municipalities, collected from the Geoportale Piemonte using QGIS. This data underwent further analysis to identify the trends in population growth/loss which yielded an accumulative population trend value as well as three trend intervals for each municipality. The information was then represented in shape of maps showing the trends for each municipality. This information was used to asses which are the most vulnerable areas on the verge of ghost towning which helped in the narrowing down the candidate areas for the case study.



Chapter 0 is an abstract summarizing the hypothesis and giving a brief overview on the premises objectives of the project.

Chapter 1 describes in more detail the issues and concepts behind the hypothesis and a brief discription of the methodology and application.

Chapter 2 gives a detailed explanation of the methodology and it's findings.

Chapter 3 shows multiple case studies with different approaches of of urban interventions to reduce the effects of marginalization.

Chapter 4 is an introduction to the study area of Val Varaita exploring aspects such as landuse, service and amenity distribution, mobility, and tourism and forestry.

Chapter 5 is a closer examination of the chosen communities showing their population statistics, economic activities, landscape and urban layout and a SWOT analysis for each community.

Chapter 6 is a description of the design manifesto and how it relates to the previously mentioned problems and potentials.

Chapter 7 is a description of the concrete design application on the valley scale as well as the community scale, with an explanation of how the restored spaces, new functions, and enhanced connection are fulfilling the requirements laid out in the manifesto. The application chapter also includes multiple graphic representations showing the differences in urbanity and terrain and explaining the proposed programs for the regenerated and newly introduced functions.

Chapter 8 is a conclusion summarizing the thesis procedure, posing questions arising from the work and making suggestions which can inspire further research.

## Depopulation by Decline

Rapid urban growth and decline, stagnation, and even abandonment of smaller settlements and remote rural communities represent greater demographic, economic, and cultural shifts that have transformed Europe in recent decades. One of the effects of urbanization is the rise in the number of so-called "ghost towns":

There are multiple definitions of ghost towns.

A real ghost town is one where buildings remain standing despite the fact that the community has left. (1.)

A ghost town is described as a place where the reason for its presence has ceased to exist. (2.) Lambert Florin poetically defines a ghost town as 'a shadowy semblance of its former self. (3.)

A deeper interpretation is that the uninhabited village can be seen both as a discarded feature of contemporary consumer culture and as a regional asset, reinterpreted from a qualifying viewpoint. (4.)

For the purpose of this study a Ghost Town shall be defined as a community abandoned a significant extent with salvagable structural assets.

Formerly prosperous towns or villages that have been deserted by their native inhabitants due to natural disasters, fiscal, demographic, environmental, or infrastructure causes. The peripheries of Italian regions have a high concentration of these deserted small villages.

Ghost Town can be classified into three categories; Ghost Town by Planning, by disaster, and by decline, with further subcategorization. (5.)

### Ghost Town by Disaster

Ghost Town by disaster usually refers to an area with high vacancy as the result of catastrophic events caused by natural or human factors. The most distinctive features are the uncertainty and uncontrollability, instantaneous nature of the events.

### Natural causes:

A significant adverse occurrence arising from natural forces of the Earth, such as flooding, hurricanes, volcanic eruptions, and earthquakes, will seriously devastate towns. Many Towns in Italy suffered from the fate of abandonment after a natural



Fig. 1: Ghost Town of Craco, Basilicata

disaster one of the most prominent and picturesque examples is Craco, Basilicata which was deserted in 1963 after being hit by a forceful Landslide. (6.)

### Disease outbreak:

Significant mortality rates from epidemics and illnesses have resulted in ghost cities, as has catastrophic environmental damage caused by long-term pollution. As an Example serves Monterano in Lazio, Italy which is currently included in the Monterano Regional Nature Reserve. The vilage plagued by malaria was depopulated in 1799. (7.)

### Armed conflicts:

There are notorious ghost towns that are created as a result of war, with residents being displaced, buildings being demolished, mills being shut down, and all being destroyed. As an Example serves San Pietro Infine located in Campania, Italy which was abandoned in 1949 after it was bombed in WWII. (8.)

### Ghost Town by Decline:

Different from the Ghost Town by disaster, Ghost Town by decline is a possible situation for each city when they are facing a problem of resource exhaustion or industry structure upgrading during the development. In the 19th century, the term "ghost town" is related with mining most frequently. The Main Characteristics of this Category is a slow and steady depopulation.

### Flood Control:

Governments have long managed to control flooding by building dams across rivers, but the result is a town that must be relocated or abandoned and demolished.

### Transport and accessibility:

In general many towns were constructed along the trails whether they are roads or railway connections Some towns moved closer when trails were built. People were able to commute farther for utilities and supplies as interstates and main highways grew in popularity, leading local businesses in smaller towns to lose customers and eventually close. The more industries that close, the more people are expected to move to a big cities. Another way in which transportation can affect the survival of a city or town is when a new road is built bypassing a town or when rail line changes and subsequently leads to the town dying off.

### Depletion of natural resources and subsequent closure of industries:

As the the industries lost its economic weight, economic activities shifted to other areas, and farming towns were frequently abandoned due to rural depopulation. For many towns which were built to cater for the industries exploiting a certain resource closure of factories/mines due to the gradual dimishing of the resources meant death. Argentiera, Sardenia suffered the same fate in 1963 when the sliver mines were depleted. (9.)



Fig. 2: Ghost Town of Argentiera

### Mutations of the economic and social conditions:

It is not uncommon that an economic recessions and depressions could subsequently wipe towns off the map. Towns get depopulated, as people lose their occupations or need to relocate to find new employment. Concrete factors for the depopulation are migration, an aging population or urbanization. Examples are Torri Superiore, Riace, and Croce.

### Ghost Town by Planning:

A planning ghost town is a clean vacancy phenomenon caused by a mismatch between supply and demand during the urban development process. The main characteristic features of this phenomenon are huge costs, luxurious government buildings, abundance in vehicular planning, and a large number of vacant residential buildings.

### Aggressive urban planning:

An uninhabited community created by overdevelopment of real estate, with a large number of vacancies in new housing in an area as one of its key characteristics. This phenomenon is especially prominent in China one of the most famous examples is Ordos a government prompted to invest heavily in urban development in the hopes of establishing a new cultural, economic, and political centre only to find themselves left with an ghost town. Best Practices

The European Association for Information on Urban



Fig. 3: Empty Apartment Buildings in Ordos

Development (AEIDL) recently undertook research in 13 EU countries and discovered that there were more than 2,000 local, community-led projects actively engaged in realistic practices to encourage sustainable, resource-efficient, low-carbon, and climate-resilient settlements.

Permaculture, ecovillages, and Abergo Diffuso were described as core movements of community-led projects with international scope in Europe, exploring new innovations, technology, and methods and showing how people and cities can live more sustainably, according to the AEIDL survey. (10.)

The Global Ecovillage Network (GEN) defines **ecovillages** as 'humanscale settlements, rural or urban, in the North or in the South, that strive to create models for sustainable living'. Ecovillages are established based on the characteristics of their respective environments, and they usually incorporate four dimensions of sustainability – social, ecological, economic, and cultural – into a structural, holistic approach to community growth. (11.)

**Permaculture** integrates land, resources, people and the environment through mutually beneficial synergies – imitating the no waste, closed loop systems seen in diverse natural systems. Permaculture studies and applies holistic solutions that are applicable in rural and urban contexts at any scale. It is a multidisciplinary toolbox including agriculture, water harvesting and hydrology, energy, natural building, forestry, waste management, animal systems, aquaculture, appropriate technology, economics and community development. (12.) This Model aims to revive a ghost town by means of agricultural production.

The **Albergo Diffuso** hospitality model was formed in the early 1980s to revitalize ancient Italian villages and town centres by revitalizing numerous historic structures, thus drawing tourists to unusual destinations. Albergo Diffuso, which translates to "scattered hotel," provides visitors with the opportunity to stay in historic places in rooms scattered around various buildings within a village, all of which are overseen by a central management system and hosted by a small group. Unlike a typical hotel, which has all of its amenities in a single structure, this type of hospitality consists of multiple units connected by a distance of no more than 200 meters.

As opposed to a hotel an "Albergo Diffuso" offers a more

authentic experience, feeling at home, contacts with local residents as well as courtesy and kindness, authenticity, non-standardised rooms, attention to detail, informal environment and a special link with territory. according to Russo, capitalizing on the authenticity of ruins by converting ancient populated sites into "slow" tourist destinations, primarily by international private investors, is controversial. (13.) Bulgarelli, on the other hand, believes that this particular model of historic site tourism growth has no negative environmental consequences because it expands in parallel with demand, with rooms being "regenerated" and added to the current network as required. (14.)

### Reality of Ghost Towns in Italy

Statistical research conducted in 2008 identified 1,650 municipalities at risk of becoming ghost towns by 2016, unable to reach the minimum threshold of 'survival' in the demographic, social, economic and services categories. These settlements represent one-fifth of Italian municipalities, one-sixth of the land area, 4.2 per cent of the population and 2.1 per cent of Italian workers" wrote May East on the current state of Italian depopulation Italy has 5,800 villages with fewer than 5,000 inhabitants each, all at risk of becoming ghost towns after younger residents left in search of work and a better life in the cities. More than 2,300 of those villages are virtually abandoned, according to renowned architect Stefano Boeri. (15.)

The most common initiative among Italian ghost towns is the famous 1 € promotion along with similar offers where local authorities in these areas are trying to sell off abandoned, often crumbling homes for the symbolic price of one euro in the hope of attracting new residents. The catch in this lucrative offer is that anyone interested in buying a €1 home must commit to renovating it. Many of the villages which started this kind of initiative are witnessing an influx of new residents of all ages, nationalities and professions. Some places are the new homes of seasonal citizens from northern Europe. While in some cases the initiative has failed due to property restrictions and disagreements between family members over who owned old houses. Other municipalities couldn't go through with their promises or were downright posting false advertisements to draw attention to their properties. (16.)

## Fragility and Marginalization

The site in question is plagued by many issues, fragility and marginalization is on top of the list. Having become a trademark problem of many mountain communities, fragility and marginalization have been a well researched topic for a while now. One of the reasons why it has been a topic of interest is that it affects many of the alpine communities which lie conveniently at the heart of Europe.

The alpine regions has been described as a heterogeneous territory for three reason. First the economic activities including agriculture, manufacturing, technology and tourism. Second the urban dependence of the Piemontese alpine territory to the Piemontese flatland. Third, the cultural isolation which had grave economic, demographic and social consequences causing continuous depopulation and eventually "regional disparities" within the same Alpine macro-region. (17.) Those traditionally considered to be "fragile" in this heterogeneity of Alpine territories are the areas affected by depopulation, a steadily negative demographic trend, limited production activities with few employment opportunities and a shortage of services for individuals and companies, in the broader sense of the term. The regions are usually characterized by (18.), (19.)

- Small/medium municipalities
- Main economic is agricultural
- Low level of industrialisation
- Little to no tourist activity
- Mainly elderly population
- Infrastructural shortcomings

The definition of such areas according to CIPRA (the International Commission for the Protection of the Alps) is "municipalities with structural and development weaknesses" (19.)

These areas are defined by a population of less than 300 residents, a predominantly elderly population and a high proportion of outbound commuters and consequently a negative demographic pattern. In particular, the territories affected by this situation of pronounced fragility include the Alps of Piemonte. Nevertheless, In most cases these seemingly fragile

areas have a significant potential to be uncovered or (re) valorized: Their uncontaminated natural environment, their unique architectural and cultural heritage, their connection to the territory. Along with the growing trend of amenity migration and the flexibility of smart working will turn these potentials into creative drivers.

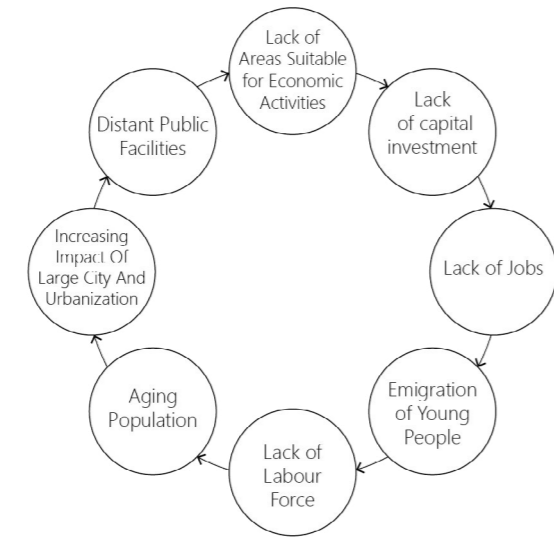


Fig. 4: Problems leading to marginalization in mountain communities

Bole states that the immediately observable issues of these communities can be linked to two main factors: lack of economic opportunities due to declining economic factors and "suburbanization" threat from larger Peri-Alpine metropolitan growth areas (MEGA) in this case Torino. The elaboration of the two factors are demonstrated in Fig. 4. Tackling these issues is key to improving the competitiveness in the Alpine context. (20.)

Furthermore redefinition of alpine towns' perceptions as measure of confronting marginalization is recognized as a strategy to deal with the dichotomies that have been accumulating in the collective mind. Four main principles have been conceived to counter the traditional view in which the notion of marginality is often synonymous

with impairment. Consequently, a new positive interpretation based on the territory, its particular features, its energies of change, the subjective and/or collective movements will help to redefine its identity. (22.)(23.) **Urbanity/alpinity:** considering the Alps as more than the remote rural tourist destination and start viewing it from an innovative perspective. **Dominance/dependence** shifting the strong predominance of the industrialised city over the rural periphery to establish a more balanced relationship between the plain and the mountains. **Fixity/changeability:** highlighting the ongoing adaptation of the territory, as opposed to the shared presumption where the alpine region is considered static, fixed. **Localism(s)/glocalism:** achieving a compromise between a localistic visions of development and regional/supra-regional development interests. (17.)

To conclude the Issues that plague mountain communities and lead to their dissolution are numerous but can be categorized into two: one category shows localized issues which can be tackled by direct interventions, the other shows issues on a larger scale that have been long brewing as a direct consequence of a broader policy of neglect. Due to the large scale and interconnected nature of the two categories they have to be resolved in tandem and through a bottom up intervention. Seeing the newly imbued potential of these communities can be a strong incentive for decision makers to invest in change that would render the mountain communities more competitive in attracting permanent residents.

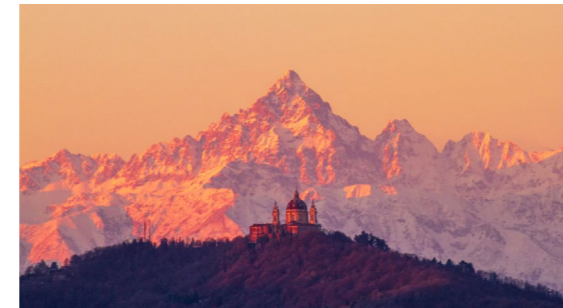


Fig. 5: Monviso as seen from Torino

## Post-pandemic Urbanism and Turnaround Migration

According to personalities with major insight on urbanism and architecture such as the Italian National Council of Engineers (CNI) head Armando Zambrano, and Renowned Architects Stefano Boeri and Massimiliano Fuksas: It would be foolish to return to life as it was before the Pandemic invaded Italy and triggered a strict lockdown as cities have proved to be vulnerable environments in sanitary terms. A sharp increase in people fleeing cities for the countryside is anticipated, after easing of the lockdown. As has happened in Italy in the 1970s, when young people left cities plagued by crime, economic recession, and drug use. Furthermore it has been stated that the countryside is at a hygienic advantage as the virus is weaker, not just because there are fewer social contacts but because the wind blows, there's less metal and plastic, as well as the vicinity to nature. (34.) And these experts aren't the only ones who are having second thoughts about city life. It is evident that contemplations of counter-urbanization can be observed, as searches for properties outside of urban centres have increased by 20% in the last two months, according to estate agencies around the country. (35.)

Attractiveness for residency is, first and foremost, a matter of individual choices made in accordance with their preferences, values, and prospects. In this light, the area's environmental and cultural beauty, work availability, land availability and price, as well as social bonds and contacts, must all be considered.

While the mountains are a popular seasonal migration destination, the same cannot be said about permanent migration. As exhibited previously the depopulation of the mountain regions is a key factor of an ongoing social and economic decline, and can even lead to the end of the traditional alpine civilization. (24.) The repopulation of mountain regions was first noticed in the mid-1980s. The pattern was more pronounced in the western part of the Alps in the Cuneo Valleys: Maira Valley, Varaita Valley, and Po Valley; the same valleys that were most influenced by emigration in recent decades. (25.) (26.)

The phenomenon of Turnaround migration is fairly new and has been under the scrutiny of researchers for a short time. It can be described as a spin-off of the concept of counterurbanization coined by Brian J. L. Berry in his work Urbanization and Counterurbanization, where he describes it

as the new found value of rural areas as areas of residence and added forms of commerce. (28.) Turnaround migration, sometimes referred to as demographic turnaround focuses on the effect of having a higher incoming migration rather than outgoing. (29.) (30.)

People who choose to migrate to mountain areas fall into three categories; Economic migrants (27.) or necessitati (22.) are people who settle in the mountains for economic purposes. Third-age migrants (33.), who relocate there after retirement. Amenity migrants (29.) (33.), or migrants who choose to relocate to a non-urban setting (in this case, a mountain area) because of the high environmental importance they put on it and the assumed higher quality of life. It has been argued that the new migrants not only bring about revival of the local economy but theirs has been characterized as active territoriality. Demonstrated by the fact that they wanted to settle in the mountains on purpose, the advantages of new blood in the population. In previous repopulation efforts show that the repopulation consequences does not merely stop at keeping the place alive with economic contributions but shows that the new citizens are engaged in projects for the development of the territory.

As a result, their attitudes and projects vary substantially from those of people who were born and raised in the mountains, who absent-mindedly take a passive stance toward the area's drawbacks. This proves that the revival efforts are characterised by technology and the motivation that renders it self sustaining and would lead to a socio-economic model that promises autonomy and perpetuity. (32.)

However the repellency of cities are not sufficient to realize a sustainable and well balanced counterurbanization movement. The main drivers for Turnaround Migration and repopulation of marginalized areas are providing facilities. According to Boeri, the government could "adopt" rural areas and attract potential residents to move there, relieving pressure on cities, by offering tax benefits, upgrading transportation connections, and building broadband to facilitate working from home. Nonetheless it has been argued by Pettenati that although sometimes repopulation can be spontaneous and takes place even without targeted policies, there cannot be a new, solid and widespread repopulation, without basic services. (32.) According to Marco Bussone, the president of UNCEM, a collective union of mountain towns and villages, persuading

Italians to vacation in hamlets in the hopes of deciding to settle will be difficult. Long-term attraction will entail climate change risk management in mountainous or flood-prone areas, improved schooling or childcare, and the installation of the internet. (34.)

Further to the above basic requirements for modern life PADIMA (Policies Against Depopulation In Mountain Areas) states three approaches for sustainable repopulation in Mountain areas: **Education and training:** The educational and training offer must be in line with the present and future interests of the local economy and culture, furthermore it must provide young people and adults with the necessary professional development programs. **Territorial marketing:** despite the fact that mountain regions can provide a higher quality of environment than cities in the plains, these areas have a misleading perception of remoteness and cultural isolation. Attractiveness is determined by these areas' ability to regain identity and renew their reputation among residents and visitors. **Economic diversification:** Diversification of the economy: Some mountain economies are too reliant on conventional industries (agriculture, winter sports, etc.). To keep appealing to the working-age demographic. Accordingly career diversification and ensuring the transmission of current industries to younger generations are critical to attract this specific demography. Notwithstanding it is important to note that different migrant profiles may require different types of welcoming services, thus determining the target migrant profile should be a priority when formulating policies. (36.)

To conclude the counter-migration phenomenon is gaining momentum due to the restrictions set on the city. This gives the opportunity for the lesser dense communities to compete for the residency of amenity migrants. The value in new residents lies in recovering the area from depopulation as well as revive the territory economically. Furthermore it has been argued that the amenity migrants take active territoriality which affects their new area of residency positively in terms of organization and decision making. As a prerequisite to become attractive for this category of remote workers it is important to fulfil certain lifestyle conditions as well as improve environmental edge they have to cater for the needs and expectations of the new residents.



## Teleworking

### Definitions

There are many words describing the recently contrived work routine forced upon many office employees. Home office, Mobile working, Teleworking, Smartworking and Agile Working are among most common terms related to this new work-styles/work-settings. According to the Cambridge dictionary, Teleworking is the activity of working outside the office, while communicating with your colleagues and clients by phone or email, using the internet. "Smart Working" and is synonymous to "Teleworking" although not recognized as a term by any English dictionary. "Home Office" describe "doing paid work at home and not in a company's office or factory". And "Mobile Working" is work setting indicating that "someone works in more than one place or travels as part of their job". (37.)

On the other hand the term "Agile Working" refers to something completely different, while the previous terms where describing Work-styles, "Agile Working" is a work setting description it incorporates dimensions of time and place flexibility, but foremost it involves doing work differently focusing on performance and outcomes. (38.) It is important to mention that according to Italian legislation the words Smart Working and Agile Working are synonymous. (39.)

For the sake of this study only the work-style formats will be examined. Teleworking will be the term of choice.

**Reflection on Office Buildings.** One of the most city-specific places is the commercial building. From an architectural point of view the office space was designed to allow access to shared services such as copy machines and archives and later computers, printers, and network connection. However with the introduction of cloud storage and the move to paperless workplaces, the office is turning into a place to form social interactions, create corporate culture, host clients, and attract talent.

Following this line of thought around 50% of the workforce at an office are working from home at any given day, which would render moot the system of companies paying for full office space. Specific office

spaces may be diminished as a consequence of this, causing businesses to rethink their office configurations in the long run and step away from assigning permanent desks. In light of the high cost of rent in big cities, companies will not be able to afford the expense of square feet depending on the types of jobs that employees are assigned to do. Teleworking may be a tactic for saving money and lowering real estate costs, in addition to being a tool for attracting and retaining talent.

In light of the paradigm shift caused by the global pandemic certain questions arise that require reflection. Arguing whether practices will need as much conference room space in the future. Understanding the types of work activities that can best be performed inside/outside the office. Examining the reduced role of the office, will it just have the purpose of hosting clients and conducting interviews? Discussing whether teleworking will be the end of office work culture. (40.)

With this in mind it is important to understand the dynamics of a new entrepreneurial Ecosystem; the **Co-Working Space** (CWS). Under the slogan "working alone together" CWS are creating a new environment which feeds innovation and creativity. Although this practice is fairly young, and hasn't been around before the late 2000s, it has caught traction seeing more than 2.2 million people around the world using CWS according to a survey conducted by DeskMag (40.). This phenomenon is partly due to a growing novel species of workers namely entrepreneurs and freelancers, which are breaking the organizational hierarchy, redefining societal conventions, and constantly experimenting with innovative work processes and unorthodox workplaces, and are challenging the traditional way of how and when to work. (41.) (42.)

Coffee shops, libraries, and hotels all have the charm of being transitional places between home and work, free of distractions. At the same time, they provide a social and inspiring environment. Despite the popularity the common drawback is that the main service they are



Fig. 6: Ex church CWS in Piacenza

designed to provide differs and does not fulfil all the needs of a work space. (43.) Accordingly the success of CWS is predicted to continue growing and as a consequence to lead to urban revitalization. (44.)(45.)(46.)(47.)

Additionally it has been argued that CWSs can have positive impact on the environment and have the potential to support sustainability, (48.) Furthermore it has been noted that the CWS have beneficial effects on society as they cultivate a sense of community, family, and friendship, which is a motivator for people to make a difference. (49.)

This leads to the question of whether an increase in co-working spaces in suburban and periurban areas can be predicted for those people who choose to stay away from the city.

Another form of Teleworking which deserves inspection is the **Home Office**. The history of working from home surpasses that of the conception of the office, specifically it started around the Renaissance era where merchants and craftspeople created a space in their own homes specifically designated to conduct their business. The home office's purpose reduced with the dawn of industrialization where employees were expected to conduct work at a centralized space where the employer provided them with equipment; factories



Fig. 7: Space Saving Home Office and Offices. (50.)

As teleworking was gaining traction so was the home-office. Considerations behind assigning a specific space in the home to house clerical functions are currently being discussed. Concerns of ergonomic workspace provision and personal preference in interior design are being discussed as the home blends with corporate culture. Questions arise whether these aspects shall be a topic of discussion in the hiring process in some firms, or whether the living arrangements and choices be scrutinized favouring candidates that have the most pristine homes. Will the employer be responsible for providing ergonomic furniture? However one of the



Fig. 8: Travel CWS

most difficult challenges in creating a home office is the question of space. (52.)

Riding this wave of decentralization and the new found balance between career and indulgence the entrepreneurs behind everywhere propose a unique melange under the slogan "travel experience work". The **Teleworking initiative** born in Puglia is a platform offering a customizable experience including accommodations with work-friendly facilities as well as unique travel value. (51.)

### Advantages and Disadvantages

While observing the advantages and disadvantages of Teleworking it is important to differentiate between two main stakeholders and to measure their benefit equally, namely the employer and the employee. Companies can gain tangible and relevant advantages from implementing Smart Working, such as increased workplace satisfaction which translates into higher productivity, lower absenteeism, and lowered facility costs. Furthermore this increased trust between employer and worker followed by result-based accountability, leading to more company competitiveness and productivity. (52.)

In addition to having the right to receive all the benefits including injury compensation the employee can benefit from an improved work life balance. Allowing the employee a comfortable environment of his choice

can significantly decrease cumulative stress and allow for increased work efficiency. Reducing commute not only saves money and spares the environment significantly it also reduces the stress of driving on busy streets and relieves the city streets of rush-hours. The aforementioned trust work-format which is result based rather than observing time quantity is gives the employee an boost in confidence. (42.) On the other hand the drawbacks of the Teleworking format are loneliness, distractions and blurred distinction between home-life and work-life. Additionally it has been argued that the reduced friction at the workspace might lead to a decrease in innovation and creativity. (43.)

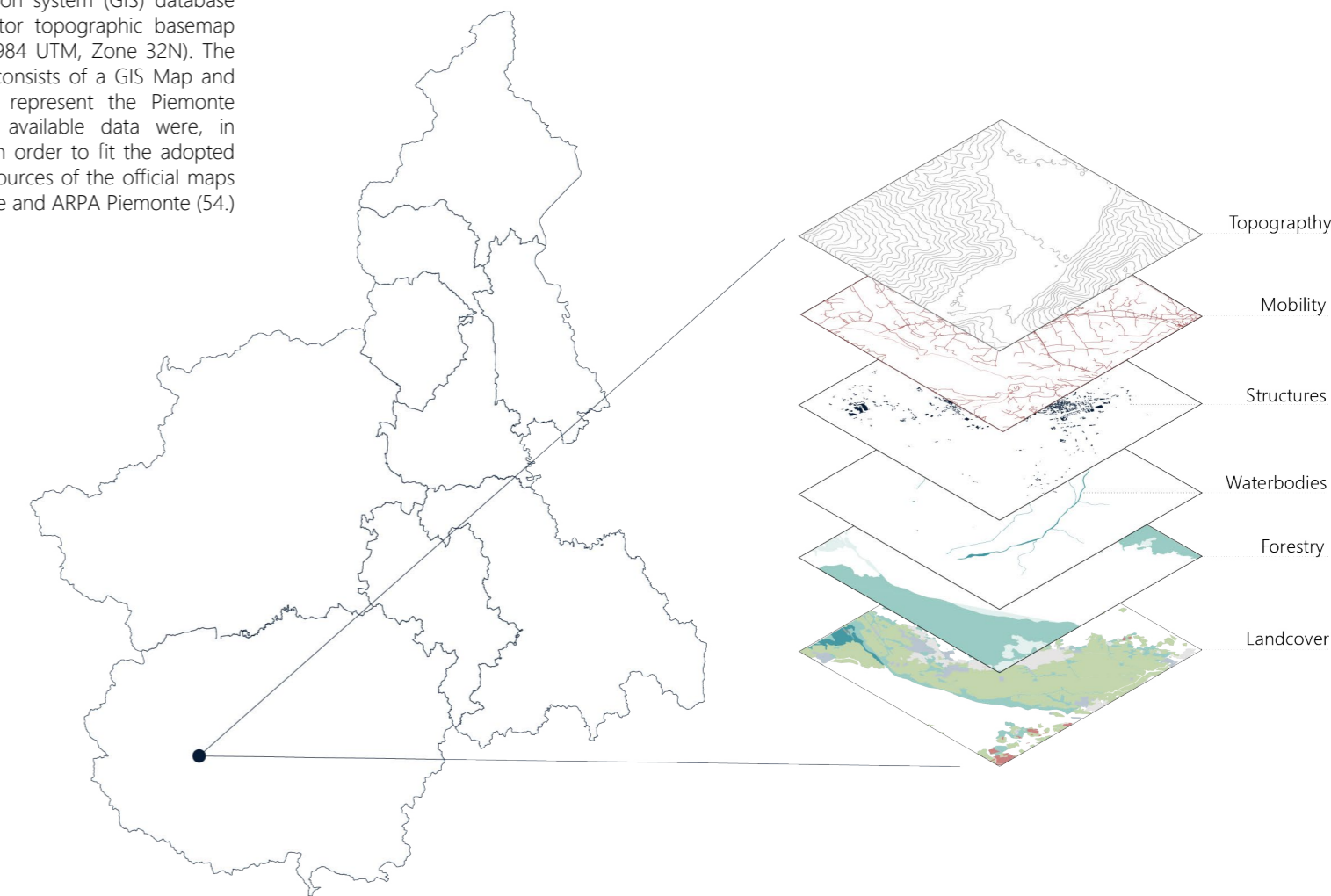
Remote working can be deployed in a number of ways, including having all employees work remotely, a number of employees work remotely, or having employees work remotely on specific days, a combination of working in the workplace and at home. Working from home on particular days of the week, such as "online Fridays," could become a trend. If more employees work from home one or two days per week, their personal desk usage might be reduced. This could encourage business owners to turn to the use of hot desking or hoteling, which could be compensated by more office facilities and larger desk footprints to allow for physical distancing.

To Conclude, the values of work related and spaces are always morphing and keeping up with the Zeitgeist. In this moment the requirements have changed from a centralized function to allow for more decentralization and customization in the workplace. A blend between a distinct work environment and comfort while keeping a lot of the decision making in workplace choice in the hands of the employee is can is a formula that doesn't rely on the city. This flexibility provides new opportunities for architects and urban planners experiment with areas that have been neglected due to their separation from working centres. This experimentation might lead to the revival of said areas.

# 02 Research Methodology

## Methods of GIS

The Piemonte Geological Map is drawn at 1:250,000 scale and covers an area of approximately 25,400 km<sup>2</sup>. Geological data derive from a thorough revision of official and unofficial geological maps, which have been integrated with original data. Data were stored in a geographical information system (GIS) database and represented on a vector topographic basemap (Coordinate System WGS 1984 UTM, Zone 32N). The Piemonte Geological Map consists of a GIS Map and Geodatabase compiled to represent the Piemonte demographic trends. The available data were, in some cases, reinterpreted in order to fit the adopted classification scheme. The sources of the official maps are the Geoportale Piemonte and ARPA Piemonte (54.) (55.)



from 0 to 7% : low growth in population  
 from 7% to 15% : moderate growth in population  
 from 15% to 30% : high growth in population  
 above 30% : critical growth in population

from 0 to -7% : low drop in population  
 from -7% to -15% : moderate drop in population  
 from -15% to -30% : high drop in population  
 above -30% : critical drop in population

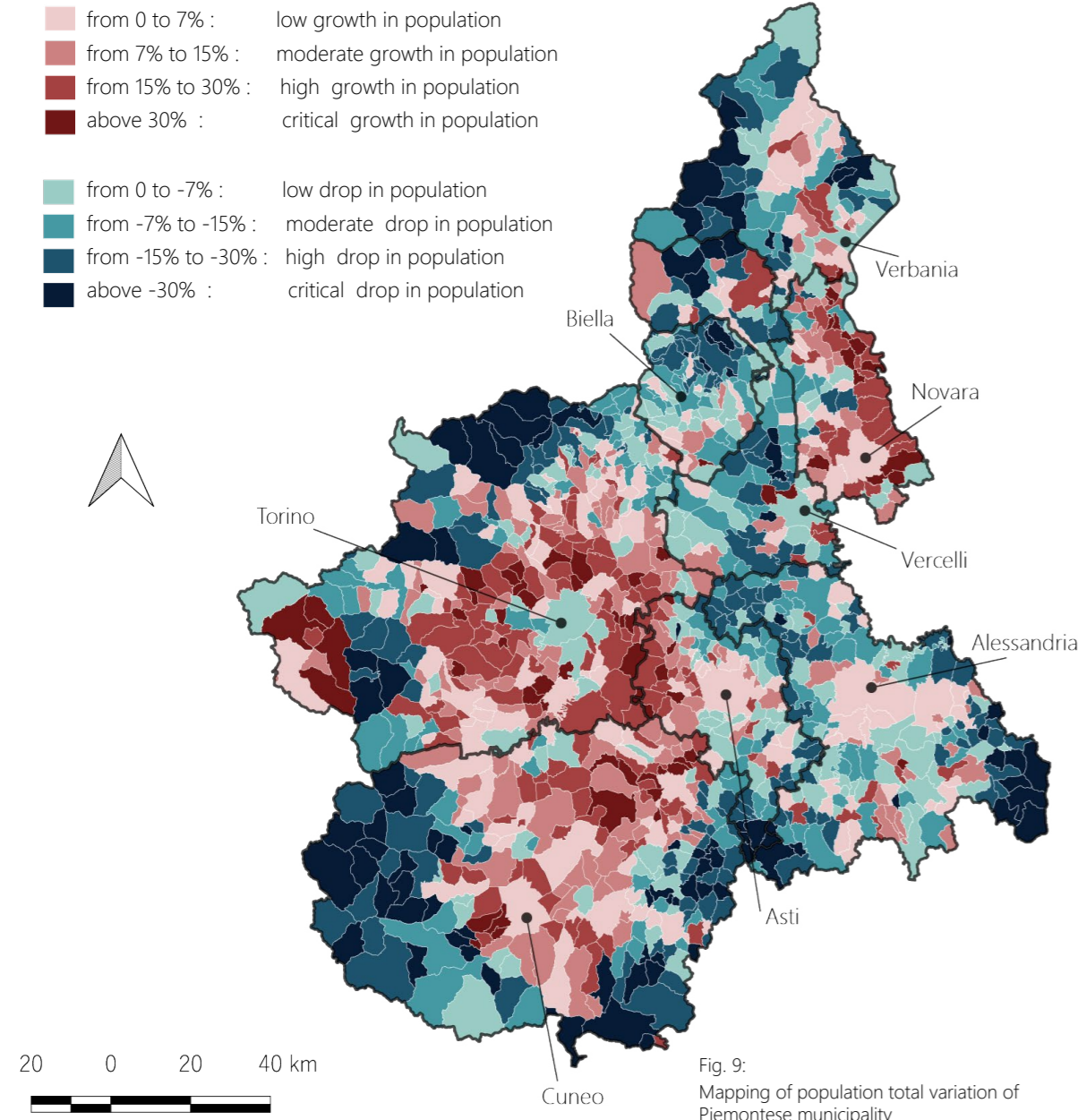


Fig. 9: Mapping of population total variation of Piemontese municipality

### Data and Methods

This study was conducted by using ISTAT (National Institute of Statistics) census data of the Italian municipalities for the period of 1991–2020 with a 10 year interval. The population variations between two different censuses were calculated for every inter-census period, in this case 3 periods were calculated) to be able to arrive at a rate that can be generally compared with disregard to the size of each municipality each variation calculated was then divided by the earlier of the two censuses and multiplied by 100.

$$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$$

This abstraction allows the viewing of the rate of population decrease and predict which municipality is in the process of becoming a ghost town with disregard to the remaining population the percentage of abandoned structures in the municipality is the decisive factor for this study. Depopulation rate is measured by the negative percentage variation in the population of a municipality, while an increase in population is a positive percentage variation. The following step was adding the three calculated percentage variations to come up with a total trend for each municipality. (57.)

$$var_{total} = var_1 + var_2 + var_3$$

The total trend was then organized into 4 categories for the negative trend and 4 for the positive trend. Since the number for the mean depopulation indicator in Italy from the 60ies till the 90ies lay around 7% (57.) The categorization of the municipality depopulation indicator conformed with this number. Following the data was assigned to the respective municipalities using QGIS. Negative trends were assigned a blue gradient while positive trends were given a red gradient with the darkest shades showing the most critical rise/fall of municipality population. This step was essential to visualize the depopulation in reference to the geographical location of each municipalities and help define clusters of depopulation in the region.

### Depopulation in Piemonte

In total the percentage of municipalities with a negative population variation lies at 52%. This value is extreme seeing as in Italy the percentage of municipalities showing depopulation indicators lies at 18% among the whole of Italy. This puts Piemonte as a region at the forefront of the abandonment hazard. The visualization showed clusters of critical depopulation in the peripheral areas, systematically in the alpine region of piemonte. While the core of piemonte showed a critical positive variation cluster. The mountain area municipalities in Piemonte which fall under the category of high and critical drop in

population are 145 municipalities. This amounts to 43% of all mountain municipalities with population trends lower than -15%. As can be seen in table 1 in comparison with the pianura Piemontese (plains of Piemonte) the mountain municipalities show higher concentrations of high and critical depopulation. The evident deficient trends in the mountain areas and the fragmentation between mountain and plain depopulation raise the question why are these alpine municipalities being aggressively abandoned.

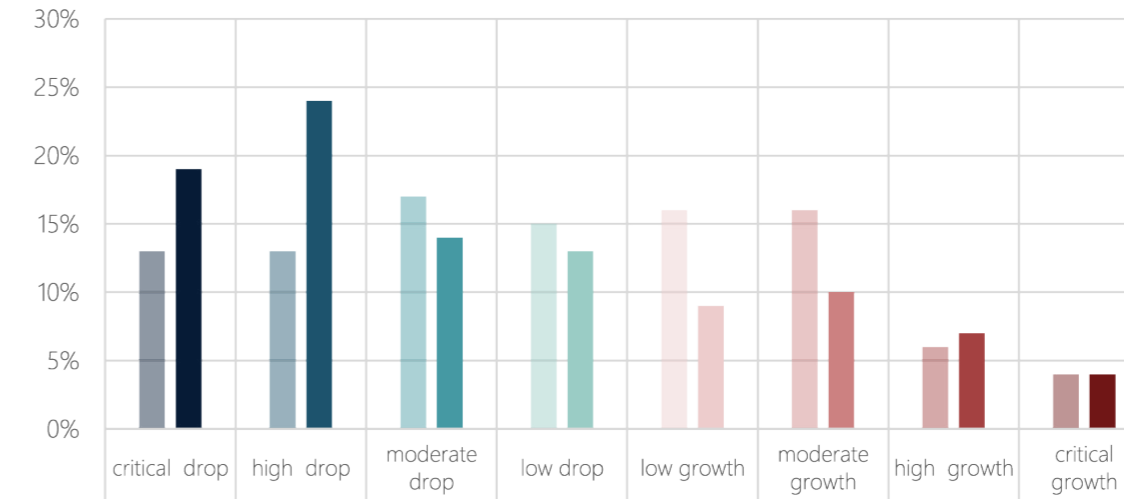


Fig. 11: population trend comparison between the mountains and plains municipalities

	critical drop	high drop	moderate drop	low drop	low growth	moderate growth	high growth	critical growth
Plains	13%	13%	17%	15%	16%	16%	6%	4%
Mountains	19%	24%	14%	13%	9%	10%	7%	4%

Table 1: population trend comparison between the mountains and plains municipalities

Municipality	census <sub>1991</sub>	census <sub>2001</sub>	census <sub>2011</sub>	census <sub>2020 (estimate)</sub>	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Acceglio	238	197	174	156	-17%	-12%	-10%	-39%
Acqui Terme	20357	19184	20054	19732	-6%	5%	-2%	-3%

Table 2: sample of piemonte municipality population variation table



Fig. 10: Val di Suza

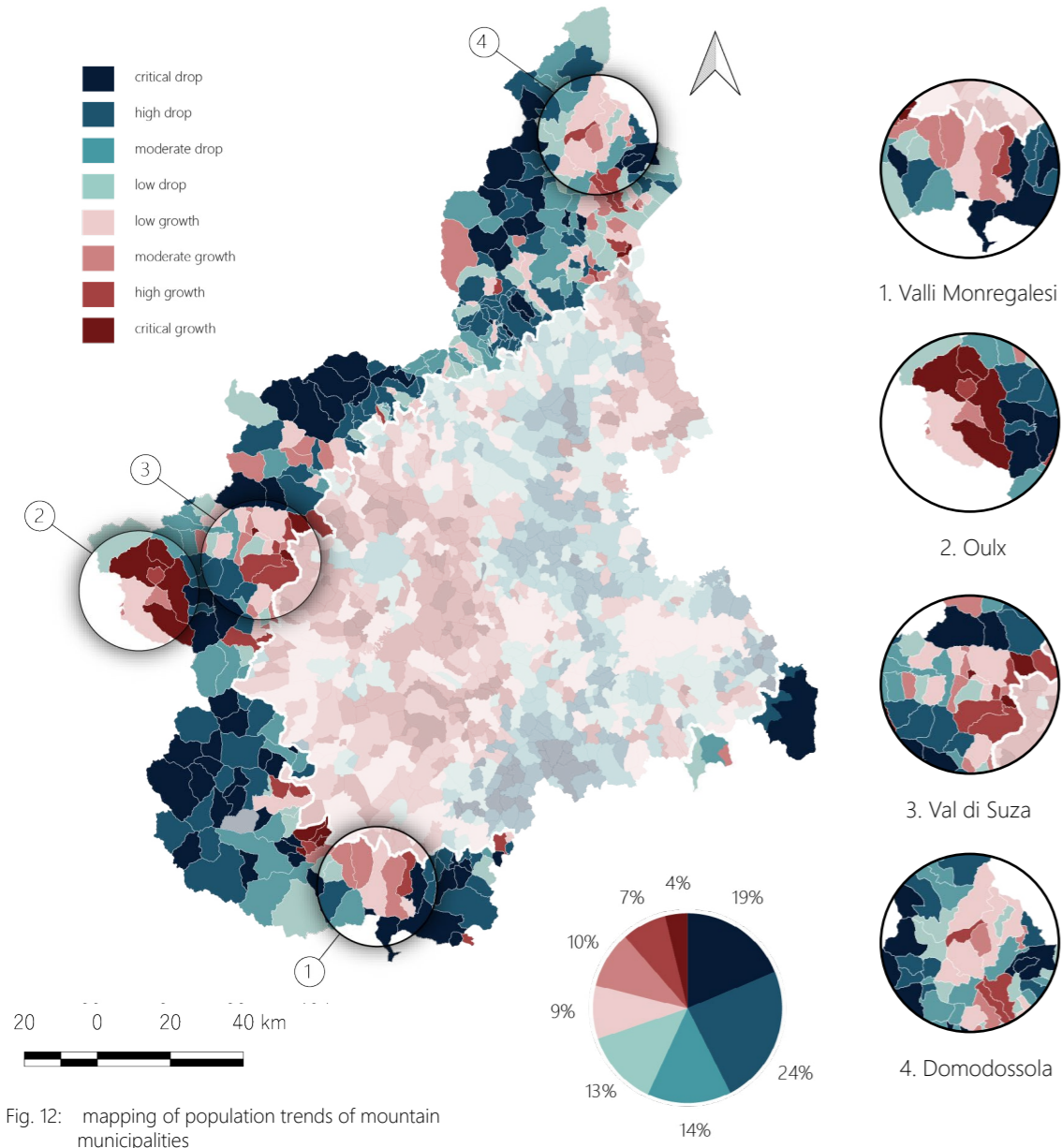


Fig. 12: mapping of population trends of mountain municipalities

**Population Growth**

As demonstrated most alpine municipalities in Piemonte are seeing a negative birth-to-death ratio. Nevertheless there are some mountainous areas that are not affected by this phenomenon. In-migration is the primary cause of population growth. The majority of in-migrants are of domestic origin (from the same country), although there are also large numbers from other countries.

1. Pesio Valley is one of the areas of the Piemontese Alps that is observed to be not in threat of depopulation. It is located approximately 25km south of the city of Cuneo. The Valley is frequented by sportsmen, mountaineers, speleologists. It also offers a strong cultural experience ranging between wine and food to ancient forts and ruins.

2. The Oulx area is located at the westernmost point of Piemonte at the higher Suza valley, on the borders with France. (58.)

3. The lower Suza valley is also seeing a growth i population, the reason is that the Valle di Suza one of the joints of the Milan-Lyon Alpine Corridor. (58.)

4. Domodossola is the city with the largest number of people in the province of Verbano-Cusio-Ossola. The area and it's surrounding are fully inserted in the transnational strategic platform of Corridor 24 "Dei Due Mari" including a plan of introduction of a new Airport. (58.) Furthermore the is also rich in resources such as the mountain heritage and it's vicinity to Val d'Aosta, a popular travel destination for winter sports and hiking.



Fig. 13: Domodossal and the sacred mountains

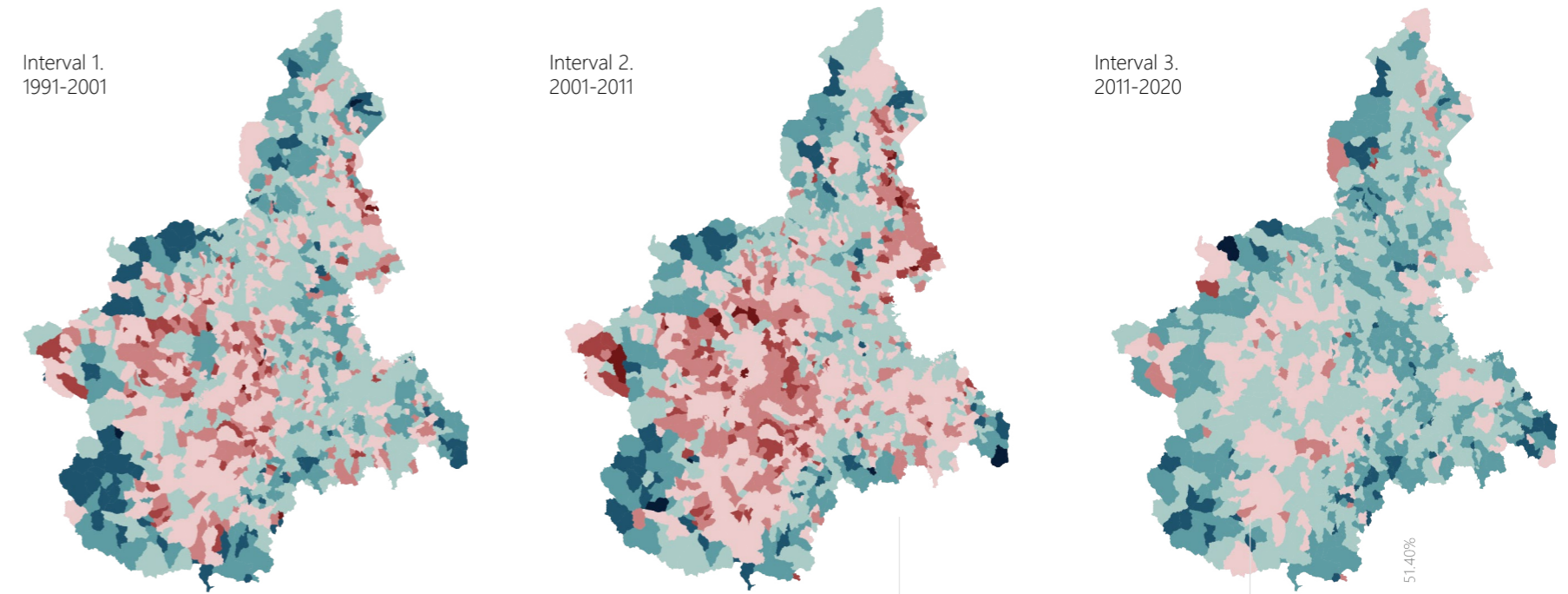


Fig. 14: Mapping of Piemonte municipality interval population variation

**Intervals**

The analysis of the intervals shows a similarity between the first two intervals; moderate and high depopulation in the mountain areas and steady hike in population in the pianura Piemontese and municipalities neighbouring the region of Lombardia as well as some municipalities in and around the areas of Oulx and Val di Suza. The last interval shows an acute hike in depopulation vanished completely while other positive population trends have taken a sharp drop. Some of the zones that were previously categorized as municipalities with moderate/high population growth have now shifted and to show negative population trends. Categories like critical population growth have

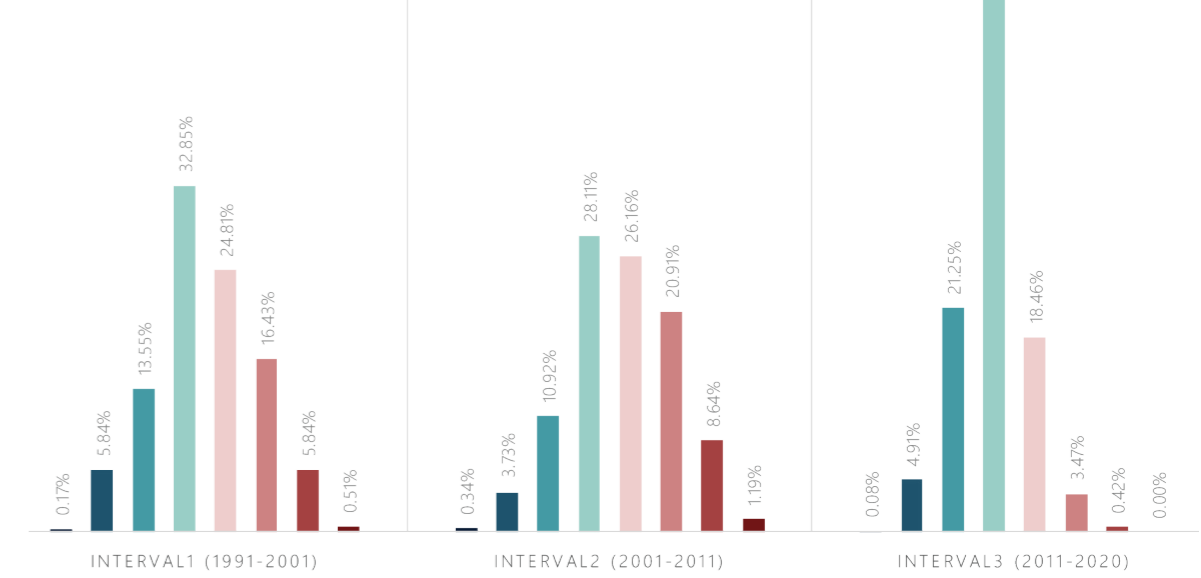


Fig. 15: Comparison of the population variation by intervals

## 03 Case Studies

### Torri Superiore

#### Ecovillage

##### Historical Background:

The origins of the medieval town Torri Superiore are unknown, but it may date from the late thirteenth century, when the city was experiencing great social and religious instability. This would explain the village's compact architecture remarkable for its width and height, which would have offered good protection to its residents.

##### Geographical Setting:

The village is located near the coastal town of Ventimiglia, at the foothills of the Ligurian Alps, just a few kilometers from both the Mediterranean Sea and the French–Italian border.

##### Urban Background

Torri Superiore is a rare urban layout with many five-story houses, 162 rooms laid out in an extraordinarily intricate nature, built entirely of local stone and lime over several decades. A complicated labyrinth, a network of rooms and passages interwoven and spread with surprising links, is created by narrow passageways, stairways, terraces, and alleys. The village is 50 meters long in the north–south direction and 30 meters long in the east–west direction. The gross area covered is about 3,000 square meters.

The buildings of Torri Superiore were constructed in stages over the years, with the final sections likely completed towards the end of the eighteenth century. People started to leave Liguria due to a lack of jobs at this stage, and the village eventually became deserted. (61.)

##### Intervention

A team of researchers, professionals, and activists began the process of negotiating the purchase of the deserted village and establishing a cultural organization and sustainable society in the late 1980s. Early on in the process, it was decided to renovate the building using environmentally friendly concepts and materials

wherever possible, while maintaining its original character. Torri Superiore was retrofitted over a 25-year cycle in a thorough collaborative self-build process that used natural resources and appropriate technology while remaining compliant with municipal building codes and the village's historical framework. (62.)

Wherever feasible, the settlement renewal adopted ecological standards while maintaining the medieval village's original character. Local stone, for example, was used on both exterior and internal walls, which was considered a rare novelty in the region. As stone houses were synonymous with a grim and miserable history, something to be ashamed of that had to be avoided at all costs. (63.)

Lime plaster walls and washes, non-tropical wood for windows and doors, insulating cork, and locally manufactured terracotta floors were all used by the society. 'Banning cement plaster, styro-foam panels, aluminium windows, and synthetic paints made us look like naive eco-idealists, but it paid off in the end,' according to one of the creators. (63.)

##### Impact

The medieval village was reborn as an ecovillage, tourist attraction, and cultural centre, complete with



Fig. 16: Torri Superiore before the restoration intervention



Fig. 17: Ecovillage of Torri Superiore

guest accommodations and apartments for residents, a central solar, biomass, and gas heating system that operates at low temperatures underneath the floor and on the walls, permaculture gardens and fruit orchards, and organically farmed olive groves.

Torri Superiore has a high degree of social engagement and inclusion, which is well-structured under its cooperative and organization structures, maintaining power and duty sharing and modeling deep democracy processes, which participants often teach to other communities and individuals. Residents of the ecovillage have evolved strong dispute-resolution processes over time to ensure that both voices are considered if a conflict arises, and that judicial action is only used as a last resort.

With a strong social infrastructure in place, it's unclear if community-led interventions like Torri Superiore will help with the rebuilding of deserted villages in southern Italy, providing a quick response to the rising need for housing amid record-breaking refugee waves. (64.)

## Borgo de Castelvetere

Albergo Diffuso

### Historical Background:

The origin of the town dates back to the first barbarian invasions and, perhaps, even to the Roman era as can be deduced from the unexplored ruins near the inhabited area and from the antiquities found. Castelvetere has had a long medieval history, often linked to that of the nearby town of Montemarano, with which it shared the fate of the various feudal families that dominated the area. (65.)

### Geographical Setting:

The town of Castelvetere is located in the rural province of Avellino, Campania. It is flanked by the course of the river Calore. The village is home to many ancient religious buildings, such as the Parish Church of Santa Maria Assunta, and some historic buildings, while at the entrance to the village is the Fontana dello Zoppo, an ancient public wash house. Castelvetere sul Calore is a territory with a strong wine-growing vocation, especially for Aglianico grapes. (66.)

Following an earthquake in 1980, the town of Castelvetere started the Villages of Tradition – Recovery and Rehabilitation of Four Medieval Villages project in 1996.

The initiative was part of a larger strategy aimed at boosting tourism in the Irpinia mountain region by creating a network of traditional villages with valuable architectural and environmental profiles. (67.) Using the public–private collaboration model, the initiative ‘acquired’ vacant buildings that were then turned into tourist accommodations, craft stores, museums, and educational spaces.

The Albergo Diffuso model was subsequently implemented as the plan for the restoration of Castelvetere’s historic centre, and the Albergo Diffuso Borgo di Castelvetere has been advocating an organized approach to socioeconomic reconstruction in the city since 2004.



Fig. 18: Albergo Diffuso of Brogo de Castelvetere

Between 1996 and 2002, a renovation project was carried out that implemented the use of local and recycled materials. The renovation has involved structural non-invasive procedures to enhance the buildings’ seismic response and the use of environmentally friendly materials. In addition Borgo di Castelvetere opted for renewable biomass technology for its energy production.

Overall, the historic centre of Castelvetere’s architectural rehabilitation has reinforced community identity, created new opportunities, and encouraged traditional craftsmanship.

Allowing reforms while maintaining the value and appropriate interpretation of the historic site is a central technique under the Albergo Diffuso concept, which was properly carried out in the Borgo di Castelvetere example. (64.)

The main limitation of incorporating AD as an approach for the revitalisation of abandoned villages is the need to balance the commercial initiative with the local

territory’s planning strategies while engaging the cooperation of the deserted village’s neighbouring communities. (64.)

Designing a multi-staged regeneration approach, as illustrated by the ghost town Apice Vecchia, is a structural way to overcome this problem. The project began with the restoration of its medieval castle, and now it is seeking proposals for small businesses and B&Bs to return to the city, with the aim of creating an economic base and eventually attracting new inhabitants, who could then serve as a base for the development of an Albergo Diffuso. (68.)

## Smartworking Villages

Courmayeur

### Background

Courmayeur is an alpine town in Valle d’Aosta in north-western Italy, at the foot of Mont Blanc. In the last 50 years Courmayeur has been on a steady population growth due to its flourishing touristic activity. It is one of the most important Aosta Valley and Alpine tourist centres in general, especially for winter sports. Due to the Covid-19 pandemic regulations Courmayeur’s steady touristic income has been seeing a decrease in numbers. Between June and July, the number of foreign tourists to Courmayeur, fell by more than two-thirds year on year. (69.)

### Smartwork village Initiative

“Whether he sleeps in a hotel, apartment or home, he wakes up surrounded by very high peaks. Fill up with energy with a walk, a run, a little yoga, breathing in the pure air of Mont Blanc, before getting to work.” Is how Courmayeur describes its smart working manifesto through a marketing campaign on their official website. (70.)

According to the mayor Roberto Rota the aim was to contribute to the affirmation of a different tourism model, more in line with the values of Courmayeur. For him and the community of the village it is not just about stopping the drop in tourists due to the pandemic, but about acting in a long-term perspective. For this reason, as a community, the decision was that smart working is the main way to go to improve the lifestyle, to find balance and harmony in a mountain landscape.

The little alpine town of Courmayeur is pioneering the front of remote smart working mountain village. Assuring a breathtaking landscape and a capable high speed internet connection they intend to attract smart working tourists as well as permanent residents to live and work in this serene valley. This a new model aims at a balanced work activity and an anti-stress lifestyle. Many hotels have already converted rooms and conference halls to video conferencing facilities and work stations complete with internet connection, desk and printer. (71.)

Furthermore they provide a provocative concept the “Skyway Monte Bianco smart working ticket” in which a person can take the funicular to the top and work directly in the panoramic cabins overlooking great alpine peaks such as the Mont Blanc, Monte Rosa, the Matterhorn, Gran Paradiso and the Grand Combin. While this exclusive working experience and a unique live background for your zoom meeting is alluring to some, it could be argued that it is disrespectful to the sanctity of the Mountain Peaks and the serenity and instant meditational



Fig. 19: Courmayeur Smart Working Village Marketing Campaign

state of mind brought just by walking to be polluted by a hectic office style computer work and stress. Nevertheless the initiative is still in an early stage and it is yet to yield observable results.

Santa Fiora

### Background

Santa Fiora is an Italian town in the province of Grosseto in Tuscany home of 2 542 inhabitants. The town has been seeing a steady decrease in the population for the last century. (56.) The limits of the town extend for almost 63 km<sup>2</sup> between hilly and mountain territory in the area of Monte Amiata, which is a mountain group of volcanic origin, located in the Tuscan Antiappennino. The town gets its charm from the medieval centre which is built on a cliff overseeing the Fiora river. This setting has earned the town a place in the list of the most beautiful villages in Italy and thus had lead to a flourishing touristic influx up until the Covid-19 pandemic.

### Smartwork village Initiative

In the case of Santa Fiora it is an entire municipality that proposes itself as a smart working village. According to mayor Federico Balocchi the village regards remote work not just a temporary solution to deal with the emergency, but it represent the future. At least for certain professions, smart work will be the norm as it has been proven that physical presence is not a must anymore. Balocchi explains that the village offers many services and amenities which shall incentivise working families to stay permanently such as nursery, kindergarten, school,

sports facilities and a youth centre.

Furthermore he adds that while some people enjoy the fast pace of the city others have been forced to reside in it just for keeping their job. Aside from necessary prerequisite of ultra-broadband the village offers the edge of a simple life which some will find quite appealing. The village intends to address the workers of Italy, through a tender with a financial endowment total of 30 thousand Euros, to cover 50% of the rent, to those who want to live for a period in Santa Fiora, working remotely. The incentives paid will cover the expenses incurred by the worker for the rental of the house, up to a maximum of 50% of the expenses incurred, for a monthly amount not exceeding 200 Euros and for a duration not exceeding six months, if necessary. To be extended by the Municipality. (72.)

While the financial incentive is alluring to a certain category of amenity migrant with medium income it is unclear whether the call yielded any interest. As a conclusion early results of the initiative are yet to be examined.

Although the two examples are offering the brand of smart village they are in contrast in terms of the stakeholders they are targeting. While Courmayeur is offering a posh stay at a hotel and exclusive facilities to be used as workspace additionally Courmayeur is not mentioning any motivation directed at families with children. Santa Fiora is offering a more humble approach by subsidising the accommodation temporarily as well as promoting the services they offer for families with children. It is also important to observe that while the two examples mentioned are suffering temporarily from decreased income they are not ghost towns and thus cannot be in direct comparison with abandoned towns that are trying to recreate a new image as smart working villages.



Fig. 20: View taken from the northern cliff overseeing the river Fiora and the medieval centre

## 04 Val Varaita

### Backgrounds

#### Geographic Setting

The Varaita Valley is a 60 km long valley at the French border. It is the southernmost of the Saluzzo valleys, from the outlet at Costigliole goes up in a westerly direction to the Casteldelfino basin (about 38 km), flanked by the roughly parallel ridges of the two alpine buttresses that join the ridge of the southern Cottian Alps with the piers of Pelvo d'Elva (m. 3064) to the south and of Monviso (m. 3841) to the north. In Casteldelfino it forks into the Bellino valley, which rises between wild walls to meet the Colle d'Autaret, and into that of Chinale, into which the steep valleys that cut into the south and west sides of the Monviso converge.

#### Administrative Layout

It contains 14 municipalities (Bellino, Brossasco, Casteldelfino, Costigliole Saluzzo, Frassino, Isasca, Melle, Piasco, Pontechianale, Rossana, Sampeyre, Valmala, Venasca, and Verzuolo). A Provincial road runs through the valley and connects it to the French Vallée du Guil through the 2,748 m high Colle dell'Agnello. Total population is 18,617 (2007) (56.), Mostly in its lower part. Albeit not part of the valley, Saluzzo (16,669 inhabitants) delivers to it most urban functions and constitutes the link between the valley and the rest of Piemonte.

The valley begins at 400 meters above sea level in Costigliole Saluzzo and develops towards the west in an almost straight direction as far as Casteldelfino, where it forks into the Varaita di Bellino and Varaita di Chianale valleys. The main road climbs the latter up to Colle dell'Agnello (2744 m), which closes the head of the valley upstream, leading to France, in the Queyras region. The entire valley is crossed by the Varaita stream. Some secondary valleys branch off from the main valley, of which the main ones are:

The Valley of Gilba: starts in left bank in Brossasco, and up towards the north-west to the Colle di Gilba (1524 m)  
Valmala: originates on the orographic right at the Valcurta bridge, between Brossasco and Melle, and goes up towards the south; the head does not culminate in

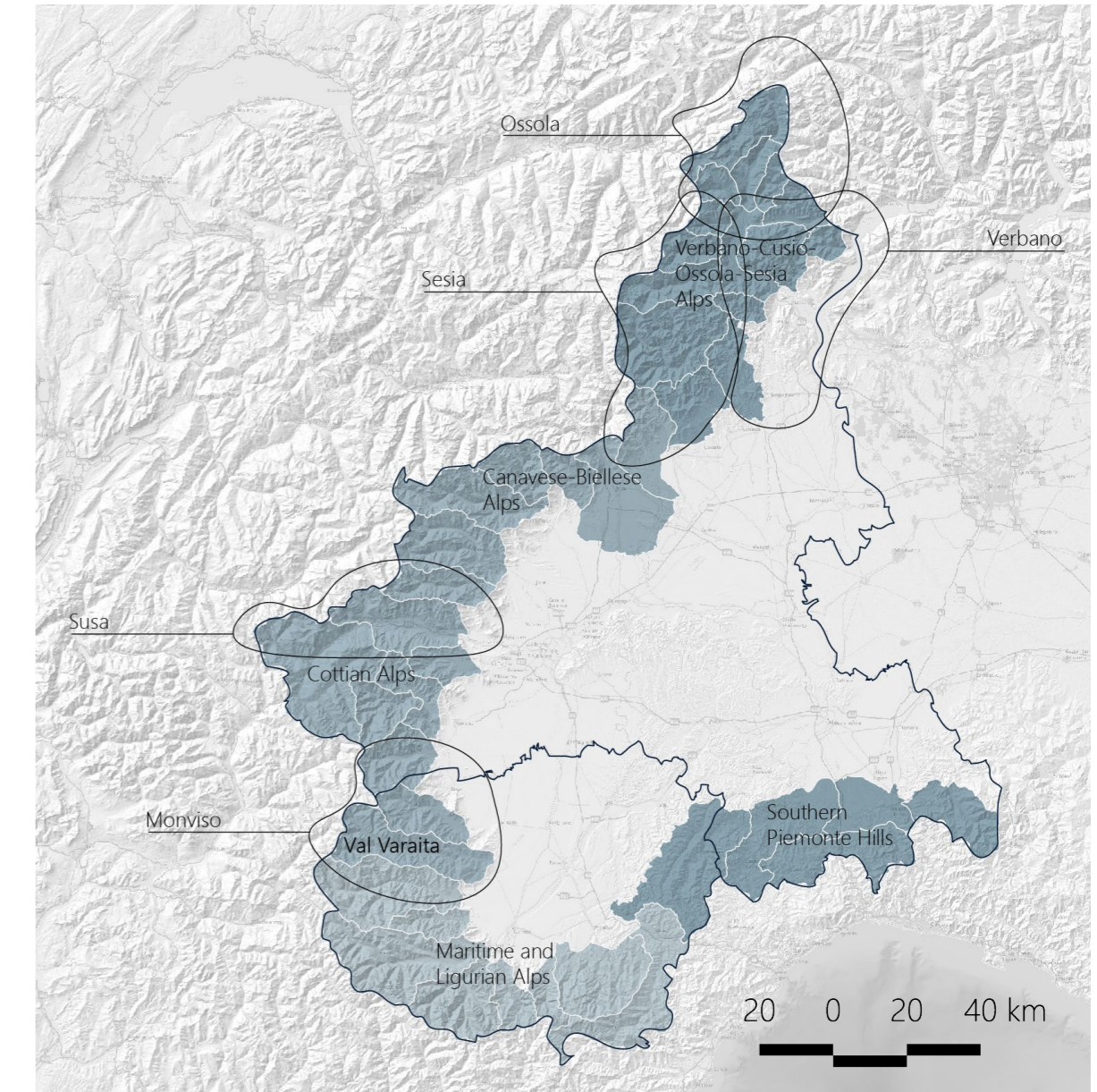


Fig. 21: Piemontese Valleys

a pass, but is dominated by Mount San Bernardo (1615 m). Equally remarkable is the Vallone di Cervetto, which branches off on the orographic left from Sampeyre climbing up to the hill of the same name.

**Population**

The Valley consists of 12 commune. Most of the commune centres are located by the Varaita River which flows from the mountain tops in the west towards the Pianura Piemontese in the east. Most of the Localities inside the valley have a low number of residents, the

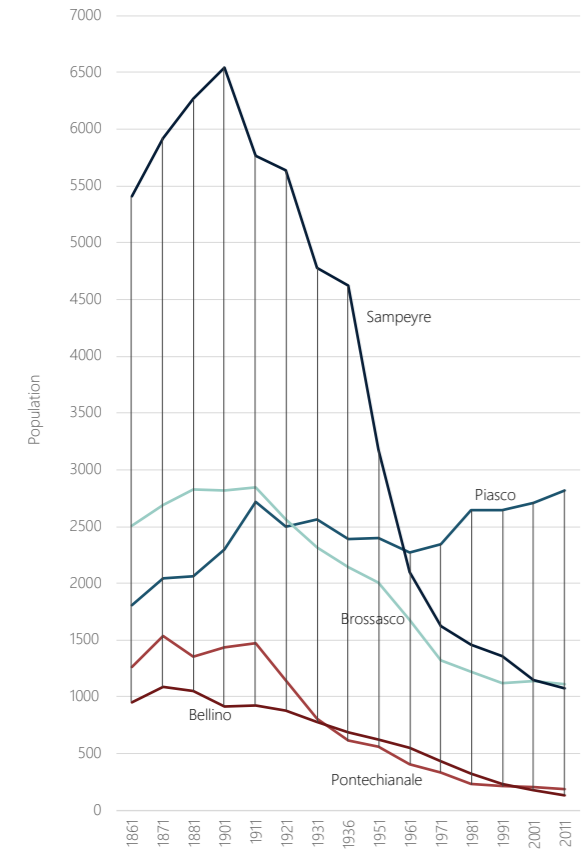


Fig. 23: Population Trends for the Major Municipalities

localities with the highest number of citizens are located at the foot of the valley which indicates a strong dependency to the plains as previously explained.

**Prominent Towns of the Valley**

Sampeyre is the main centre of the Varaita valley, and rises to 998 m of altitude. Once based on traditional mountain agriculture, the economy since the 1960s has focused on tourism, hiking in the summer, and in winter linked to the ski lifts.

The municipality of Piasco rises at 458 m above sea level at the entrance to the Val Varaita. At the end of the 1700s and the beginning of the 1800s, three filure, three tanneries, three lime kilns, two mills, a jack, a saw, a forge, a trough for walnuts, various stone quarries, and in the early 1900s the Wild cotton mill and new lime kilns. Today an important voice of the economy is the factory of Arpe Victor Salvi, with the only harp museum in the world: the collection of over 100 specimens

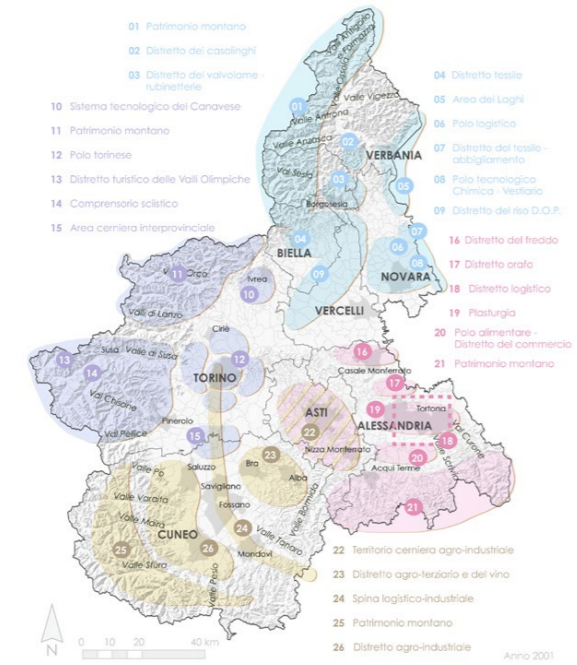


Fig. 22: Piemonte economic division

illustrates the history and evolution of the instrument. Pontechianale rises at the bottom of the Val Varaita, at 1614 m of altitude. The main hamlets are Castello, defended and fortified in medieval times, which stands on the shores of the artificial lake formed following the construction of the ENEL dam in the 1940s. In 1942 the lake submerged the ancient Borgata Chiesa, which was part of the ten villages that formerly made up the locality of Pont: Villaretto, Castelponte, Chiesa, Rueites, Cros, Granges, Maddalena, Forest, Genzana and Sellette. In addition to agriculture and livestock, the population today is dedicated to the tertiary sector with activities related to summer and winter tourism. (58.)

Val Varaita has been chosen as the focus area of this study for several reasons. First and foremost is that it suffers from structural and development weaknesses with critical drop in population values for the last 30 years. Second reason is the economic fortitude of the province of Cuneo (58.) The western sector of the province of Cuneo, around the cities of Cuneo and Saluzzo, is an area with a strong presence of foreign multinational companies or companies created from the decentralization of operational phases of the transport sector. The eastern sector of the province, on the other hand, around the cities of Alba and Bra, is characterized by the rich cultural and environmental fabric of the Langhe and a solid economic structure (headquarters of indigenous multinational companies such as Ferrero and Miroglio), and presents a renewed image linked to the successes in wine production and the tourist and gastronomic discovery by an international clientele. Although both territories have a rich and vital entrepreneurial fabric (significant presence of small and medium-sized enterprises) and a positive economic situation, there is a weak point however, even within the most dynamic areas of the province consisting of the series of depopulated areas and economic marginality that is distributed in the Alpine valleys of the Cuneo area.

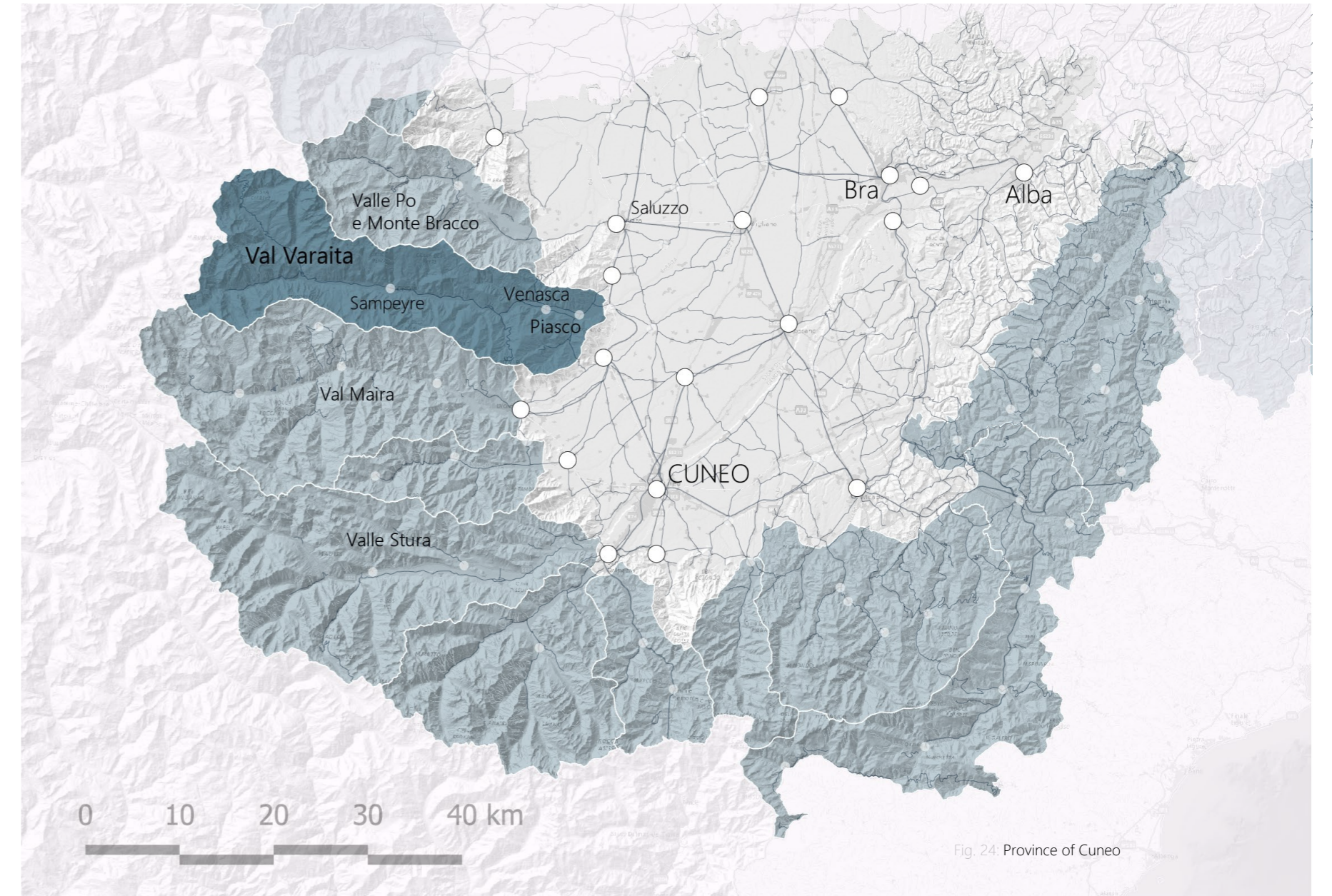


Fig. 24: Province of Cuneo



## Occitan Lands

### Historic Background:

The first cultural appearance in the Occitan territories has been found in caves in Aisone in the Stura valley; A prehistoric graffiti by a Ligurian shepherd at Monte Bego in Val Roia. Following this period was the celto Ligurian period. The Ligurians are perhaps the direct descendants of the Neolithic populations already present in the territory since the 6th millennium BC and do not come to the Valleys from afar. Many toponyms of names in the area, for example the suffixes -asca, -asco, words such as comba (valley), bric (mountain), sap (fir), are linked to their language.

The Roman conquest took place in the 2nd century BC. But only in the first century AD. Where they were able to defeat the Alpine Celto-Ligurians and include the territory to the Roman empire.

Middle Ages - Around 900 there was the invasion of the Saracens who arrived from the Provence in France,



Fig. 25:têtes coupées architectural ornamentation in Bellino

which left a memory in the toponyms and popular traditions (Baia de Sant Peire). The experiences of autonomy of the Valleys date back to the following centuries.

The Escarton Republic was officially born in 1343 with the capital Briançon, which was located around the Monviso. The name comes from the French écartier means "to divide", here used in the sense of "dividing the taxes into quarters. It was made up of a set of mountain territories of the French department of the Hautes-Alps, the province of Turin and the province of Cuneo, which enjoyed a privileged fiscal and political status. The republic ceased to exist in the early eighteenth century with the treaty of Utrecht, after four centuries of flourishing life leaving behind a unique cultural and architectural heritage. (73.)

The stereotype of the Alpine community as a closed and impermeable reality is disproved by realities such as that of the Escartons. A peculiar case within Europe at the time, in the Escartons literacy was such that 9 out of 10 inhabitants knew how to read and write and do mathematical calculations. Although in the collective imagination, the mountain is considered a place of isolation and underdevelopment, in the Escarton Republic the most widespread profession was that of the home teacher, based on three levels: the basic one, where you learned to read and write, the middle one where mathematics was learned, and the upper one where philosophy, art and languages were learned. (74.)

Luigi Zanzi and Enrico Rizzi coined the term "Paradosso Alpino" the Alpine Paradox" the phenomenon whereby, in the late Middle Ages, the level of education and cultural openness of a high mountain communities were higher than that of the inhabitants of the lower valley. (75.)

The Occitan valleys reached their maximum population towards the beginning of the 1900s, but in a short time a period of decline is reached.

Consequently, a massive depopulation occurred especially in the middle and upper valleys, due to emigration towards industrialized poles of northern Italy. At the end of the 60s the awareness of the Occitan linguistic and cultural identity was born, which favours a new pride of belonging to the territory. Groups of intellectuals (associations and movements) are formed with the aim of planning a new political, cultural and economic destiny for the Valleys. In 1999, with Law 482 "Rules for the protection of historical linguistic minorities", the Italian State finally applied Article 6 of the Constitution of the Italian Republic "The Republic protects linguistic minorities with specific rules", and recognizes, among the others, the Occitan minority. Furthermore, the territory of the Valleys can today offer numerous resources such as a unique landscape, water resources and a high quality of life in terms of environment to hope for new settlements that are already beginning to occur.

## Cultural Values

### Langue d'Oc

Like Spanish, Italian, and French, Occitan, or Langue d'Oc (lenga d'c), is a Latin-based Romance language. The Occitan language was granted legal status in Italy in 1999. It is spoken in fourteen Piemontese valleys in the provinces of Cuneo and Turin, as well as in scattered mountain villages in the Liguria region and, oddly, in one village (Guardia Piemontese) in the region of Calabria.

With its two branches the Varaita di Bellino valley and the Varaita di Pontechianale valley, along with the Maira valley south of Val Varaita, are the living heart of Italian Occitania, in the Cottian Alps. It extends for 58 km in length, until the Colle dell'Agnello resting at 2748 m.s.l., which connects it with the Dauphiné in France, of which it was part of the past Escarton republic. Occitan is spoken there from the plain of Piasco up to the Colle dell'Agnello and in the upper valley of Bellino. Val Varaita offers a various expressions of the Occitan culture:



Fig. 26: Occitan Territories

**Music** as a form of artistic expression has a prominent position in the Occitan culture. The poems of the troubadours are sung to this day accompanied by instruments. Specifically in the upper valley, traditional dances are an aspect of this culture that remains particularly vital, especially among young people. Some music is of medieval origin, a good number are from the following centuries, others instead of new composition. The instrument that was used most was the violin, held facing down and played with double strings.

Traditional **dances** are danced on numerous occasions ranging from "La Baia di Sampeyre" and "La Beò di Blins", to the countless summer and winter patrimonial festivals. "La Beò di Blins" similar to "La Baia di Sampeyre" is linked to the expulsion of the Saracens with origins dating back to the medieval period. It took place every year in the Bellino hamlets Chiazale, Celle and Prafouchier, until 1939 when it was interrupted due to the war.

On the occasion of patrimonial feasts in the upper valley, particularly during the summer, you can see men, women, and children dressed in traditional **costume**. The women's wear, which changes form from Castellata (Bellino, Pontechianale,

and Casteldelfino) to Sampeyre, is particularly fascinating. The Alpine Architecture of Val Varaita can be divided into 3 categories: The lower valley, the middle valley and the upper valley. (75.)

The lower valley is characterized with its chestnut production heritage reaching until Brossasco. A common house in this area has reduced proportions; a small stable, a minimal attic, stone walls with small blocks, exposed wooden beams, and



Fig. 27: Occitan Celebration at the Baio di Sampeyre

Flagstone roofs; the dwellings are grouped together in small agglomerations near springs or pastures.

Furthermore chestnut dryers can be found in this area, two-storey constructions separated by a horizontal trellis on which these fruits were spread to pass them through the smoke produced by the slow combustion of green twigs, burnt on the lower floor. This was the system for the production of white chestnuts.

The middle valley includes the municipalities of Valmala, Frassino and Sampeyre. The farms are modest, self-sufficient, and grouped together in agglomerations of vast dimensions.

The buildings are all tight and often contiguous due to successive alterations. Almost all the families owned summer cottages (la Meira) in the pasture area, private or communal, where they could move with the animals for four or five months a year.

The house often has a "hut" shape, with the facade facing

the valley and the ridge line oriented along the line of the greatest slope.

It includes the municipalities of Casteldelfino, Pontechianale and Bellino which formerly formed the Escarton de Chasteldalfin, also known as La Castellata, territory of the Dauphin then of the Kingdom of France until 1713.

Here more than elsewhere, the patriarchal tradition has remained and has avoided the dismemberment of land and the proliferation of houses: here are therefore large residences, headquarters of flourishing companies, large enough to accommodate many herds and consequently hay reserves for at least seven months.

Among the decorative structural elements: the round stone pillar (the pilia rionda) often plastered and used as roof support, either on the facade or on the sides. This architectural element, present throughout the Varaita Valley is used to transform simple farms into real monuments.

Evidence of the Celtic presence remains in the têtes coupées that are found on the portals of some churches and buildings. The têtes coupées, representations of stylized human heads, are one of the most interesting celtic ornamental elements, present in portals, capitals and decorations of churches or fountains and are to be found in the hamlets of Bellino among other. (76.)



Fig. 28: Valley facing traditional houses in Bellino

### Landuse

The most prominent landuse in the area is forestry, although this is a strong leisure advantage forestry potential is mostly untapped due to lack of investment interest. (Ceraulo, A.) Strong agricultural activity including farming and orchards can be found at the plains at the foot of the valleys. Wine making can also be found around the communities of Saluzzo and Costigliole Saluzzo. Quarries and Industrial functions can also be found in the area although they are of weak economic importance.

Agriculture and forestry are still today one of the driving sectors of the valley's economy. In the valley, fruit growing reigns supreme, with excellent local products such as the apricot of Costigliole Saluzzo, which benefits from the climate of the hills and mature into high quality products.

The hills of Costigliole and Verzuolo are also home to the vineyards of Pelaverga, a local grape from which the tasty native wine is produced, already known since the 16th century, and of Quagliano, a red doc dessert wine that takes its name from the vine of the same name.

The most important autumn production is the chestnut, which for centuries has been the main fruit of the territory and which today characterizes the autumn fairs, first of all that of Venasca, an important market since the times of the Marquisate of Saluzzo. (79.)

A niche production, but of significant importance, is that of officinal herbs, spontaneous blooms of the high mountains that are used in the production of infusions, herbal teas and other herbal products. A centuries-old artisan tradition, marked by the rhythms of man and the seasons, is flanked by the presence of raw materials such as larch, stone pine, chestnut, cherry and ash which allows the creation of high-level craftsmanship.

The activities related to woodworking are a strong point in the valley, as evidenced by the numerous workshops, where mostly furniture is produced, and the shops, where forms of artistic craftsmanship as well as industrial production are found around the area of Brossasco. (80.)



Fig. 29: Artisanal Woodworking Traditions of Val Varaita

thanks to the geomorphological formation of Val Varaita and the easy access of many attractive sites, it lends itself to various types of tourism. Nature lovers will find walks and excursion, both in summer and in winter, while fans of cultural tourism will be able to discover small villages with typical mountain architecture still intact and chapels and parishes of indisputable artistic value. in addition to the range of museums scattered throughout the valley.

Another strong point of summer tourism is the panoramic path of the Colle d'Agnello, which allows you to reach the nearby French region of Queyras: an exciting challenge for cyclists and motorcyclists. (81.)

To Conclude, the artisanal and agriculture production of the valley provides a strong basis on which can be built a self relying network of communities. However in order for this network to be sustainable upgraded methodology and integrated collaboration has to be introduced.



Fig. 30: Apricot Industry in Saluzzo

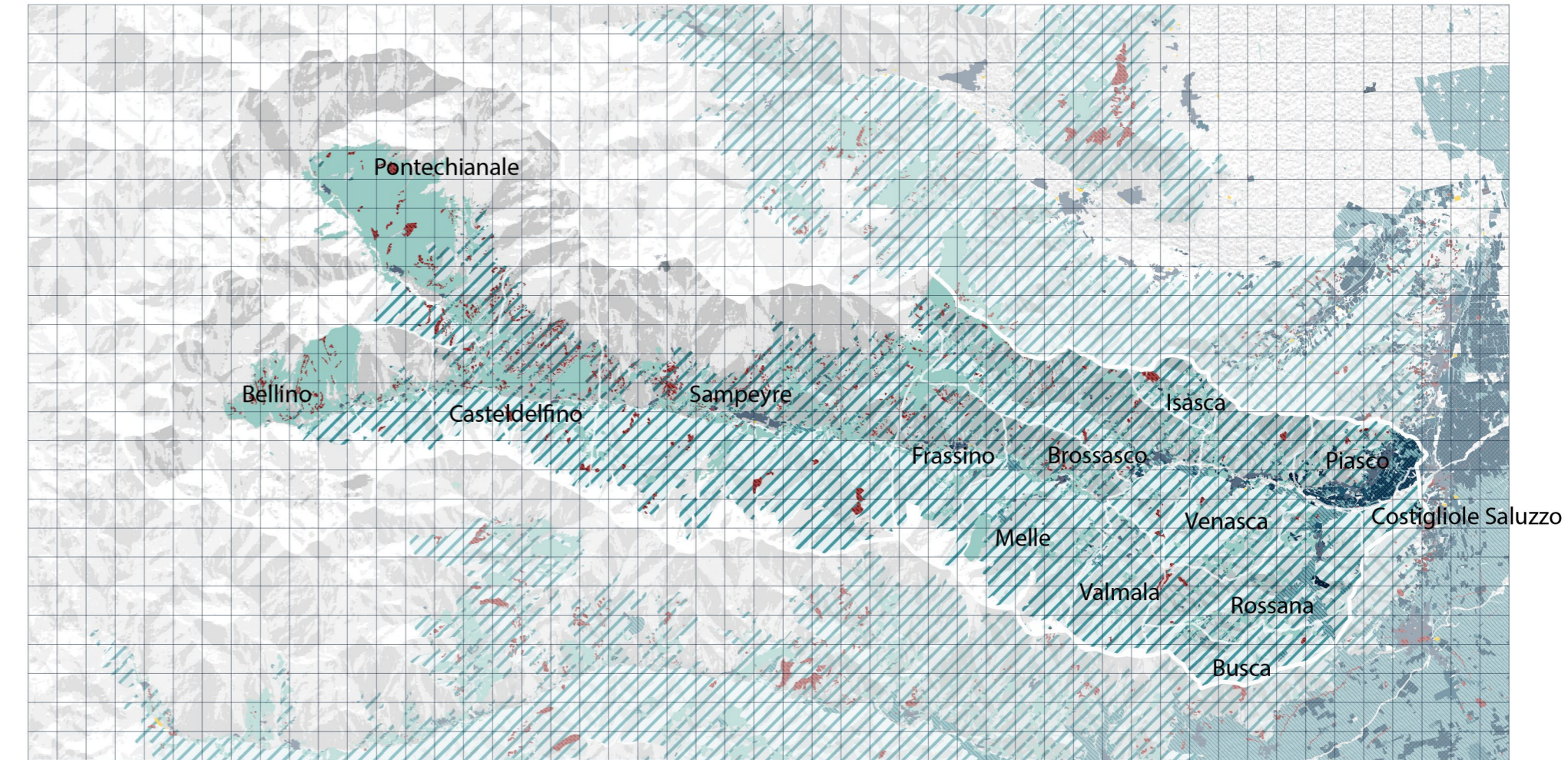


Fig. 31: Venasca Chestnut Festival Flyer



Fig. 32: vineyards of Pelaverga Grapes near Verzuolo

Fig. 33: Landuse



scale 1: 200.000

- |                  |            |                           |
|------------------|------------|---------------------------|
| open green space | garages    | public service structures |
| commercial       | industrial | residential               |
| grey areas       | orchard    | vineyard                  |
| farmland         | other      |                           |
| forest           | quarry     |                           |

### Services and Amenities

The map shows the services available in each locality and the distance to lesser equipped localities in the valley. The map is focusing specifically on emergency services such as hospitals and fire guard, and educational facilities and day care centres. The farthest distance from lesser equipped localities to the nearest hospital, which are located in Sampeyre and in the foot of the valley (Verzuolo, Saluzzo and Busca) is not more than 20 minutes. Whereas schools are more scarce only to be found at the foot of the valley. The Fire guard is only available in Venasca. Other facilities such as post office, banks and pharmacies can be found in almost every locality. While leisure facilities such as bars, restaurants and hospitality structures are common even in smaller communities due to the areas prominent touristic activity. Furthermore Old places of worship are scattered all over the valley even in places where no community exists. (76.)

To Conclude, the services and amenities might be the valley's greatest weakness. The scarcity of important facilities such as hospitals leads to unfortunate tragic deaths which affects tourism activity of the area. (83.) The Not only are they scarce but they are also not up to date with the needed equipment due to the budget cuts ordained by the policy makers in the plains. In order for the valley to be more attractive, services

and facilities costumized to the needs of citizens as well as prospective permanent residents have to be introduces



Fig. 35: Sampeyre Hospital



Fig. 36: school of agriculture commune di verzuolo

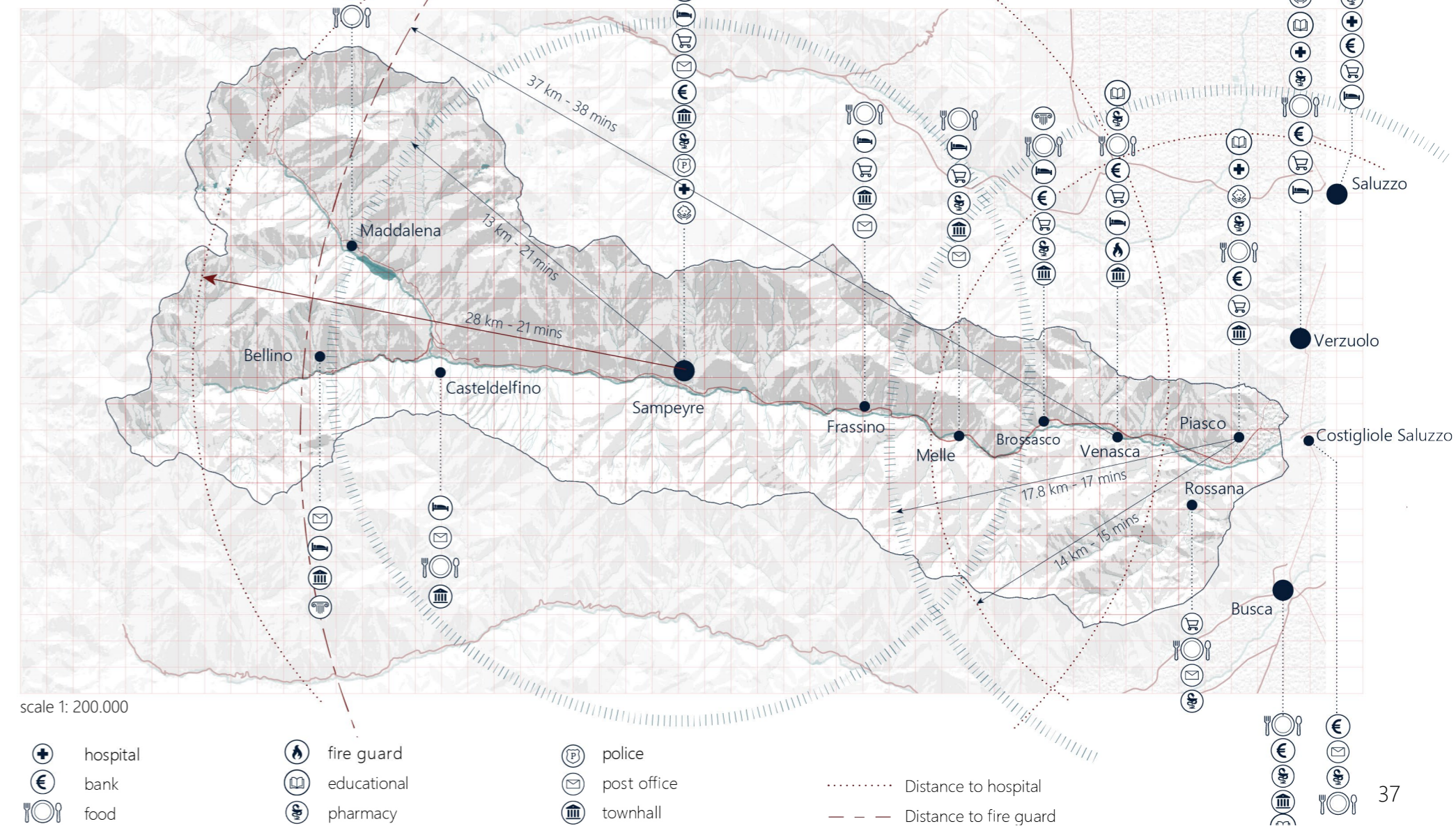


Fig. 34: Red Cross Sampeyre



Fig. 37: Venasca Fire Department

Fig. 38: Services and Facilities



### Mobility

The Valley is strongly connected through a vehicular spine, which bus stops every few minutes. The plains adjacent to the valley are prominent bicycle routes which are frequented by amateurs and professional cyclists. The bicycle routes do not extend into the valley. A train connection can be found right outside the valley connecting north to south Saluzzo to Busco.

The Mountain and the valley are connected through small roads enabling visitors to reach touristic places by car although no bus routes are found reach the mountains. Additionally the area offers hiking trails and footpaths for leisure activities.

One of the largest and longest valleys in the Cuneo mountains, it stretches into the heart of the Cottian Alps as far as Monviso, with its 3841 m the highest peak in Occitania. The valley was divided for a long time between the Dauphiné and the marquisate of Saluzzo, and reunited under the Savoy family only in 1713.

At the mouth of the valley, Piasco was for centuries an important market for the whole valley. The SP 8 which goes up the valley, but you leave it immediately to go up to Rossana, located in an elevated position.

With the SP 46, on the right orographic side of the valley, you reach Venasca: the parish church of the Assumption was built between 1749 and 1755 in Baroque style by Paolo Ottavio Ruffino.

You return to the valley floor to continue your visit to Brossasco, which was built at the confluence of the Varaita and Gilba streams. From Brossasco you go up into the side valley of Gilba, where slate quarries were once active. The village of Gilba is now almost abandoned, but valuable examples of mountain architecture are preserved in the main village, Danna. Follow the SP 8 for another short stretch beyond Brossasco, for a new deviation on the right orographic side: the road, panoramic over the valley, leads to Valmala and, beyond the town, to the nineteenth-century sanctuary that rises not far from the Valmala hill ( 1541 m). larily interesting for mountain biking.

The SP 8 continues on the wide valley floor where Melle is found, a village with an agricultural vocation, known for the

production of the famous tomini. We then reach Sampeyre, the capital of the valley, with a tourist vocation thanks to various hotels and a small ski resort for downhill skiing.

From Casteldelfino the valley forks and follow the provincial road towards Bellino, touching the various hamlets in a splendid mountain setting, aligned along the course of the Varaita di Bellino stream. Characteristic of the hamlets is the tight-meshed building system, with buildings with arcaded loggias, supported by pillars.

From Casteldelfino follow the signs for Pontechianale and Colle dell'Agnello, which lead to the large basin where the lake of Castello is located, on whose shores the village of the hamlet develops. Castello is the starting point for the ascent to Monviso, through the Vallanta valley.

Continue towards the Agnello hill, up to the hamlet of Chianale, located in the beautiful meadow valley. The township has retained the appearance of a mountain village, with beautiful stone houses lined up along the Chemin Royal to France. (88.)

Although the Valley does not have an easy access to neighbouring valleys or to France, it does have a number of carriage passes such as Colle dell'Agnello (connecting with France) Colle di Sampeyre (connecting with the Maira valley) as well as non-carriage connections, which can be reached by means of excursion itineraries including Colle di Saint Veran and Col Longet (connecting with France) Colle Birrone and Colle della Bicocca (connecting with the Maira Valley) San Chiaffredo Pass (connecting with the Po Valley).

To Conclude, the quality of infrastructure in Val Varaita is largely adequate. However there is room for improvement when it comes to the public transportation system. Although the buses have a large number of stops in the valley, many strategic locations, are left without easy access. Furthermore the touristic activity as well as the living quality of the inhabitants could be enhanced by introducing cycling paths which will connect to more prominent cycling circuits around Piemonte.



Fig. 39: Cycling Passage

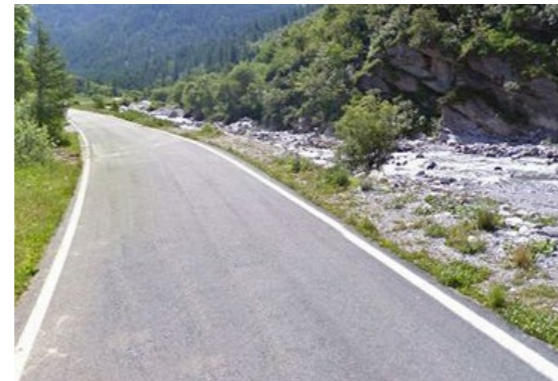
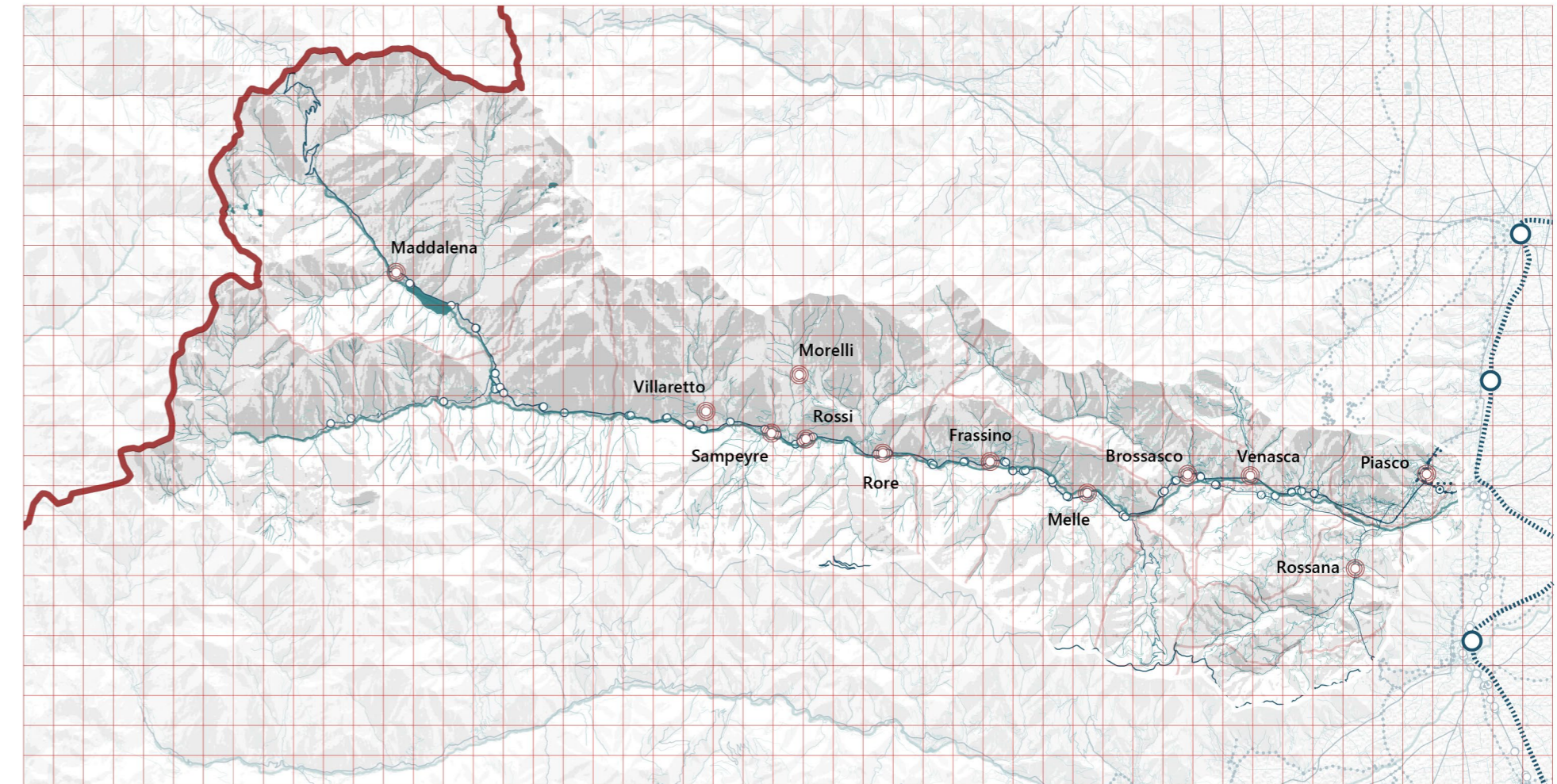


Fig. 40: Strada provinciale della Valle Varaita



Fig. 41: Val Varaita Picturesque paths

Fig. 42: Mobility



scale 1: 200.000

- ..... Railway
- Road
- ..... Bicycle
- Bus Stops
- ⊙ Commune

### Tourism

The Valley offers a variety of activities scattered generously across the mountainous areas and the valley. The most prominent attractions are in the communes of Pontechianale and Casteldelfino namely, the Monviso Peak, the Alevè mets forest and the adjacent Lago di Castello. The mountain tops also covered with glacials which Furthermore one major asset which grabs the interest of visitor is the Occitan culture. Additionally the area offers attractions such as picnic spots and museums.

The area is well covered with hospitality functions of various types from alpine shelters to multiple star hotels. The mountain slopes are also littered with hiking trails of various degrees of difficulty for beginners as well as professional mountaineers.

The area has many natural and cultural assets and yet the area is not seeing enough touristic activity to keep the people from leaving some of tourism businesses are only open half of the year how can the be kept open all year long

The village of Saluzzo presents itself in a sober style by welcoming travelers to very elegant restaurants and accommodation facilities. Slow Food Presidium. (85.) The Varaita Valley, together with the Po Valley, is the closest to the Monviso massif. It starts from Verzuolo and ends with the basin of the Agnello that culminates, at 2,746 metres of altitude, with the homonymous pass that connects the French Queyras. After Verzuolo, Rossana, Venasca, Brossasco, Melle and Frassino, we arrive at Sampeyre and then again at Casteldelfino, where the valley forks and leads to Pontechianale and Chianale, to the Colle dell'Agnello, and to Bellino on the other. (86.) (87.) The main feature of this valley are the extraordinary landscapes that alternate: the gentle and fertile slopes of the initial stretch are transformed into alpine horizons, green pastures and steep grasslands, vast deciduous forests and pine and larch pine forests. The so-called "emerald" valley has always shone in the

thousand shades of the lush green vegetation. (88.)

To conclude the touristic activity of Val Varaita is its strongest economic asset, however there is room for improvement in order to catch up with the updated expectations of visitors. The most touristically attractive areas in Val Varaita start from Sampeyre and end in Bellino and Pontechianale.

The aim is to enhance the experience for tourists and to keep the business autonomous and profitable throughout the year. Furthermore it is important to note that the tourism of Val Varaita helps in preserving and educating people about the Occitan culture of the Piemontese alps.

These aims can be achieved through soft interventions such as, the introduction of digitalization, improvement of interconnectivity between the different tourism services as well as creating more sustainable and multifunctional tourism activities.

Furthermore Val Varaita is mainly visited by local tourists, the international potential of prominence of Val Varaita still largely untapped.



Fig. 43: Town of Chianale

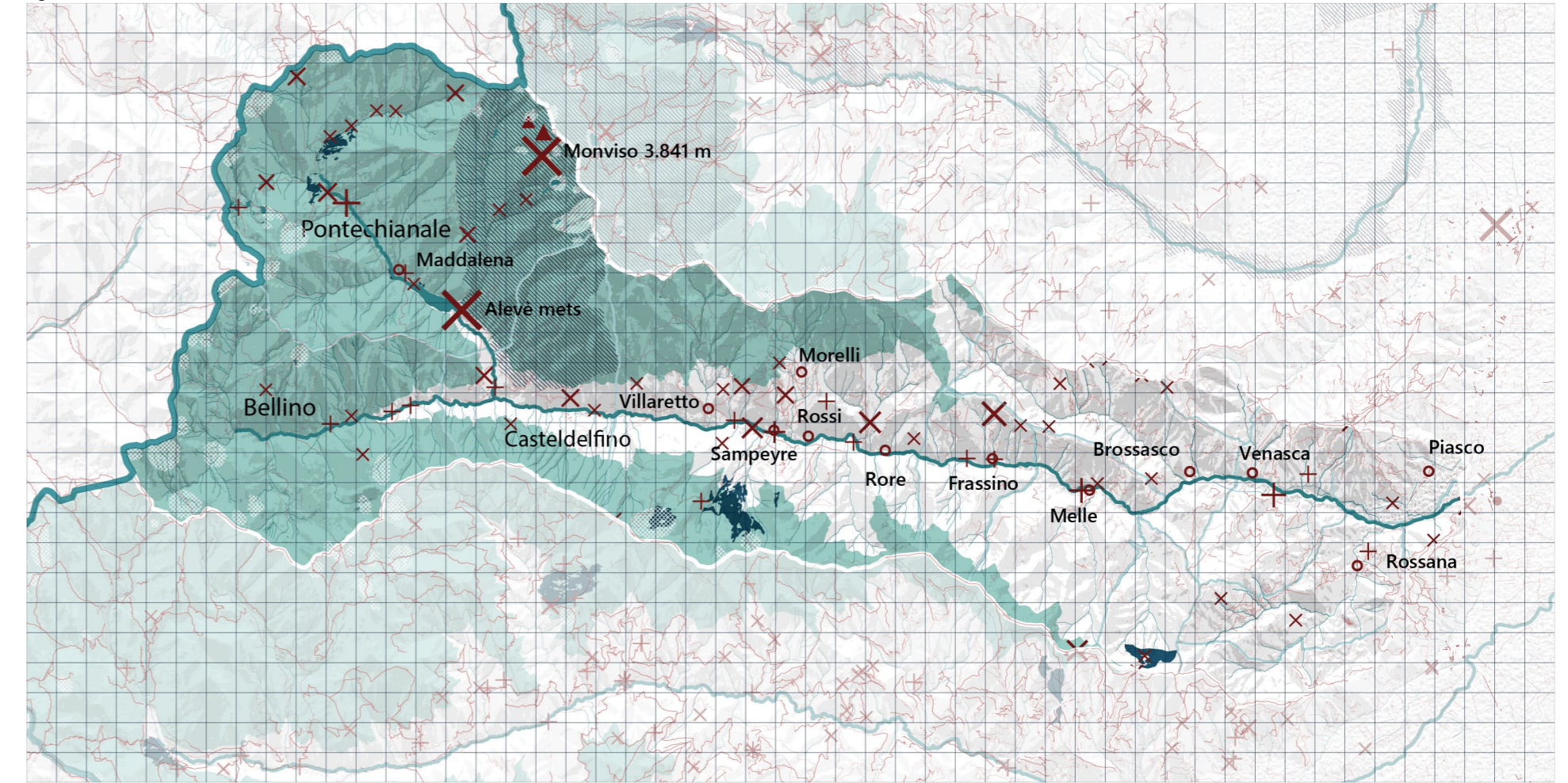


Fig. 44: Castello Ice Climbing



Fig. 45: Colle dell'Agnello Mountain Pass

Fig. 46: Tourism



scale 1: 200.000

- |   |                 |   |                        |   |               |   |                  |
|---|-----------------|---|------------------------|---|---------------|---|------------------|
| × | Attraction      | ▲ | Prominent Peaks        | ▨ | National Park | ■ | Fruition Forests |
| + | Hospitality     | — | Mountain Hiking Trails | ▨ | Glacial Zones |   |                  |
| ○ | Comunal centers | — | Hiking Trails          | ▨ | Mountain Area |   |                  |

### Forestry

The most prevailing functions are Protective and Protective/Productive Forests. The Protection is aimed against weathering agents where the tree roots are planted to prevent erosion and landslides. Protection/ Production Functions are designed to accomodate sustainable forestry activities. Presently, protective forests, sometimes show a lack of renewal and poor stability, the result of unpunctual and discontinued maintenance; these factors make them more vulnerable to biotic and abiotic events. The management of protective forests must therefore aim at increasing the stability of the populations, with an active and conscious approach, also resorting, where necessary, to forest reconstitution in case of severe landslides, boulder falls and avalanches. Fruition Forests are characterized by attracting high tourist attention, the forests are of high aesthetic value and are a destination for social activities. Free development forests are reserved for woods where no specific value is highlighted among the previous ones, above all due to location limitations, (89.)

#### Territory protection

As is known, woods and, to varying degrees, other plant forms of ground cover play a fundamental role in protecting the area against destabilizing meteoric agents thanks to the action of the root systems and epigeal parts. In particular, the woods can prevent widespread erosion, instability, rock falls, avalanches and, along water courses, bank erosion. protection highlighted in the context of the PFT, having a direct or general role for the protection of settlements, artifacts and the most vulnerable areas (landslide slopes and river banks), are of increasing importance, due to the progressive spread of human activities on the territory and therefore must be identified and appropriately managed and maintained. Presently, protective forests, particularly in the Alps, sometimes show a lack of renewal and poor stability, the result of past management not always constant and punctual and of a subsequent abandonment with

failure to carry out the necessary cultural care; these factors make them more vulnerable to biotic and abiotic events.

#### Naturalistic

Woods for naturalistic use make up about 15% of the forest area. These woods include forest stands included in Protected Areas, Sites of Community Interest (SIC), SPAs, or of particular conservation value flora and fauna, excluding those of direct protection; such environments require management based on the maintenance, improvement or recovery of functionality of the ecosystem, always according to the approaches of forestry close to nature, considering that this destination does not mean abandonment at all. Among the naturalistic forests, the Beech woods prevail, followed by Larch-cembraie and Quercu-hornbeam forests, with a prevalent high forest structure. Beyond the 60% of the area, at least in the next fifteen years, will not be subject to active management interventions; however, on about 1/5 of the surface improvement interventions are planned and in particular thinning and conversion to high forest in simple or compound coppices (12%)

#### Production and protection

Forests with a productive-protective function, clearly prevalent in the mountains and hills, with over 45% of surface area, are also predominant at regional; this destination includes the stands placed under hydrogeological constraints but in any case in stations with good fertility and the possibility of access, without direct protection functions, where it is possible to carry out sustainable forestry also aimed at production without compromising the stability of the stands themselves. Piemontese production-protective destinations are approximately 30% composed of Castagneti and 20% of Beechwoods; more than 10% of them consist of Robinieti widespread in the hills and plains. The prevailing arrangement is the simple coppice, on about 50% of the surface, while on about 25% are present forms of mixed government (coppice under high forest). About 3/4 of the surface is expected

active management: in particular coppice, renewal cuts in high forest through crop choice cuts, improvement cuts with thinning and conversions.

#### Fruition

The use destination is attributed to wooded areas subject to high tourist attendance for recreation, in which this social function prevails, and involves a management aimed at maintaining /improving the structure and stability of the soil to allow the maximum possible attendance in safety. To that function a lot circumscribed, which at the regional level corresponds to about 1% of the forest area total, with diffusion mainly in mountain public properties, absolve to a greater extent the Larches-cembraie. The most frequent form of government is the high forest, generally sparse, suitable for both winter and summer visitors. (90.)(91.)

To conclude the Forests of Val Varaita are a strong productive and touristic asset with large potential, the reason why this potential is not tapped to the fullest is the lack of investment. improving the overall attractiveness of the Valley will also attract investors for the sustainable forestry industry.

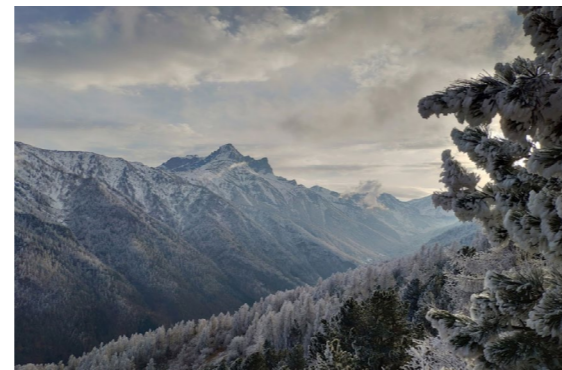
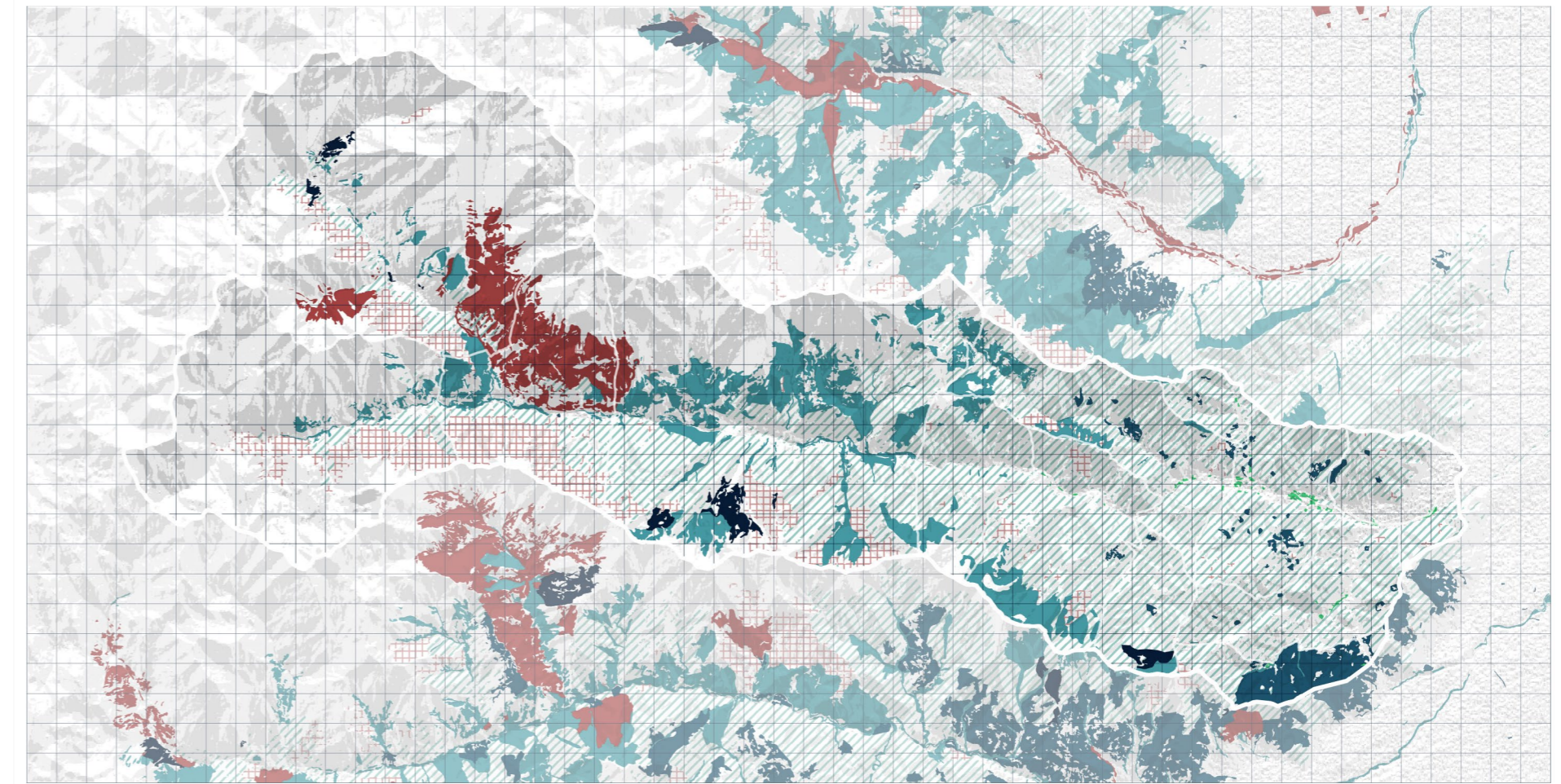
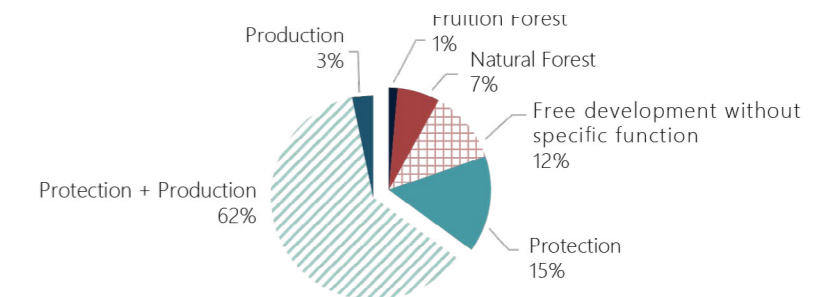
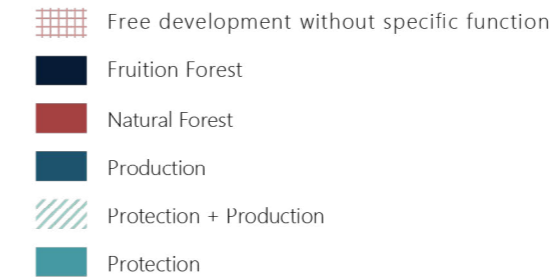


Fig. 47: Alevé Mets

Fig. 48: Forestry



scale 1: 200.000



# 05 Site Analysis

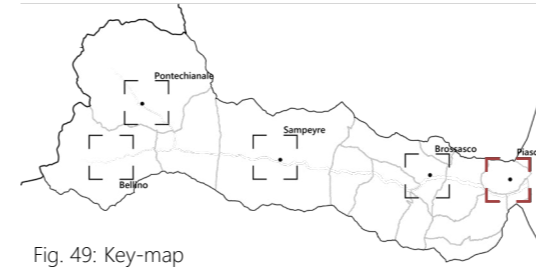
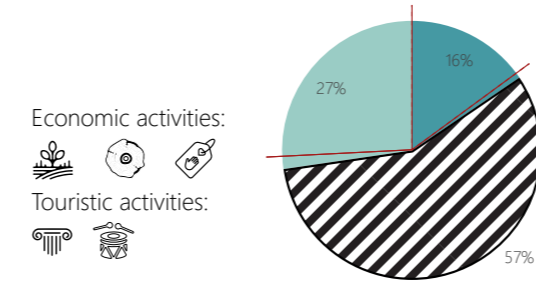


Fig. 49: Key-map



## Piasco

Piasco is an agricultural and industrial centre situated on the left side of the Varaita torrent. Once a Roman customs station, it then became a fief of the Lords of Venasca and subsequently of the Lords of Piasco. In 1252 it was acquired by the Marquises of Saluzzo and remained under their rule until 1396. Having fallen under the rule of the Savoy family it was given as a fief to various liege lords, including the Counts della Roche and the Porporati of Sampeyre. Today the civic tower, a majestic brick construction and former steeple of St. Sebastian's ex-church, bears witness to the medieval period, together with St. John's Church. The imposing complex of the Porporatis' castle, consisting of three wings arranged around a central porticoed courtyard, was built in 1655. Today, the village is the birthplace of musical instruments, the Salvi harps, which are played in the grandest orchestras of the world; the only museum worldwide dedicated to them, the Harp Museum Victor Salvi, has been established here, near the factory. (92.)

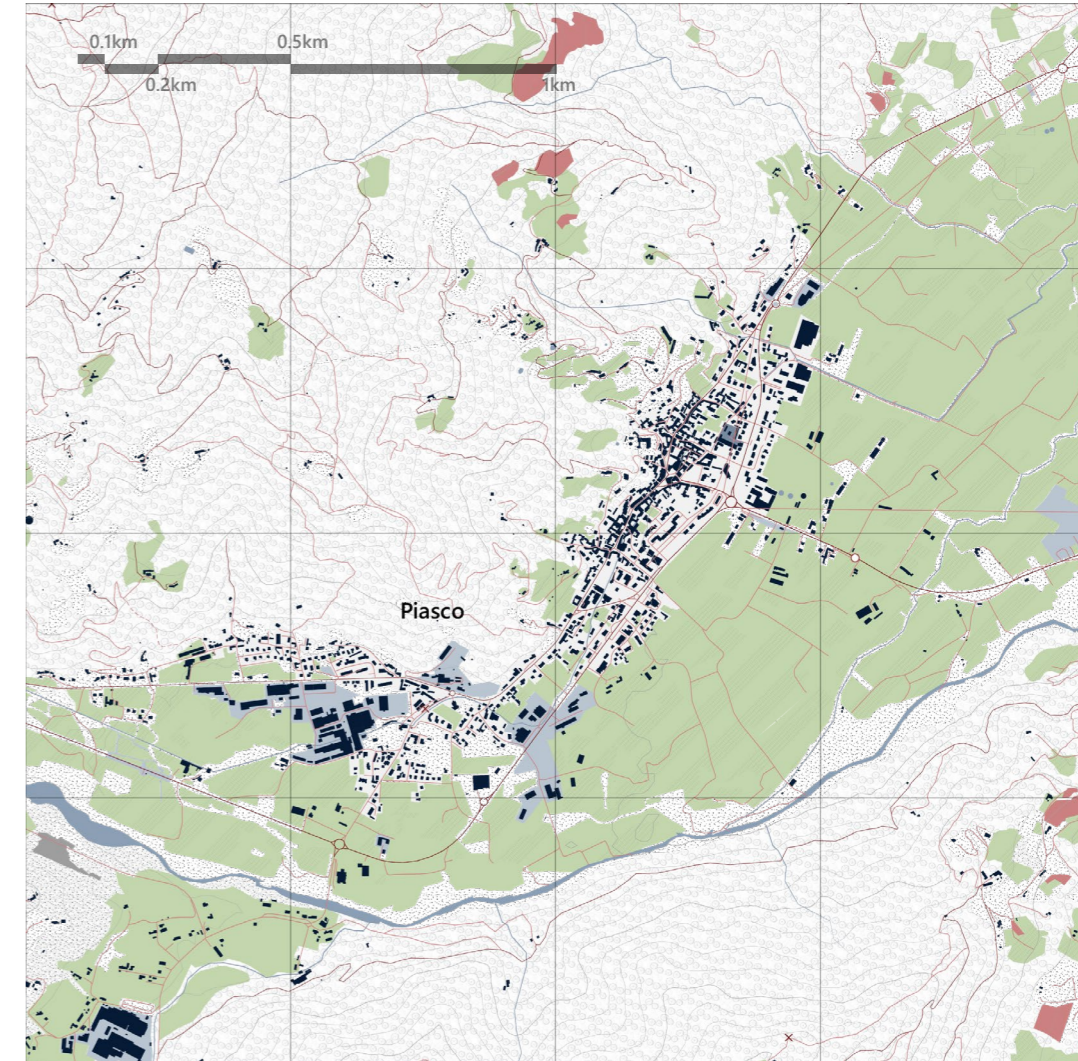
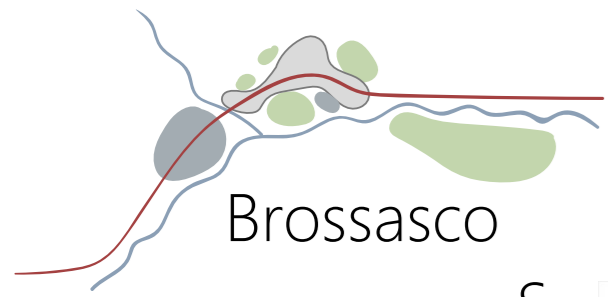


Fig. 50: Piasco Landuse



# Brossasco

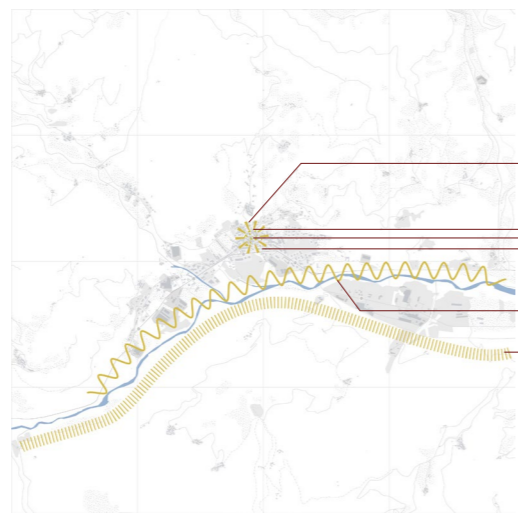
S

- 1. Hiking Paths
- 2. Historical Center
- 3. Agricultural Activity
- 4. Wood industry
- 5. Water body



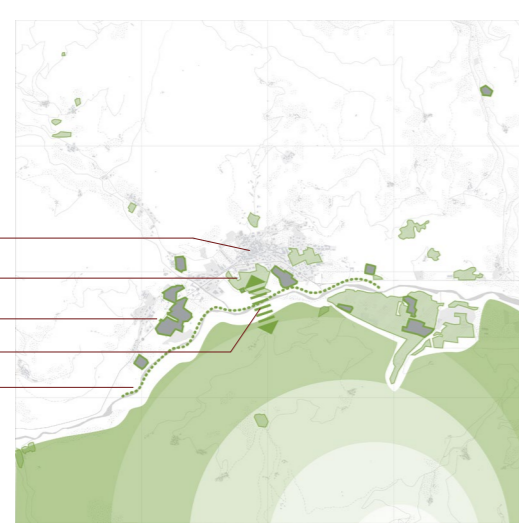
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- 1. Lack of attractive Public Spaces
- 2. Lack of attractive activities
- 3. Missing Services
- 4. Dilapidated Structures
- 5. Disconnectivity from water
- 6. isolated southern valley and forest



O

- renovated Historical Center
- enhanced agriculture activity
- activating artisanal wood production
- stronger connection between community and surrounding
- maximized natural element potential



T

- Further loss of Services
- Abandonment and Population decline

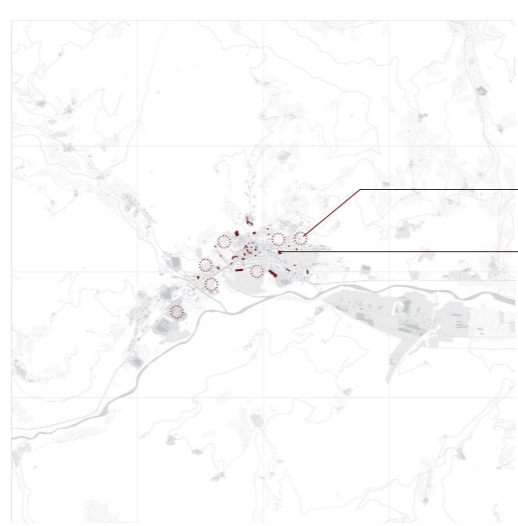


Fig. 51: Brossasco SWOT Analysis

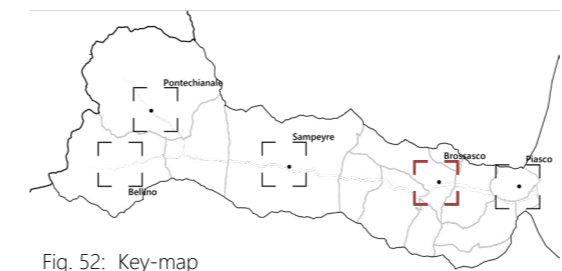
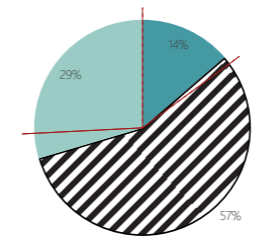


Fig. 52: Key-map

## Economic activities



## Brossasco

It is located in the lower Varaita valley at 606 m asl at the merging of the Gilba stream into the Varaita river. The village of Brossasco lies on the left side of the Varaita river, at the foot of the green hills (Bric Monforte, 1015 m and San Bernardo, 1419 m) that form the watershed with the upper Po Valley. Erstwhile in possession of the bishops of Turin, who gave it as a fief to the Marquises of Busca, it came under the rule of the Marquisate of Saluzzo in 1160. Passing to the Savoys in 1601 it was given as a fief to the Counts of Montauban and subsequently to the Marquises of Porporato. The parish church of Sant'Andrea built in 1406, preserves a precious portal of Gothic origin. The steeple dates from the same period but it was restored later. Noteworthy are also the chapel of San Rocco, with its frescoes dating from the first half of the 16th century, and the chapel of Saint Sebastian, on the other side of the village. In the hamlet Gilba Superiore, in the church of Saint Sixtus, a stone ciborium from 1590 is preserved. Brossasco is the centre of wood handicraft. The Porta di Valle is located here, a kind of "welcome" to all the tourists, where they can buy mountain maps and guides, taste and purchase typical products, rent sports gear, refresh themselves and obtain information. Brossasco offers touristic attractions such as the medieval centre (traces of the city walls, orthogonal layout of the streets, big portals of some houses, access gate to the fortified core in the current via Marconi), the municipal coat of arms (memory of the Saracen invasions in the 10th century), Sant'Andrea's parish church, San Rocco's chapel and the Wood Museum. (80.)



Fig. 53: Brossasco Landuse

Application

- Residential
- Agricultural (Farms)
- Agricultural (Orchards)
- Quarry
- Industrial
- Vineyard
- Glacier
- National Park
- Forest
- Meadow
- Ski Range
- Hiking Path
- Sightseeing Tour
- children (0-17)
- working age (18-64)
- seniors (65-)
- Piemonte Values for reference

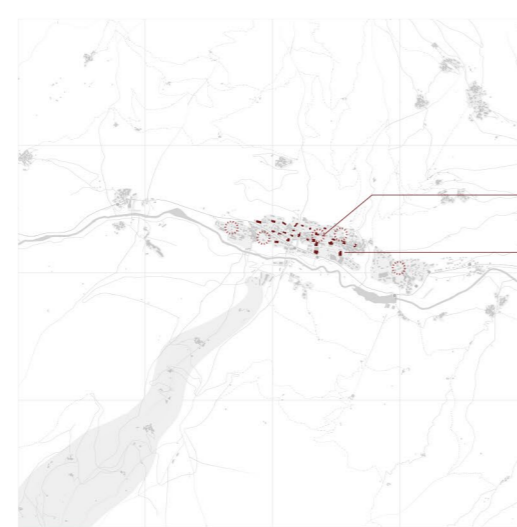
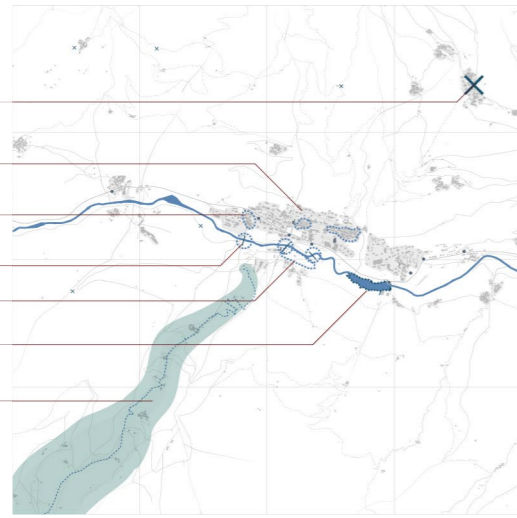


# Sampeyre



- S**
- Festival at culturally relevant hamlet of Baio
  - Available of Services
  - historical Nuclei with intact structures
  - Existing River Crossings
  - Flourishing hospitality activity
  - attractive waterbody suitable for recreational activities
  - ski range

- augmenting the Baio events aids in strengthening the Identity image
- enhancing the hospitality sector through state of the art tourism strategies
- Connecting the historical nuclei to the environmental amenities to create a complete sampeyre experience
- exploiting the skiing activities in the area to expand the touristic activity and thus the create activities of the community
- strengthening the town connection with the water increases the liveability quality and identity image of the area and strengthens the connection towards the other communities



- W**
- Lack of attractive Public Spaces and town activities
  - Closure of Services
  - Disrupted community connection due to overgrown Wilderness
  - Disruption of urban flow due to private properties
  - Disconnectivity from water

- Further loss of Services which reduces the liveability value of the area
- Abandonment and Population decline

**T** Fig. 54: Sampeyre SWOT Analysis



Fig. 55: Key-map

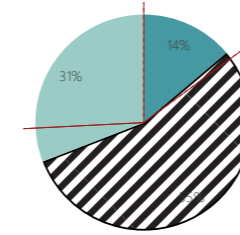
Economic activities:



Ceased activities:



Touristic activities:



## Sampeyre

Sampeyre is a holiday resort and starting point for excursions and ascents, including the one to the Lobbie di Viso (3015m). The chairlift (divided into two sections), open both in winter and in summer, leads into the magnificent Sant'Anna valley. The artificial lake is a destination for passionate fishermen. The centres of Rore and Becetto are very active in the cultural and tourist fields, where every year on the last Sunday of August the Cianto Viol takes place, a walk on the paths with traditional songs and dances that last all day. (82.)

Fairs and Festivals: Fairs: S. Michele , with raviolas festival (last Sunday in September)  
 Festivities: San Defendente Ball (Fraz. Calchesio, January 2), "Baio di Sampeyre" (the two previous Sundays and Shrove Thursday of Carnival, every five years; next edition in 2022), "Carneval lou Viei" (Fraz. Rore, first Sunday after Shrove Tuesday of Carnival), "Lou Cianto Viol" (Fraz. Becetto, last Sunday in August) (93.)

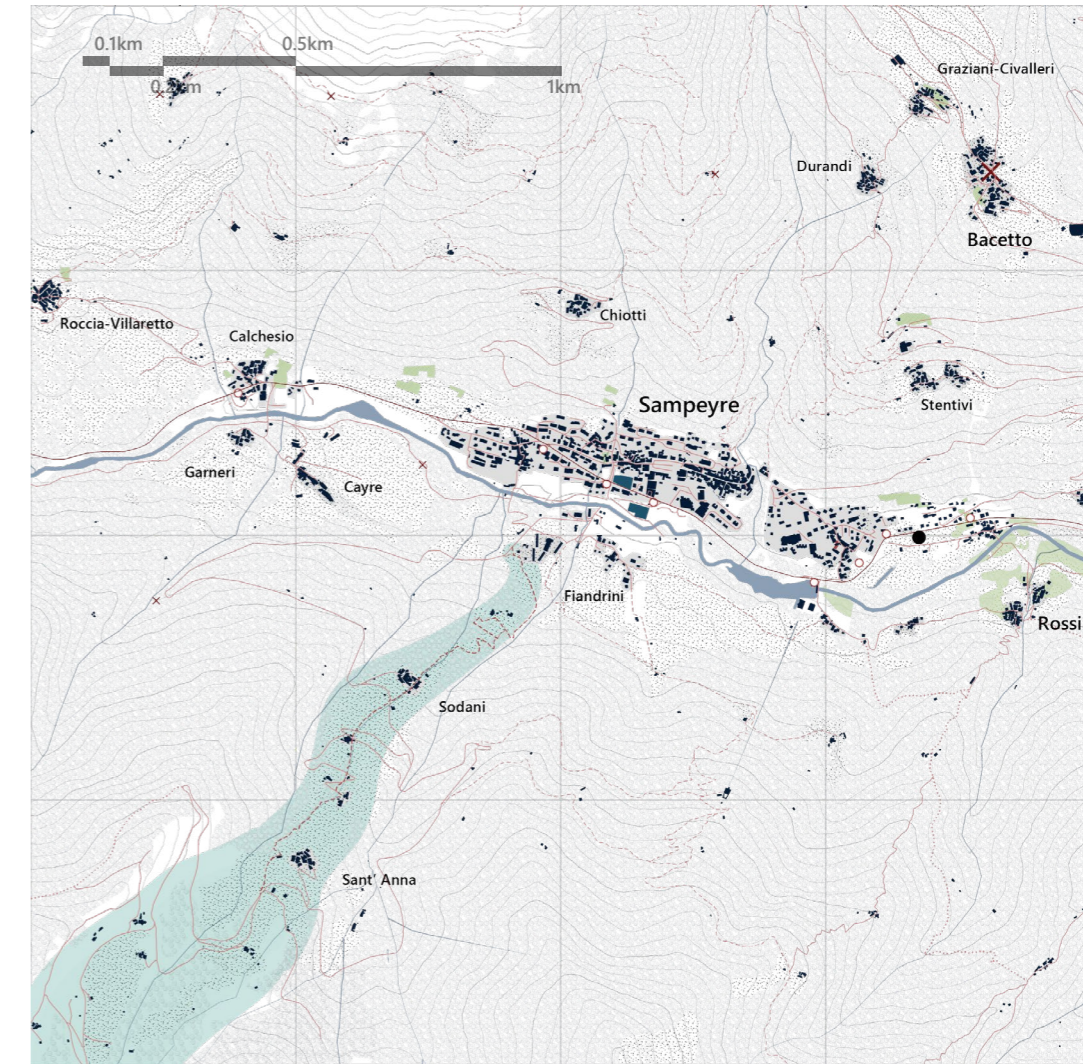


Fig. 56: Sampeyre Landuse

- Application
- Residential
  - Agricultural (Farms)
  - Agricultural (Orchards)
  - Quarry
  - Industrial
  - Vineyard
  - Glacier
  - National Park
  - Forest
  - Meadow
  - Ski Range
  - Hiking Path
  - Sightseeing Tour
  - children (0-17)
  - working age (18-64)
  - seniors (65-)
  - Piemonte Values for reference

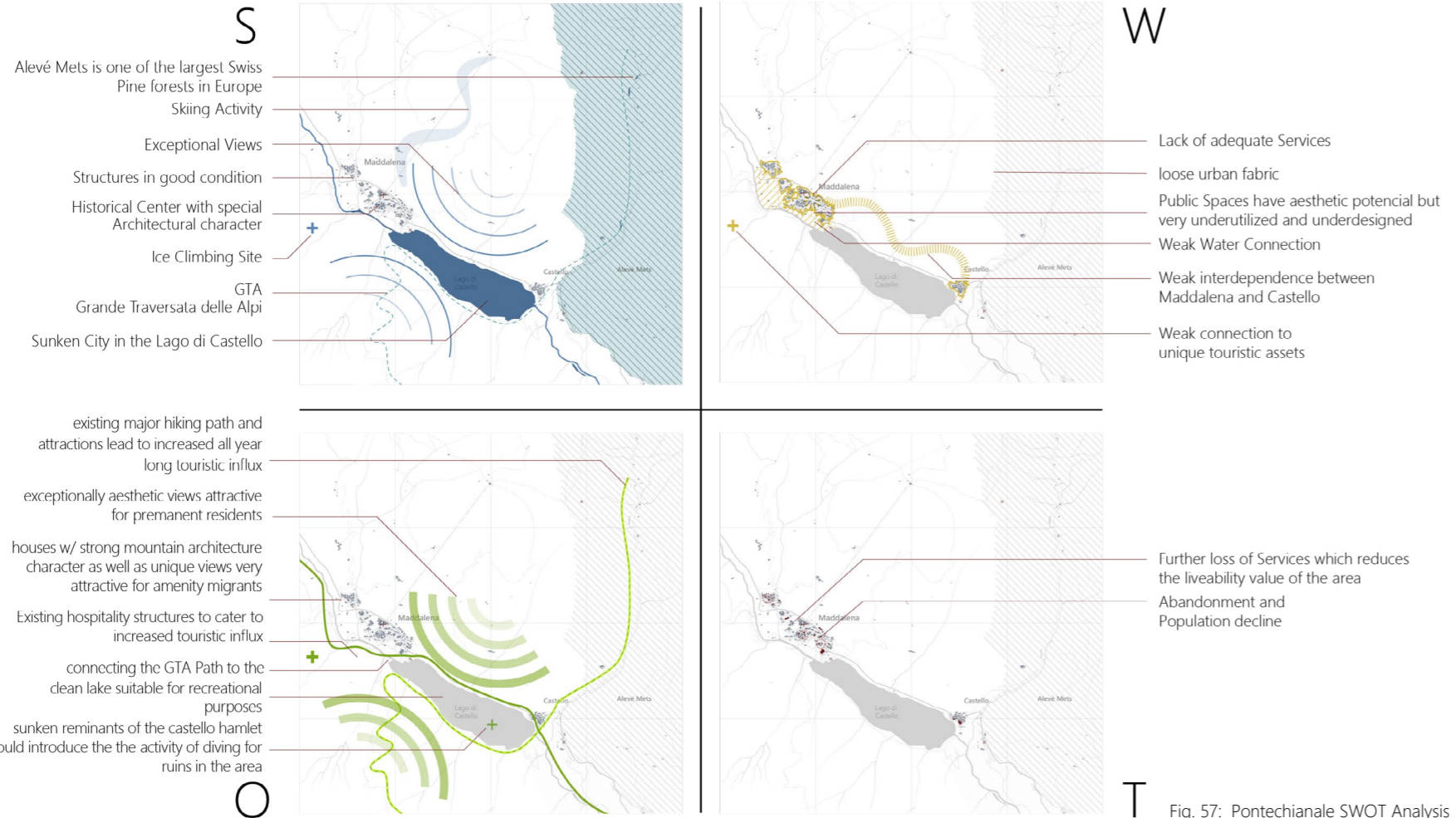
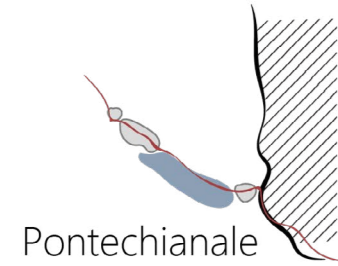
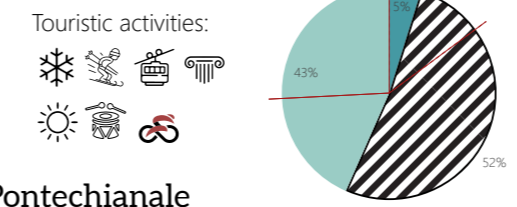


Fig. 57: Pontechianale SWOT Analysis



Fig. 58: Key-map



**Pontechianale**

Pontechianale is the last municipality of the Varaita Valley, situated shortly before the French border. It consists of some hamlets and numerous small settlements, located upstream and downstream the artificial lake of Castello.

Under the rule of the bishops of Turin it was a fief of the Lords of Pont (12th century). It was then affiliated to Casteldelfino and Bellino forming the so-called Castellata, one of the Escartons (cantons) which constituted the Federation of Briançon. In 1713 it passed to the Savoy Kingdom and in 1743 it was the scenery of battles between the Savoys and the Franco-Spaniards. (94.)

On occasion of the saints' days local people can be admired in their traditional costumes. The hamlets Castello and Villaretto are excellent starting points for hikes in the Alevé Forest and to its lakes Bagnour and Secco.

Sport centres and facilities include a football pitch, tennis and volleyball court; rest area for campers; children's playground, picnic area. Summer sports include hiking, mountain-biking, biking, rock climbing, horseback riding, windsurfing and canoeing, fishing Pontechianale is both a summer and a winter resort, with good tourist and sports facilities. Winter sports include downhill skiing, ski mountaineering, snowshoeing and ice climbing.

Prominent Fairs of Pontechianale are Ritorno dall'Alpe where they celebrate the cattle returning from the mountain pastures it takes place on the second Sunday of September. Prominent Fairs of Pontechianale are Ritorno dall'Alpe where they celebrate the cattle returning from the mountain pastures it takes place on the second Sunday of September.

Maddalena houses facilities such as a Town Hall, a Post office, a First Aid Clinic, a Tourist Office, and a small Grocery Places (95.)

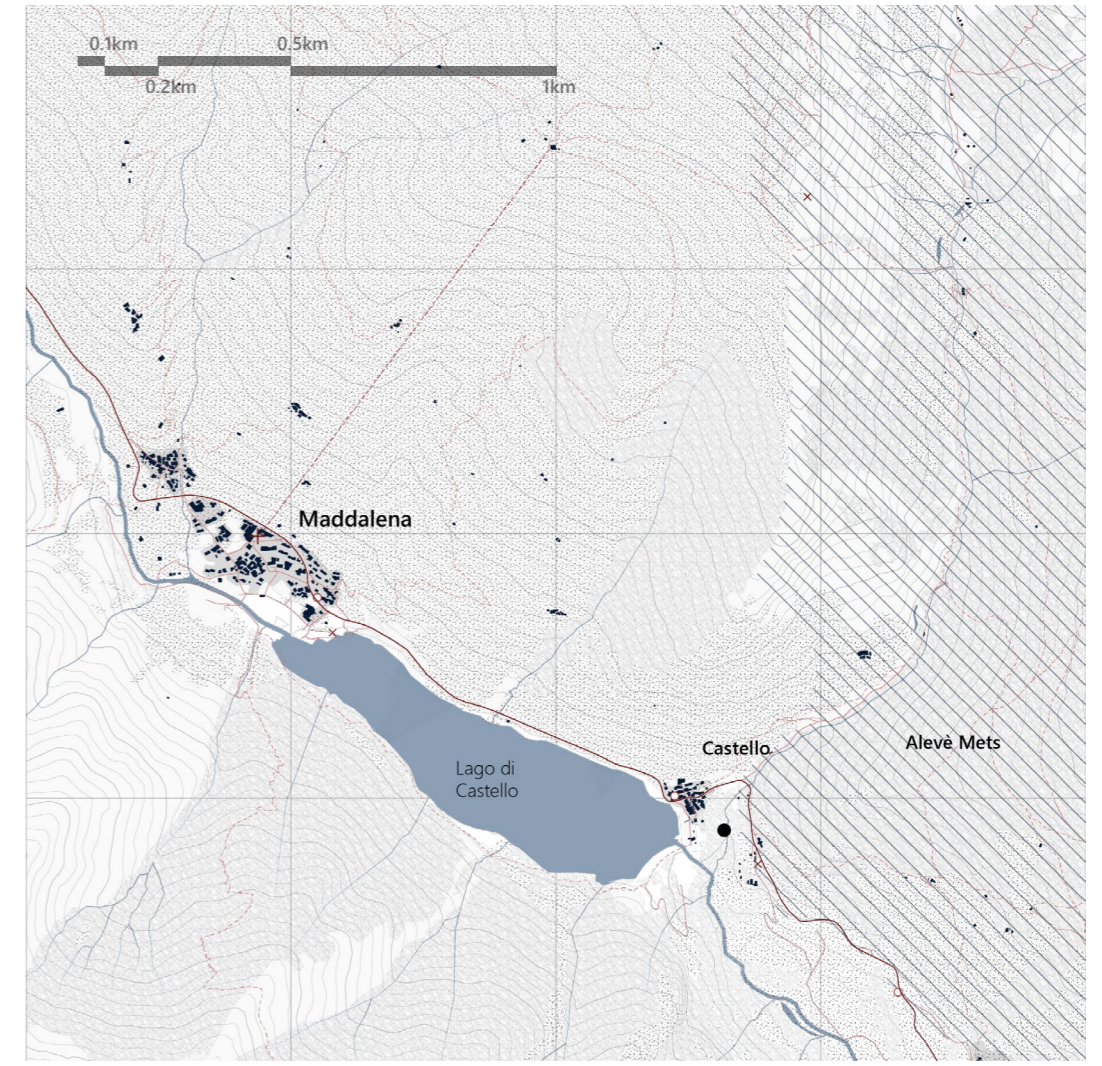
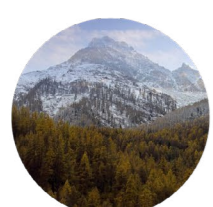


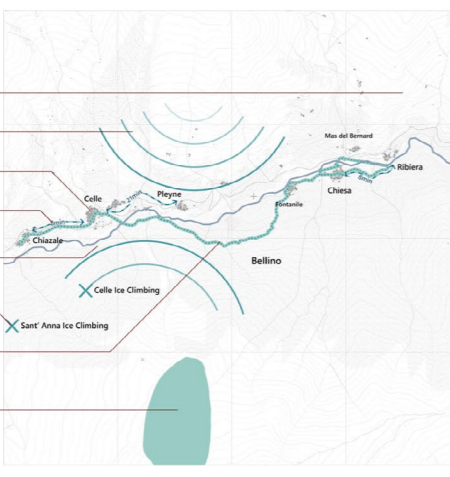
Fig. 59: Pontechianale Landuse



# Bellino

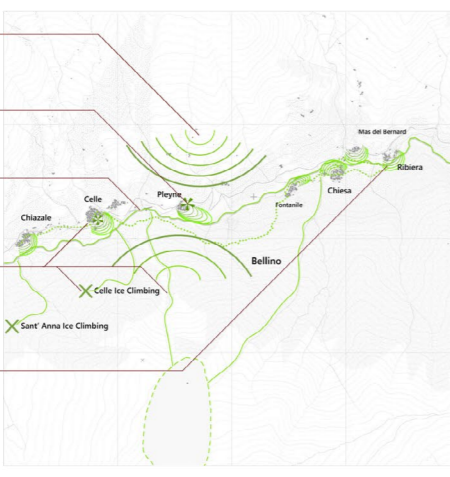


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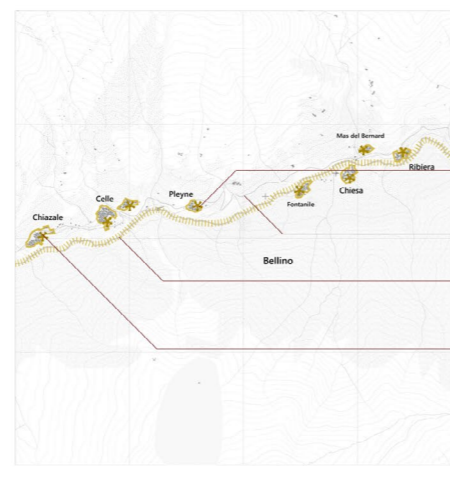
- Structures in good condition
- Exceptional Views
- Cultural Heritage and Parades
- Strong Pedestrian Character
- Special Architectural character
- Ice Climbing Site
- important cultural experience is the Sundial Path
- Major Glacier south of Bellino

O



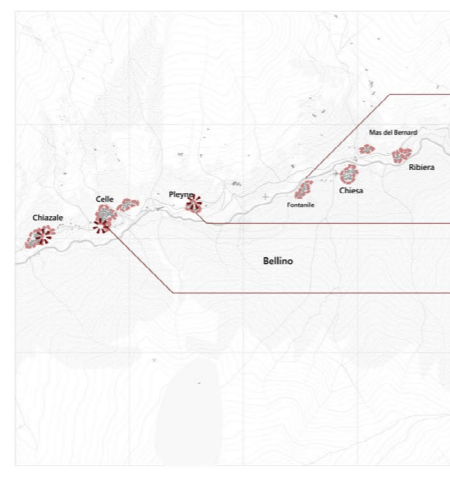
- exceptionally aesthetic views attractive for permanent residents
- additional facilities based on the needs of amenity migrants can lead to permanent residency
- enhanced connectivity between the Hamlets can lead to improved interdependence and increase the touristic traffic
- additional to the attractive existing cultural assets some culture oriented facilities could increase the touristic influx
- houses w/ strong mountain architecture character as well as unique views very attractive for amenity migrants

W



- Lack of Parking Space
- Lack of adequate Services and Public Spaces
- Hamlets are extremely Isolated and lack interdependence between them
- Weak Water Connection
- Structures are limited to Residential Functions
- Scarcity of Hospitality facilities, the existing ones are not connected to prominent tourism platforms

T



- Population decline and Abandonment
- Further loss of Services which reduces the liveability value of the area
- Reduced Touristic traffic due to reduced services

Fig. 60: Bellino SWOT Analysis

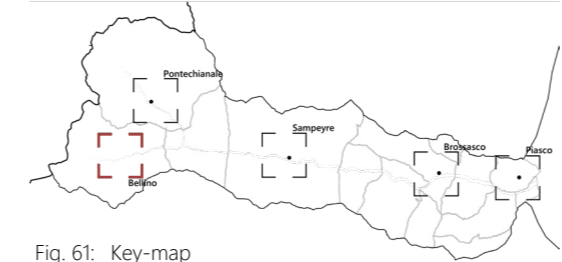
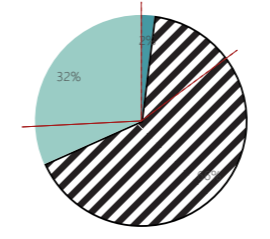


Fig. 61: Key-map

Economic activities:  
Touristic activities:



## Bellino

Bellino ( Blins ) is, together with Pontechianale, the highest town in the Valley. The proximity to the French border and its proximity to Liguria have meant that the region was originally inhabited by the Ligurians and by the Celts, and probably the same name of the municipality comes from Belenos, Celtic god of the sun. (86.)  
The municipal territory is spread over 62 sq km across the high Val Varaita, between two steep and wooded slopes that culminate in large mountain pastures. It is made up of ten hamlets which exhibit characteristic examples of alpine architecture in the Monviso area; the exceptional landscape joined by a rich and varied mountain flora, the intact architectural heritage of the villages with the typical large ciappe roofs of Luserna slate , the extraordinary frescoes of Celle, the "têtes coupées" sculptures that emerge among the stones of the walls of the houses , supposed to be of Celtic origin, and an assumed mystical function.  
Over time, due to war and external labour attraction the population of Bellino has undergone a sharp decline, due to emigration: first directed to France, then to the factories of the Piemontese plain.  
Nevertheless Bellino has kept intact its ancient charm of a high mountain farming community.  
In later times, like all border areas, Bellino underwent various occupations and was at the centre of territorial disputes and religious wars, which resulted in the now small local population as well as the safeguarding of a compact cultural identity. this lead to an attractiveness which favours a growing selected tourism.  
The hamlets of Chiesa and Celle have been included in the recovery project of the Piedmont Region called Borgate. European funds have allowed redevelopment and revitalization of these magnificent Alpine villages. (96.)



Fig. 62: Piasco Landuse

- Residential
- Agricultural (Farms)
- Agricultural (Orchards)
- Quarry
- Industrial
- Vineyard
- Glacier
- National Park
- Forest
- Meadow
- Ski Range
- Hiking Path
- Sightseeing Tour
- children (0-17)
- working age (18-64)
- seniors (65-)
- Piemonte Values for reference

## 06 Application

### Manifesto

#### Identity



The strategy is resting on 4 main columns; identity, livability, residential, creativity. each column tackling the challenge of making the localities of Val Varaita more attractive as a permanent living communities.

The identity column is concerned with preserving the mountain territoriality, and promoting the Occitan culture. Though improving hiking paths, promoting attraction points, expanding the Occitan traditions through better organization and planning this will alter the image of the mountain areas from isolated refuges to areas that are characterized with a distinct natural and cultural identity. Furthermore by promoting culturally relevant events and attractions this will alter the image of fixity of this alpine valley.

#### Residency



The Residential column is concerned with creating adequate and appealing domestic arrangement. Using tools as restoring abandoned and historical housing as well as creating new diversified homes the intent is to solve the general problem of abandonment and dilapidation as well as to attract permanent and diverse valley citizens varying from creative amenity migrants to economic migrants as well as third-age migrants.

#### Livability



The livability column is tackling the issue of life quality in marginalized mountain areas. By using tools such as improving the urban fabric, creating attractive public spaces, enhancing the connection between urban and environmental assets and restoring and adding needed services. This will reduce the dependance on the pianura Piemontese and enhance the autonomy of the valley. Furthermore increasing the life quality will assure a permanent citizenship.

#### Creativity



Last but not least is the creativity column which is concerned with introducing a state of the art creative and productive environment. keeping the existing economic sources alive as well as adding new activities is a matter of extreme importance to prevent the alpine environment from being reduced to a museum and a place of consumption for ski or summer tourism. By using tools such as creating coworking spaces, structures for traditional education and lifelong learning, improving data infrastructure, improving mobility, enhancing the profitability of the products of the valley by creating permanent and temporary exhibition spaces and markets, as well as creating spaces of meeting between the two to build a synergy between the creative crowd, traditional production of the valley and the touristic pull. This aims at promoting the topical concept of smart working village in spaces rich with environmental assets thus assuring permanent dwelling. Furthermore it aims at reviving the unique economic activities of the different localities which in return will create stronger interconnectivity and interdependence in the valley.

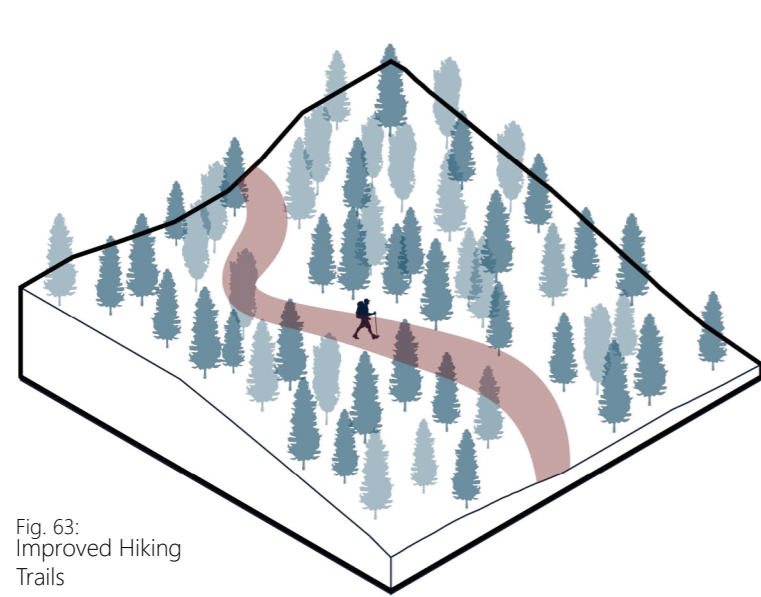


Fig. 63: Improved Hiking Trails

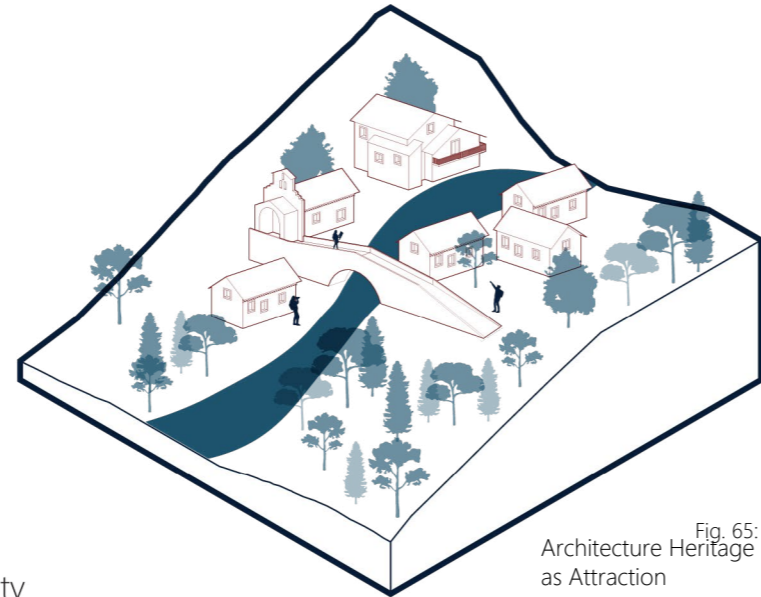


Fig. 65: Architecture Heritage as Attraction

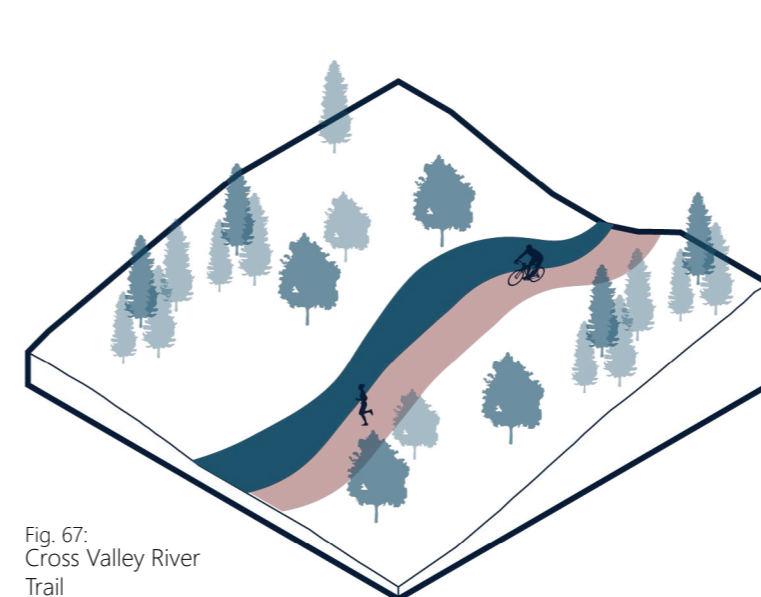


Fig. 67: Cross Valley River Trail

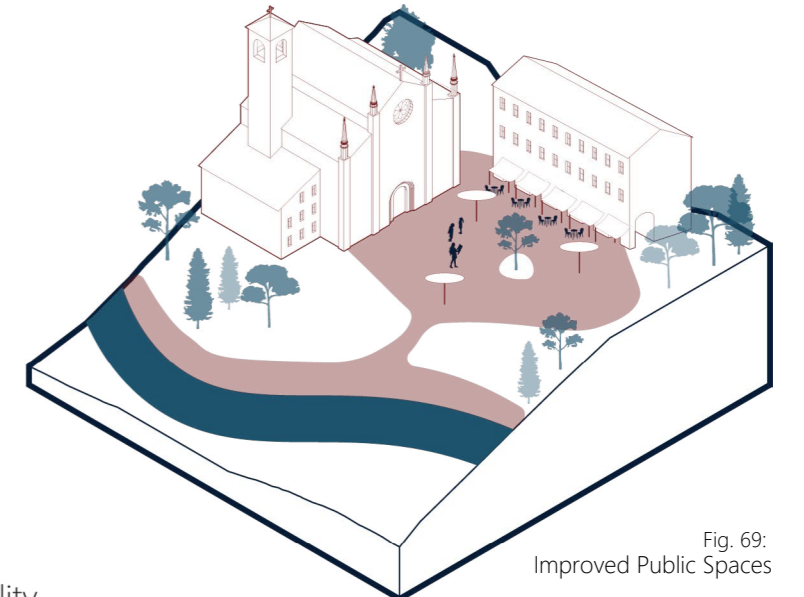


Fig. 69: Improved Public Spaces

Identity



Livability

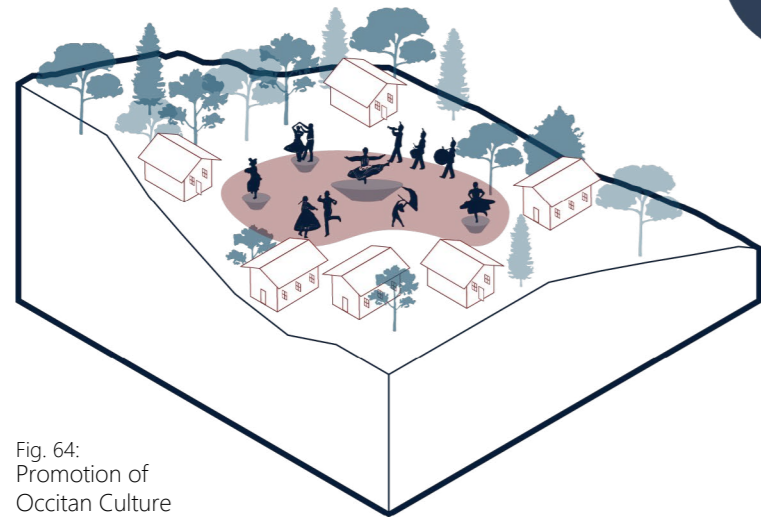


Fig. 64: Promotion of Occitan Culture

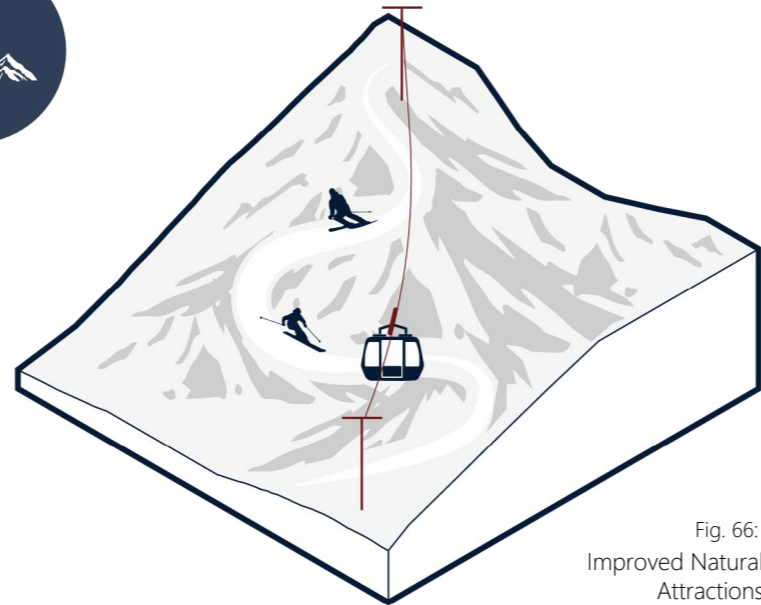


Fig. 66: Improved Natural Attractions

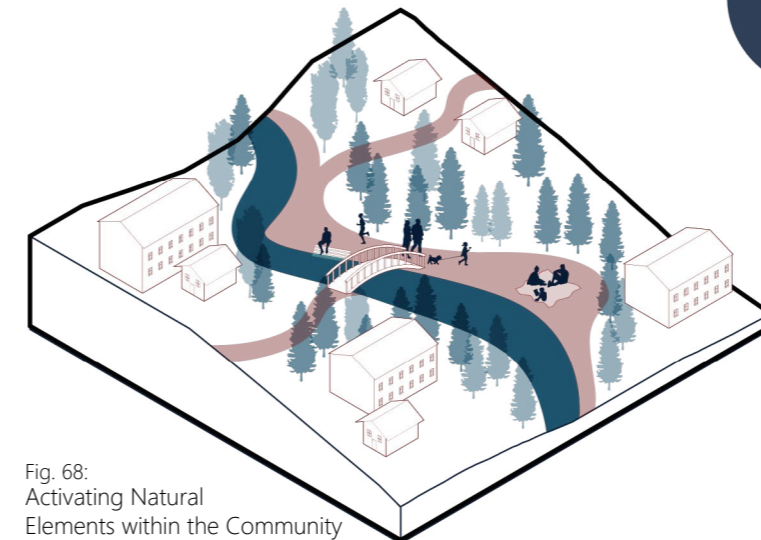


Fig. 68: Activating Natural Elements within the Community

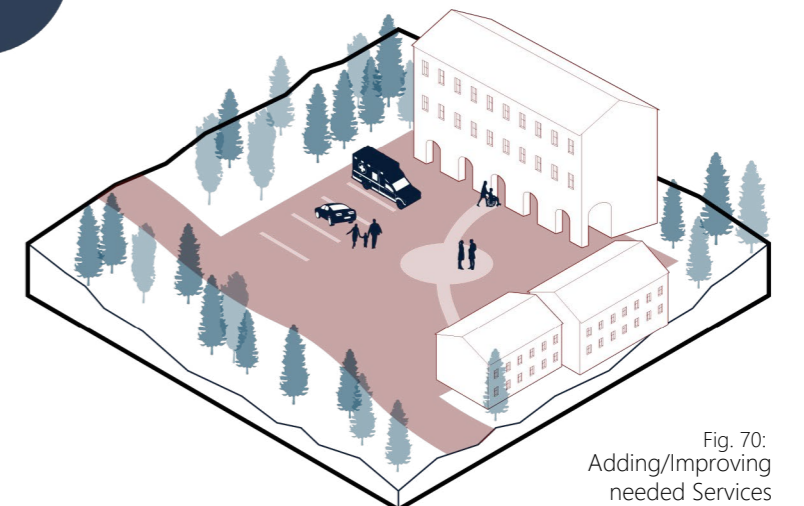


Fig. 70: Adding/Improving needed Services

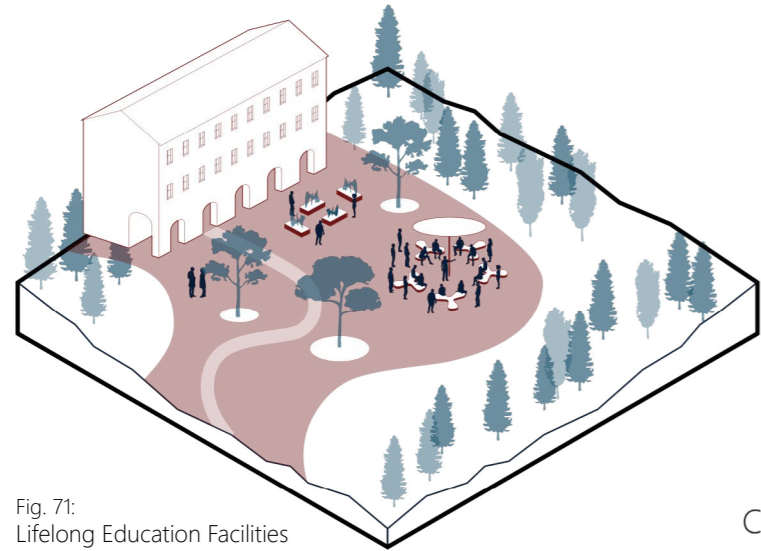


Fig. 71:  
Lifelong Education Facilities

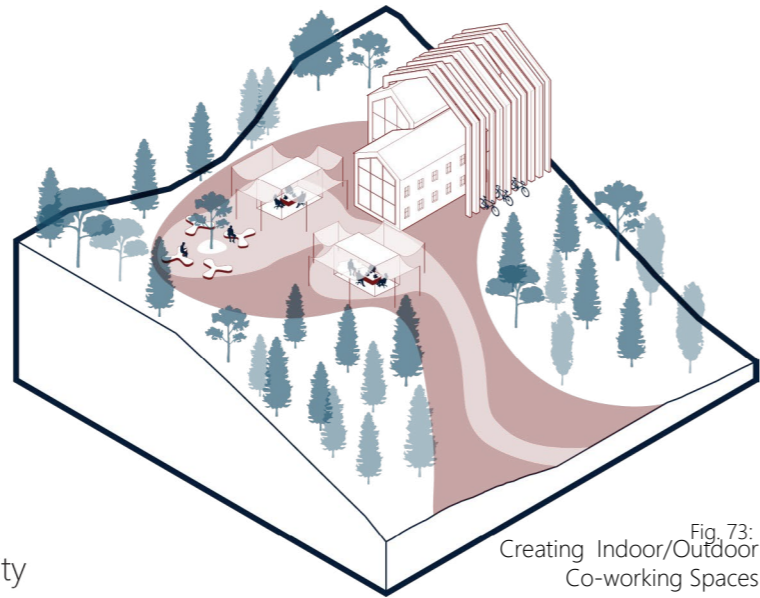


Fig. 73:  
Creating Indoor/Outdoor  
Co-working Spaces

Creativity

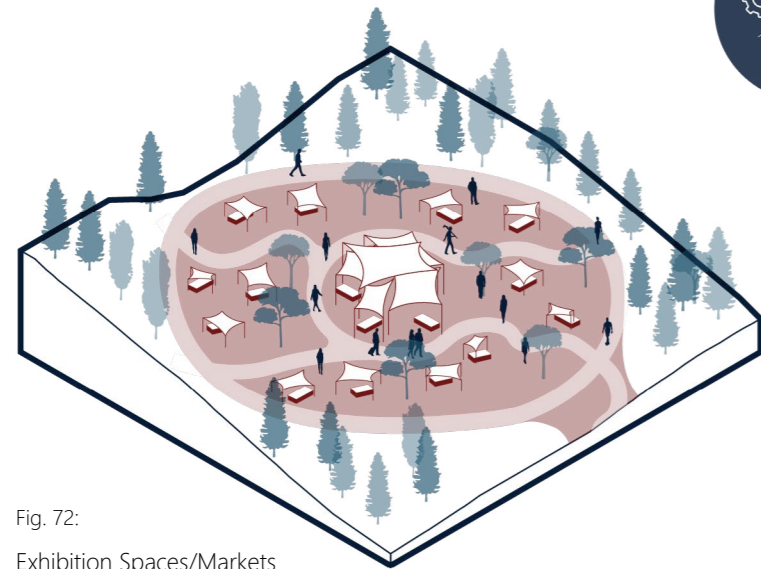


Fig. 72:  
Exhibition Spaces/Markets

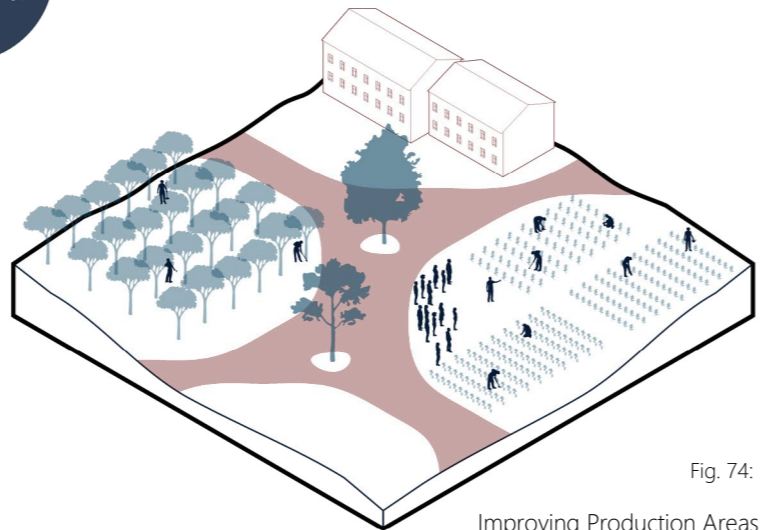


Fig. 74:  
Improving Production Areas

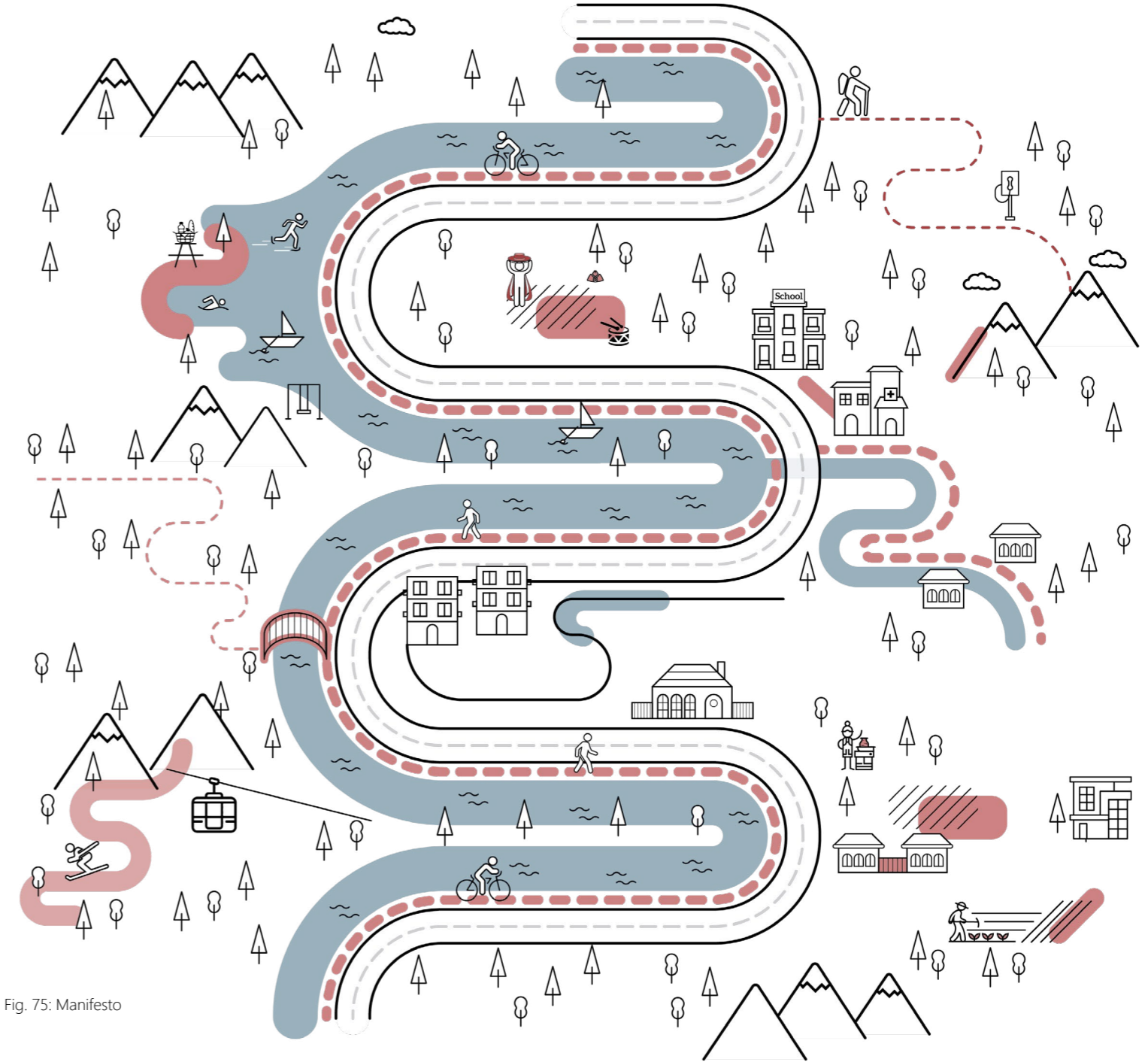


Fig. 75: Manifesto

### Val Varaita Valley Scale

The presence of people who reside in these places, live and work in them, is the only way to allow the mountain territories to continue to exist, renewing themselves without altering the authentic characteristics of the places. Each of the chosen municipalities along the Varaita river has developed its own blend of activities, functions and environmental image. Nonetheless each one has shown a tendency towards a certain trait. By emphasizing the specific characteristic for each municipality the aim is to create an attractive identity to counter the image of remote isolated mountain settlement. Furthermore the uniqueness of the identities in the valley will work together to create a magnetic tourism network.

Additionally the Proposal for the Valley scale includes a plan to regenerate the mobility of the valley, improve the connection to the Varaita River and add a unique attraction for residents as well as visitors; Cross Valley River Trail. The River Path shall incorporate pedestrian and cycling circulations and offer different activities depending on the location and context. This further supports the interdependence strategy and is part of the livability concept.

#### Strength

1. abundance of amenity green spaces
2. Unique cultural values; Occitan culture
3. Authenticity and preservation of traditions and traditional knowledge
4. availability of structures and flexibility of urban fabric
5. Unique Products and activities: Woodwork, natural park, archeological sites, Occitan culture

#### Weakness

1. lack of job opporunities which leads to emmigration
2. disparity of services (schools, nurseries, hospitals)
3. lack of coordination/ cooperation between municipalities
4. weak presentation of the Occitan culture
5. marginalization as consequence of population decline
6. seasonal economic activites

#### Opportunity

1. Demand for living destination with strong amenity green space availability
2. connecting to experiential and substantively creative tourism
3. introduction of sustainable and smart quality standards
4. exploitation of the cultural and environmental potetial

#### Threat

1. geological risks such as floods avalanches and landslides
2. threat of whole villages dying out

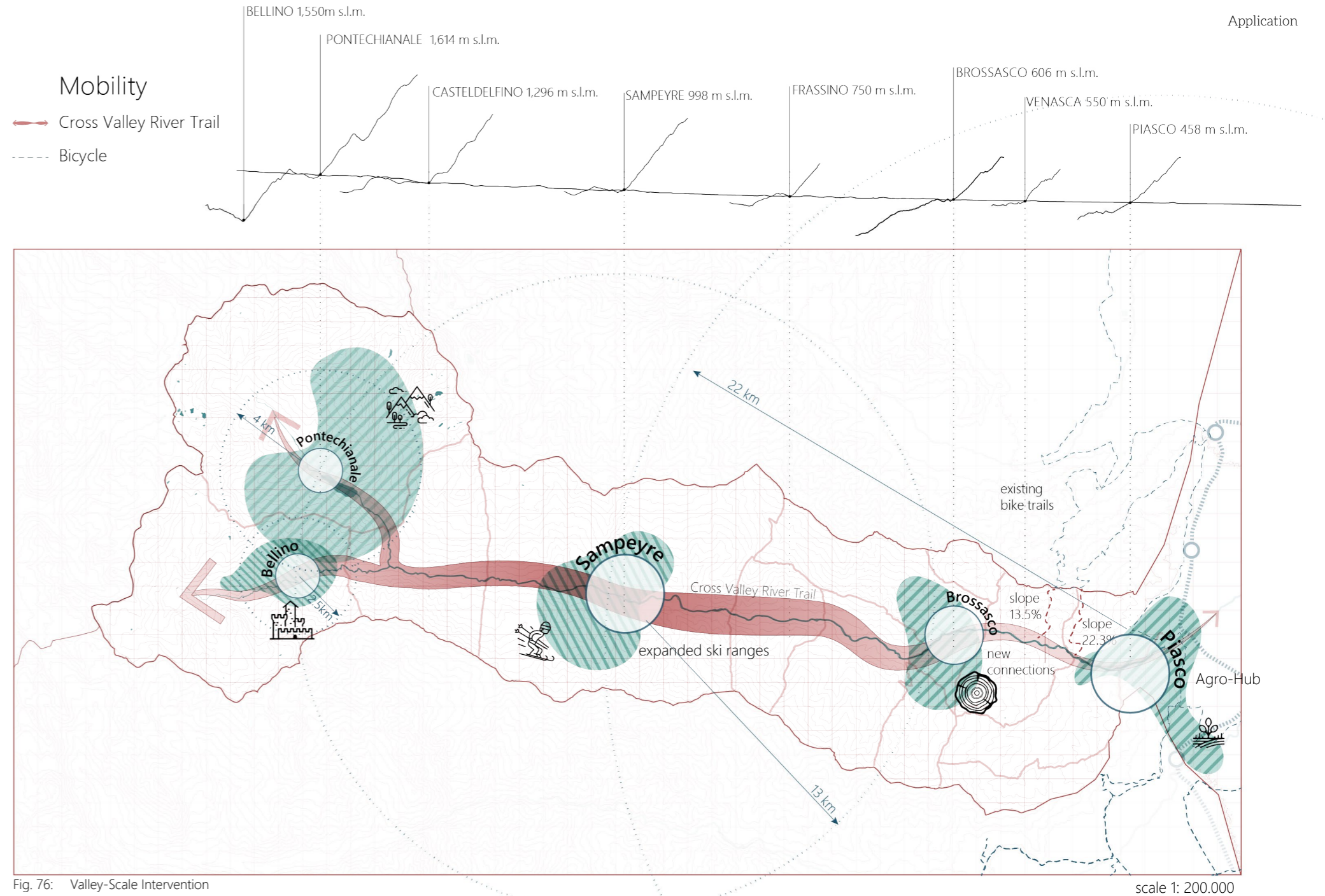


Fig. 76: Valley-Scale Intervention

scale 1: 200.000

### Brossasco

#### Existing Condition

Brossasco is located on the northern bank of the Varaita river, around 9 km west of Piasco. With a population of about 1000 people the small community houses scarce amenities limited to a couple of playgrounds, a museum preserving the wood production, post office, bank, and pharmacy. The public spaces in the little town are invaded by vehicular activity and parking, furthermore the limited parks are under-designed and thus not attractive to the residents. However the town of Brossasco is well connected by public transportation.

-  Historical Center
-  Farms/Orchards
-  Industry
-  Parking
-  Camping Grounds
-  Communal Facilities
-  Cemetery
-  Educational Facilities
-  Parks
-  Bus Stops

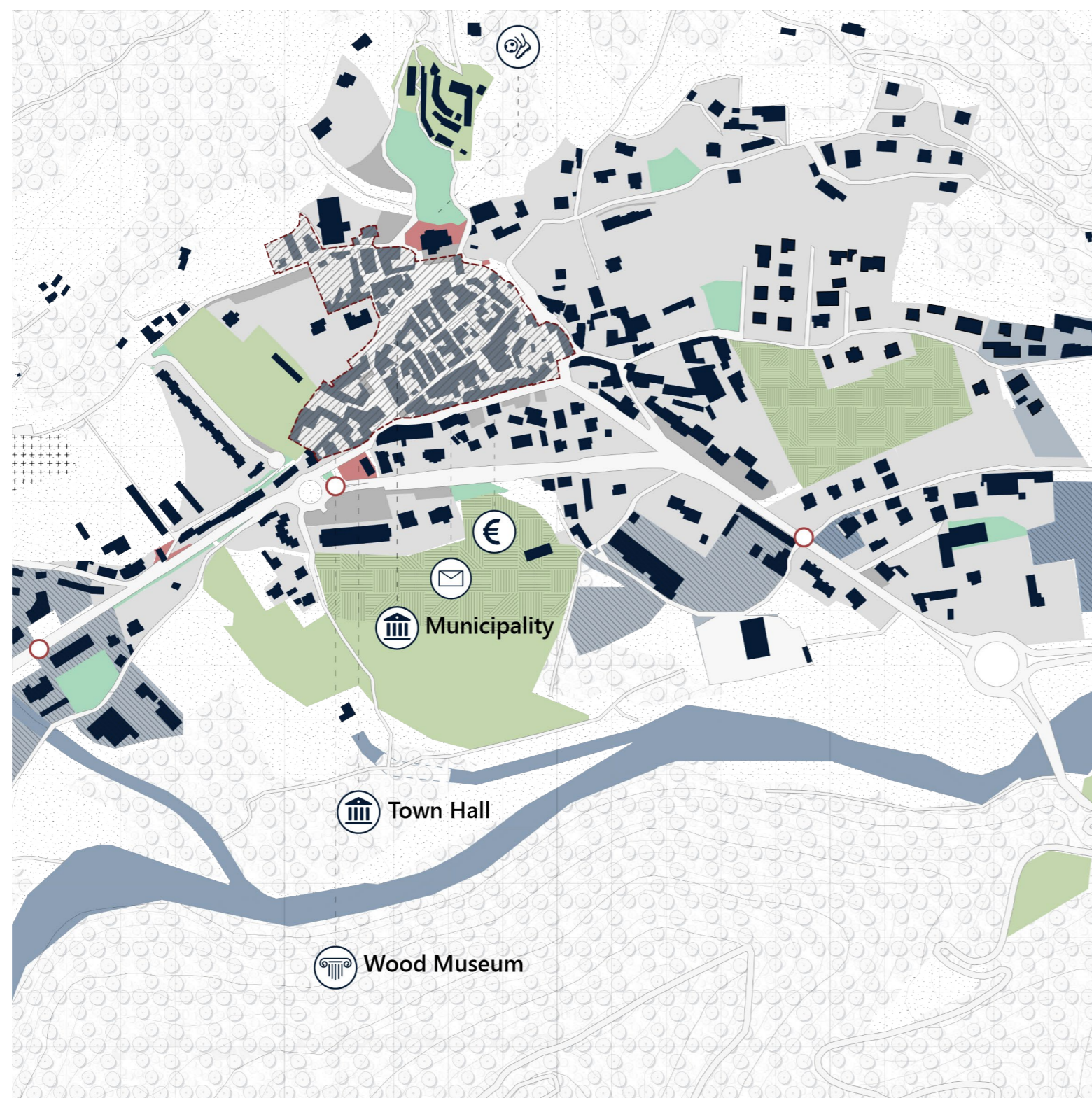


Fig. 77: Brossasco Existing Assets

### Proposal

The proposal in Brossasco is to restore the historical centre and turn it into a protected all pedestrian zone, eliminate the round about at the southwestern edge of the historical centre and turn it into a public space. This public space has the potential of existing structure such as the wood museum and other commercial and gastronomic functions enclosing it. Furthermore the proposal aims at introducing the creative campus north of the Piazza with a direct connection to the new Parco del legno to the south. The Parco del legno is meant to connect the community with the Varaita river and the cross valley river trail as well as create exhibition and vending points for the existing industrial and artisanal wood working factories in the area. Furthermore by crossing the river the park is connecting to existing hiking trails and thus activating the wild southern river bank.

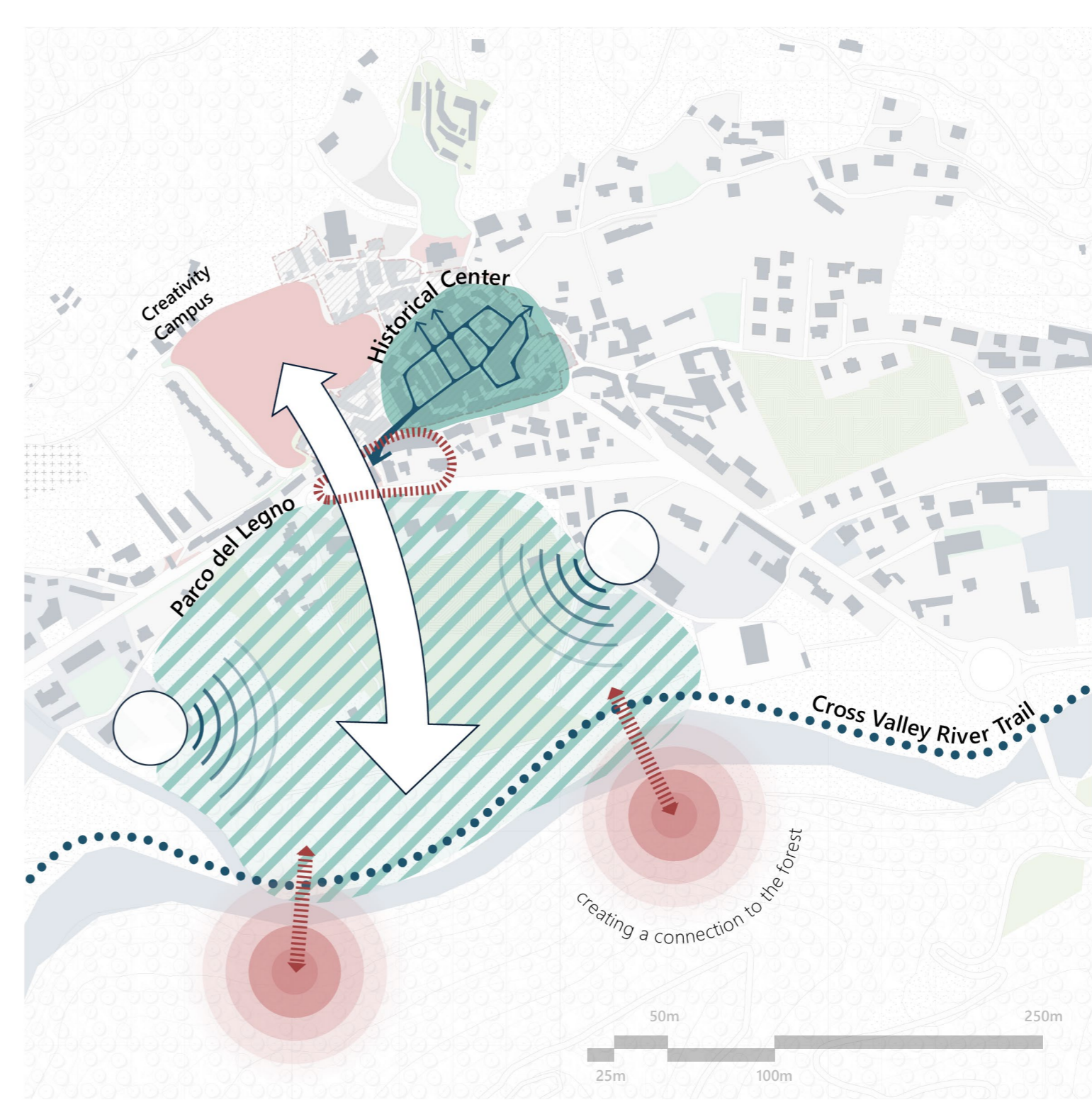


Fig. 78: Brossasco Proposal



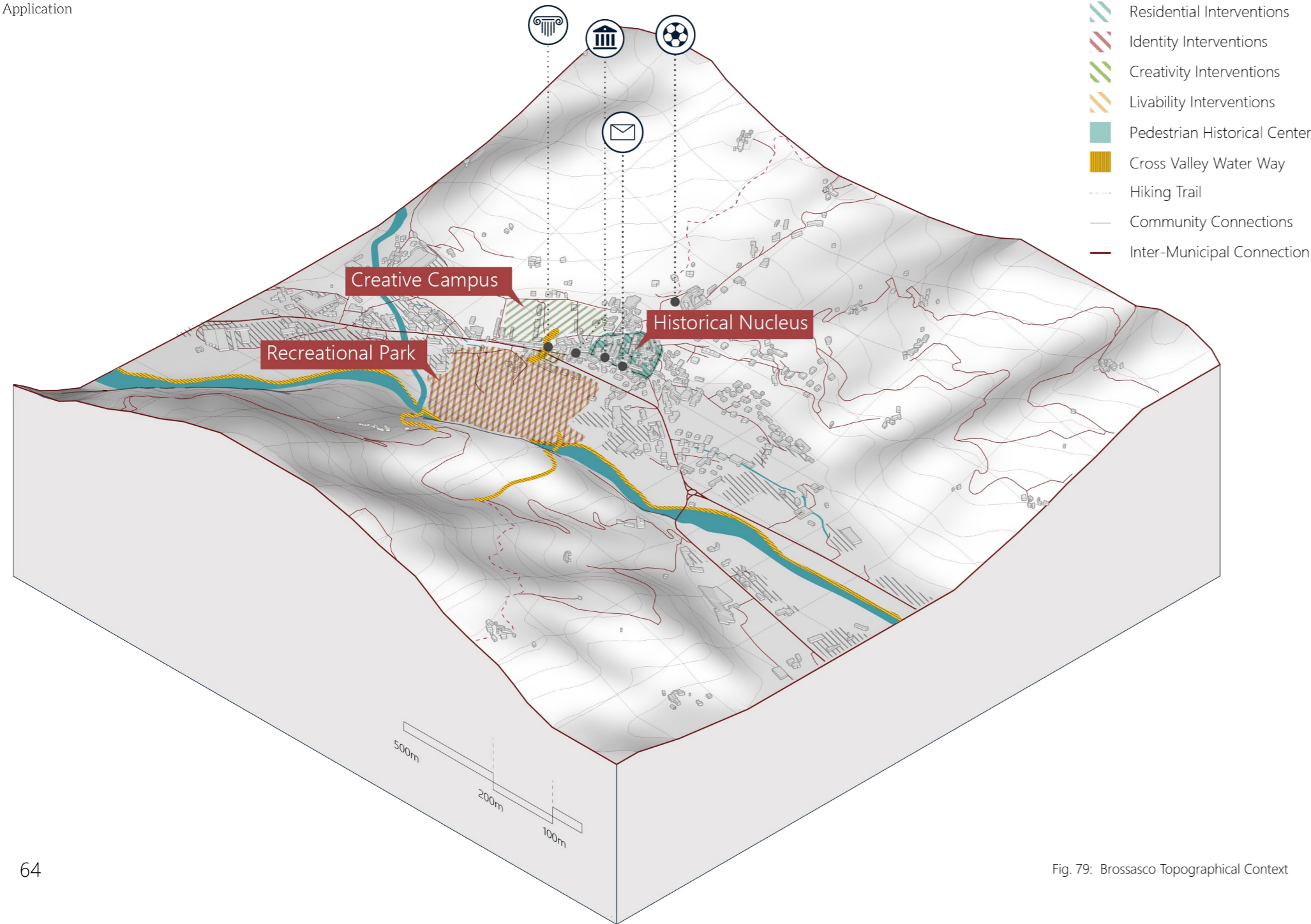


Fig. 79: Brossasco Topographical Context



Fig. 80: Brossasco Masterplan

Masterplan

The Program is specific to the immediate needs of Brossasco and its orbiting hamlets. Larger Facilities and services shall be accessed through the interdependence to larger communities such as Sampeyre.

The **Creative Campus** will include multiple coworking spaces Educational facilities and Workshops for youth as well as adults. It will also include a convention hall and exhibition facilities. The facilities shall be aligned with the while creating smaller meeting point between them. The creative campus shall also include a **Childcare** centre which houses indoor classes indoor playgrounds and outdoor garden and playground.

The **Park** is just a well maintained assimilation of the existing natural assets which creates a better connection to the water and comfortable recreational use along side preservation of nature. Furthermore the park will be able to house exhibition events targeted at the industrial and artisanal wood production enclosing the site.

The Creative Campus and the Park are both connected through the main Piazza, which will encourage influx between the two functions and boost synergy between the smart workers and the wood industry of Brossasco.

### Sampeyre

**Existing Condition**  
 Apart from the many Touristic assets and facilities the Community of Sampeyre offers many important services. Sampeyre is home to an elementary school as well as a small Red Cross Ward. Along with its location at the centre of the Valley these functions put the Community at a unique position of bringing together the inhabitants of the whole valley as they frequent the town to use the various services. This would give functions such as parks and public space an augmented role as they not only cater to the needs of the inhabitants of sampeyre but are also frequented by visitors from neighbouring municipalities.

Sampeyre offers sights such as:  
 - Historical-ethnographic museum in the historic Palazzo Savio (XVIII century);  
 - Parish church of SS. Pietro e Paolo with splendid frescoes by the Biazaci painters (15th century);  
 - Casa Clary in the central Via Roma;  
 - Sanctuary of Becetto (current parish church of the hamlet; it houses a Black Madonna);  
 - botanical path of Crosa (botanical educational path about 2.5 km long, located a short distance from the town of Becetto);

-  Historical Center
-  Farms/Orchards
-  Industry
-  Parking
-  Camping Grounds
-  Communal Facilities
-  Cemetery
-  Educational Facilities
-  Parks
-  Bus Stops

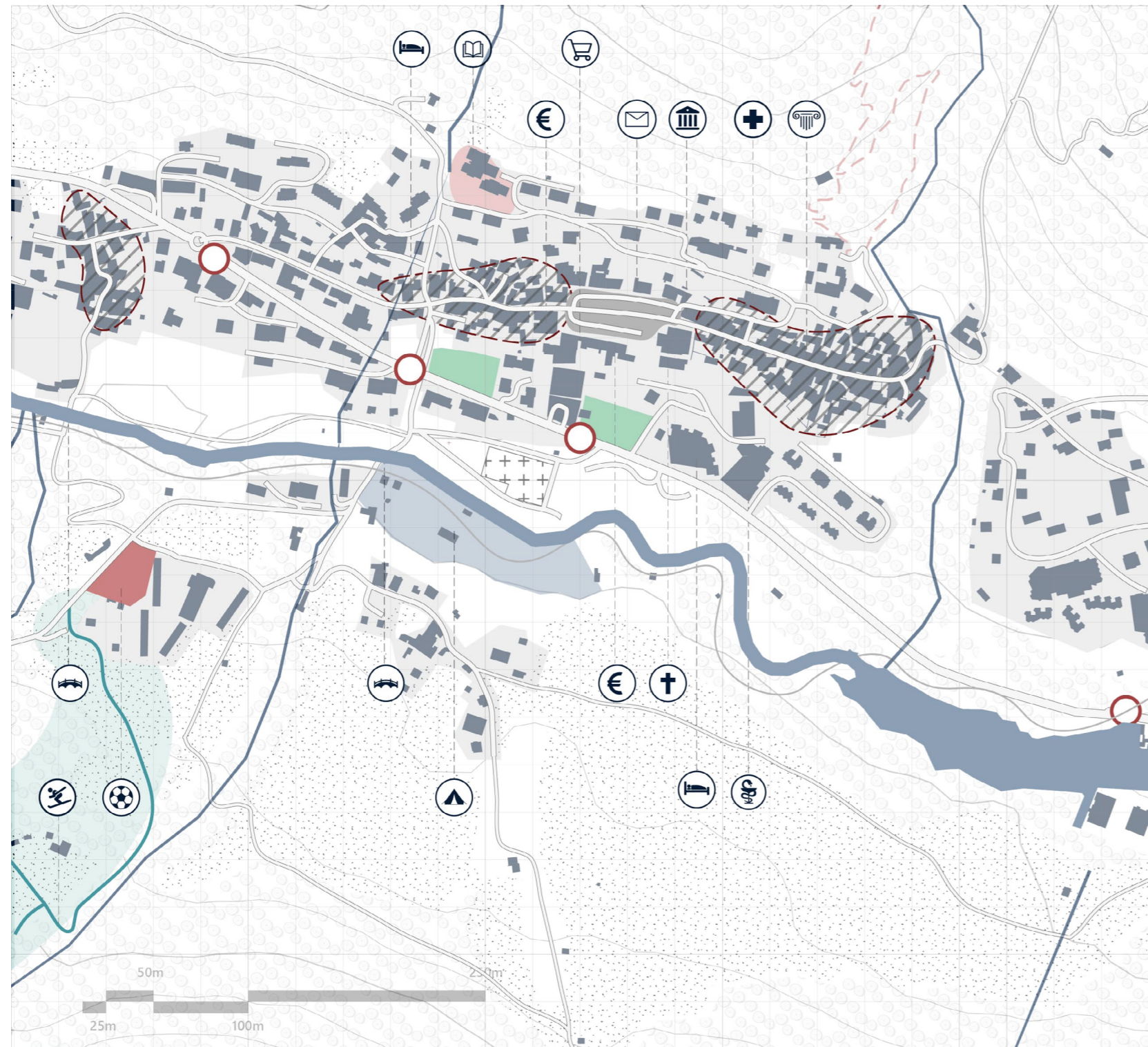


Fig. 81: Sampeyre Existing Assets

### Proposal

The proposal for sampeyre starts with restoring the historical nuclei for residential and touristic purposes. Secondly comes the renewal of the main Public place "Piazza della Vittoria". By augmenting the Healthcare and Educational facilities the intention is to create Healthcare and Education Hubs that will serve Sampeyre as well as the neighbouring municipalities. Furthermore the proposal includes creation of new functions such as the Creative campus and multiple interconnected recreational parks, around the stream to the east and north of the lake.

in terms of connection the plan outlines a strong spine linking the historic nuclei of the town.

The Spine forks off into multiple side connections. Four sideconnections point southward connecting the community with the Varaita river and the "Cross Valley River Trail". Two of them are the most important as they connect to the westernmost nucleus, the main Piazza delle Vittoria and the Waterway park passing through the Lake Side Park. Two side connections lead to the Educational Hub and the a hiking path through the Waterway park leading to the village of Becetto.

Furthermore the the proposal aims to stitch together the neighbourhood to the east which is cut off by the wild stream vegetation by means of the main spine as well as a transversal secondary connection further to the south.

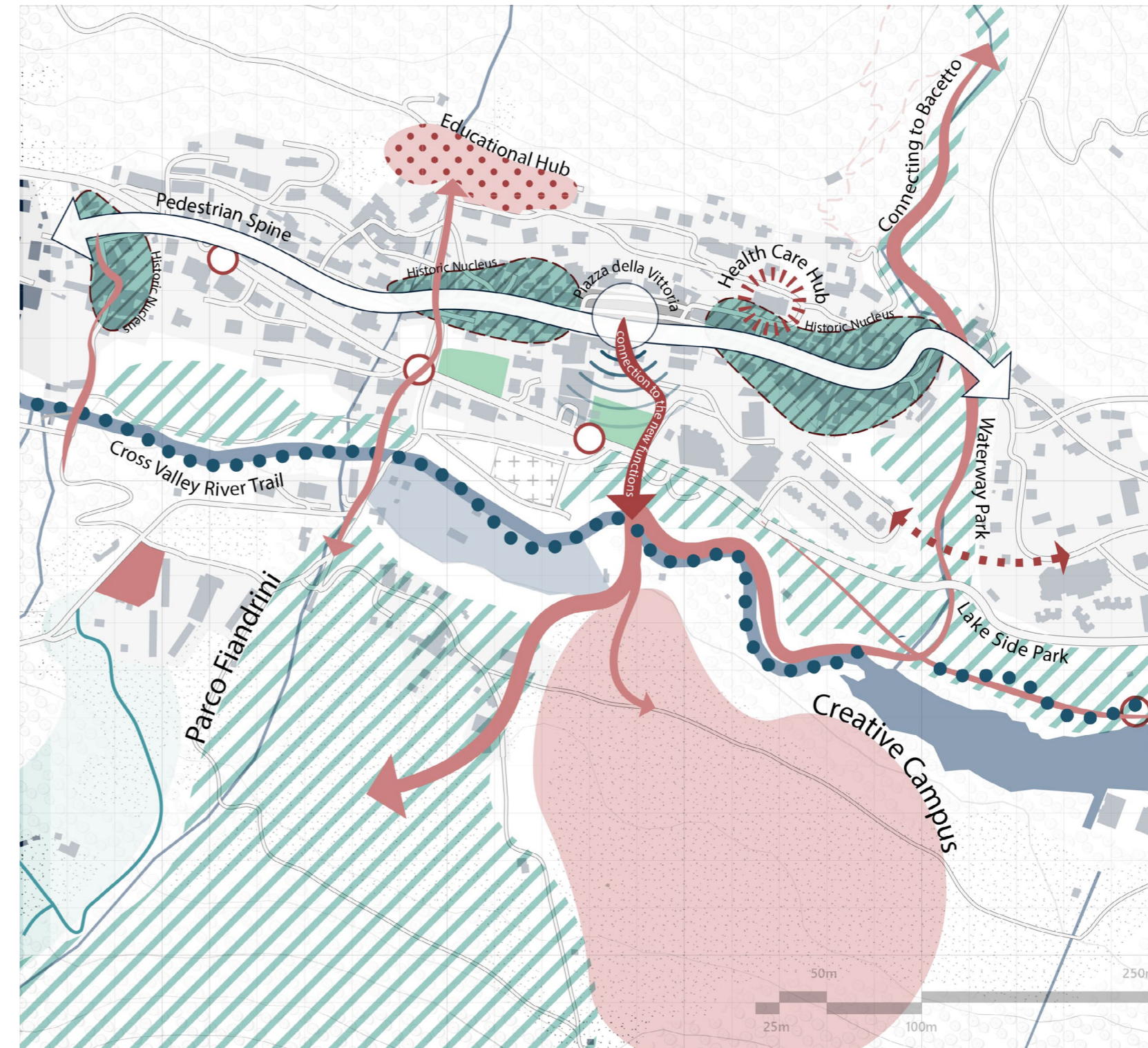


Fig. 82: Sampeyre Proposal

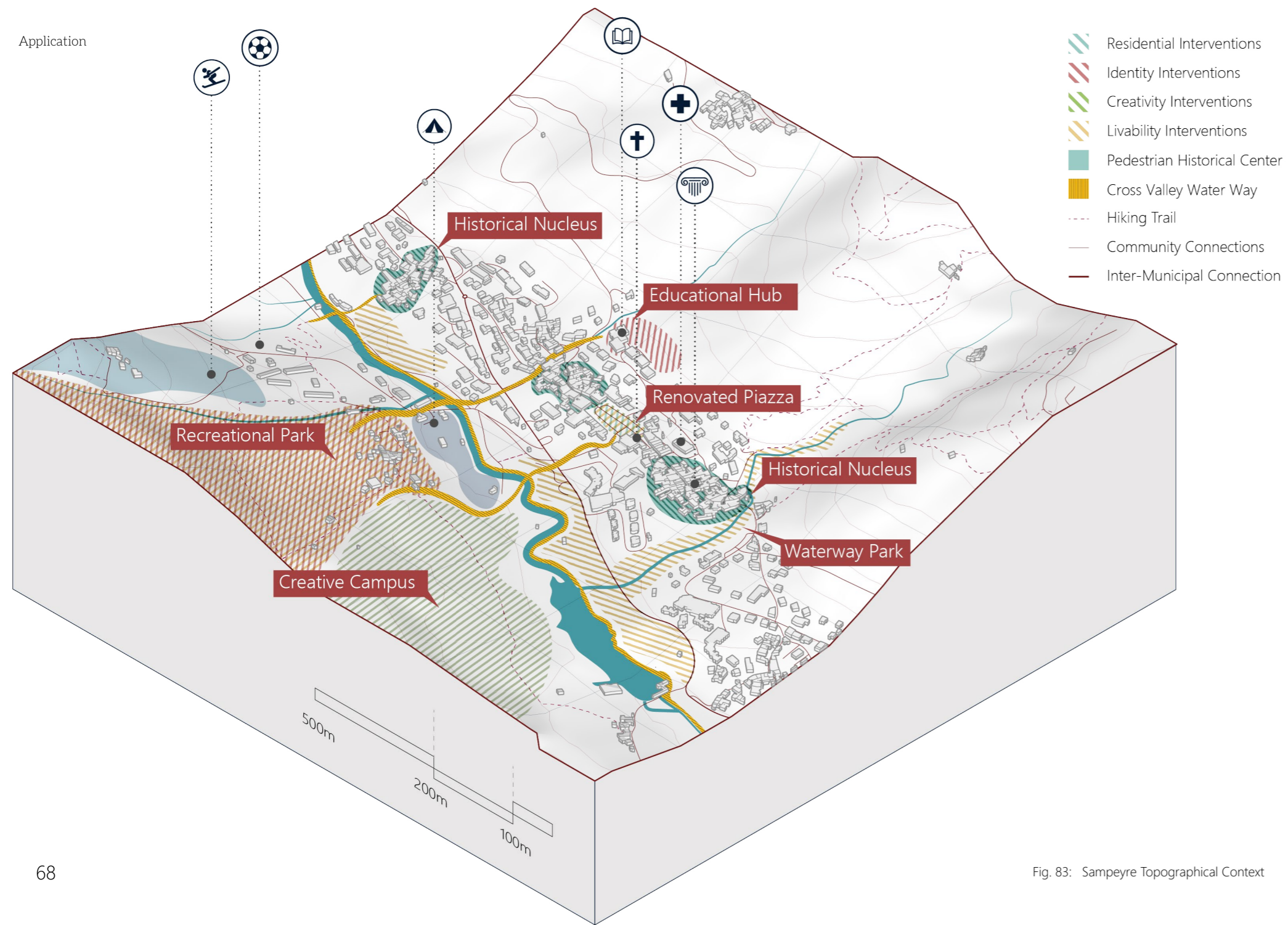


Fig. 83: Sampeyre Topographical Context

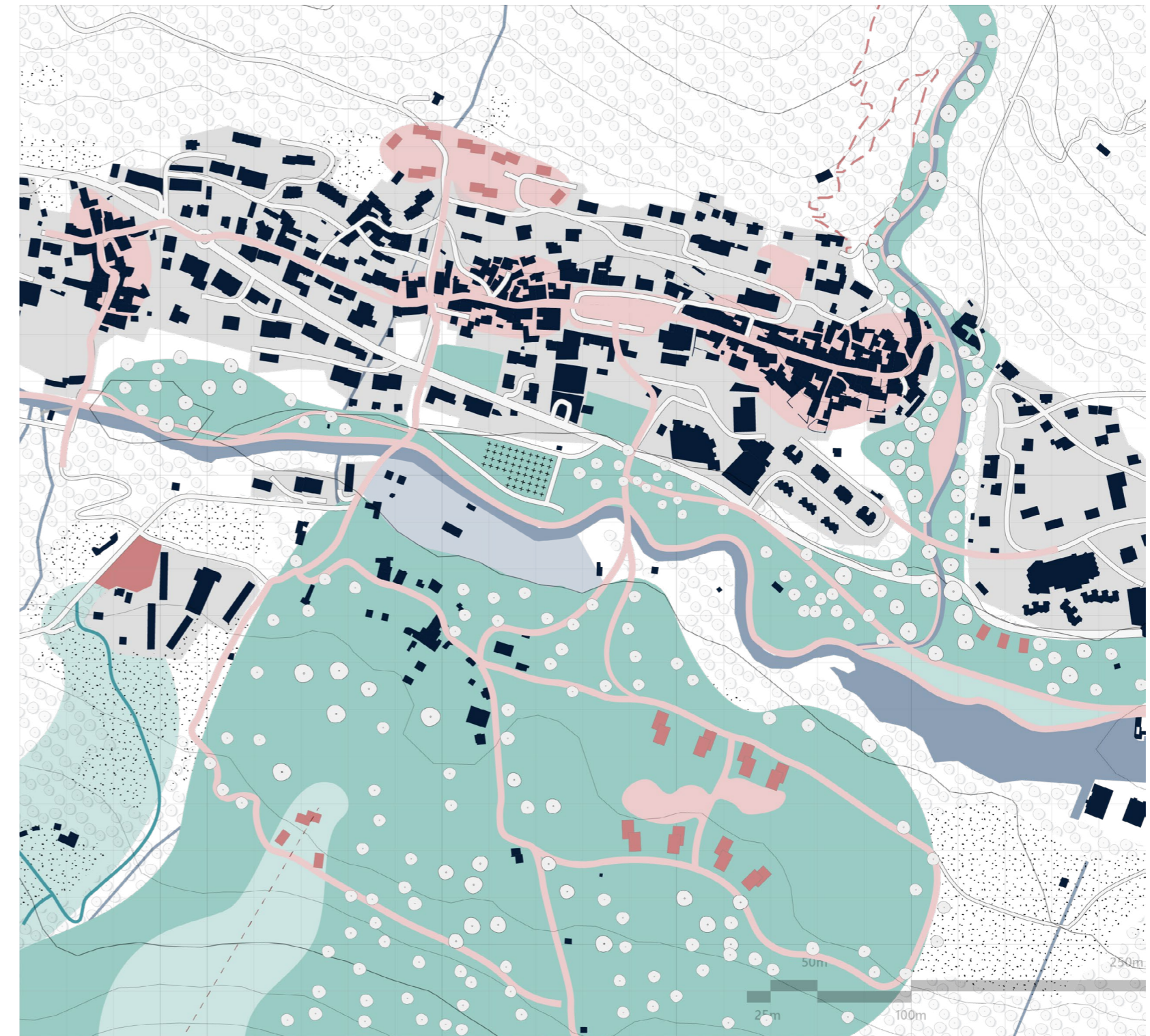


Fig. 84: Sampeyre Masterplan

Masterplan

The Program is designed to answer to the needs of the residents of Sampeyre while keeping in mind the central role the town is playing in the Valley. The location of Sampeyre necessitates the availability of certain functions which cannot be available all over the valley but can be accessed by many of the surrounding communities.

The **Educational Hub** will include facilities to cater for the didactic needs of children of all ages. It will also include an Childcare facility for toddlers and children of young age. It is located on one main access connecting it to a bus station reachable after 5 minutes of walking, as well as the main Park across the river.

The **Healthcare Hub** is catering to a large part of the valley. Seeing as there is a rich offer of extreme sports and activities which include a certain amount of danger the Hospital will have a well developed emergency section and a helipad. The Healthcare Hub shall have easy access to the waterway park to the east.

The **Creative Campus** will include multiple coworking spaces Educational facilities and Workshops for youth as well as adults. It will also include a convention hall and exhibition facilities. The facilities shall be aligned with the while creating smaller meeting point between them.

The **Park** is just a well maintained assimilation of the existing natural assets which creates a better connection to the water and comfortable recreational use along side preservation of nature.

### Pontechianale

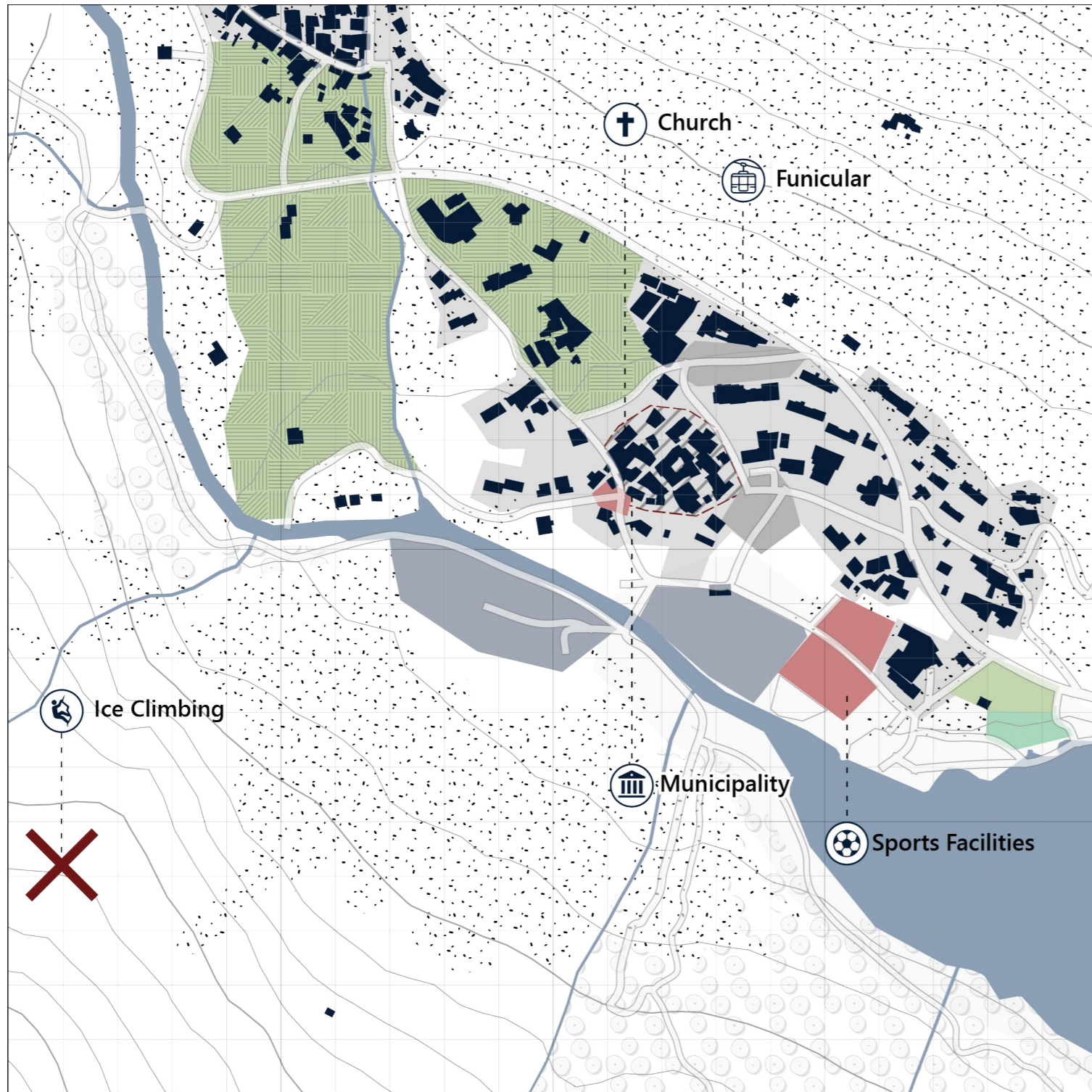
#### Existing Assets

Pontechianale offers limited facilities, apart from hospitality and gastronomy services, it only has a sports facility to the south near the lake. There are touristic attractions such as a funicular going up to the northern terrain and ice climbing sites although the connections to these sites are weak. The lake is one of the most important amenities in this scale and it offers some services yet the services and the lake are not well integrated with the community urban fabric. The western part of the neighbourhood is not well connected with the centre due to its low density and farming nature. In between the western part flows a small stream parting the settlements in two and leading to more isolation.

Sport centres and facilities include a football pitch, tennis and volleyball court; rest area for campers; children's playground, picnic area. Summer sports include hiking, mountain-biking, biking, rock climbing, horseback riding, windsurfing and canoeing, fishing

-  Historical Center
-  Farms/Orchards
-  Industry
-  Parking
-  Camping Grounds
-  Communal Facilities
-  Cemetery
-  Educational Facilities
-  Parks
-  Bus Stops

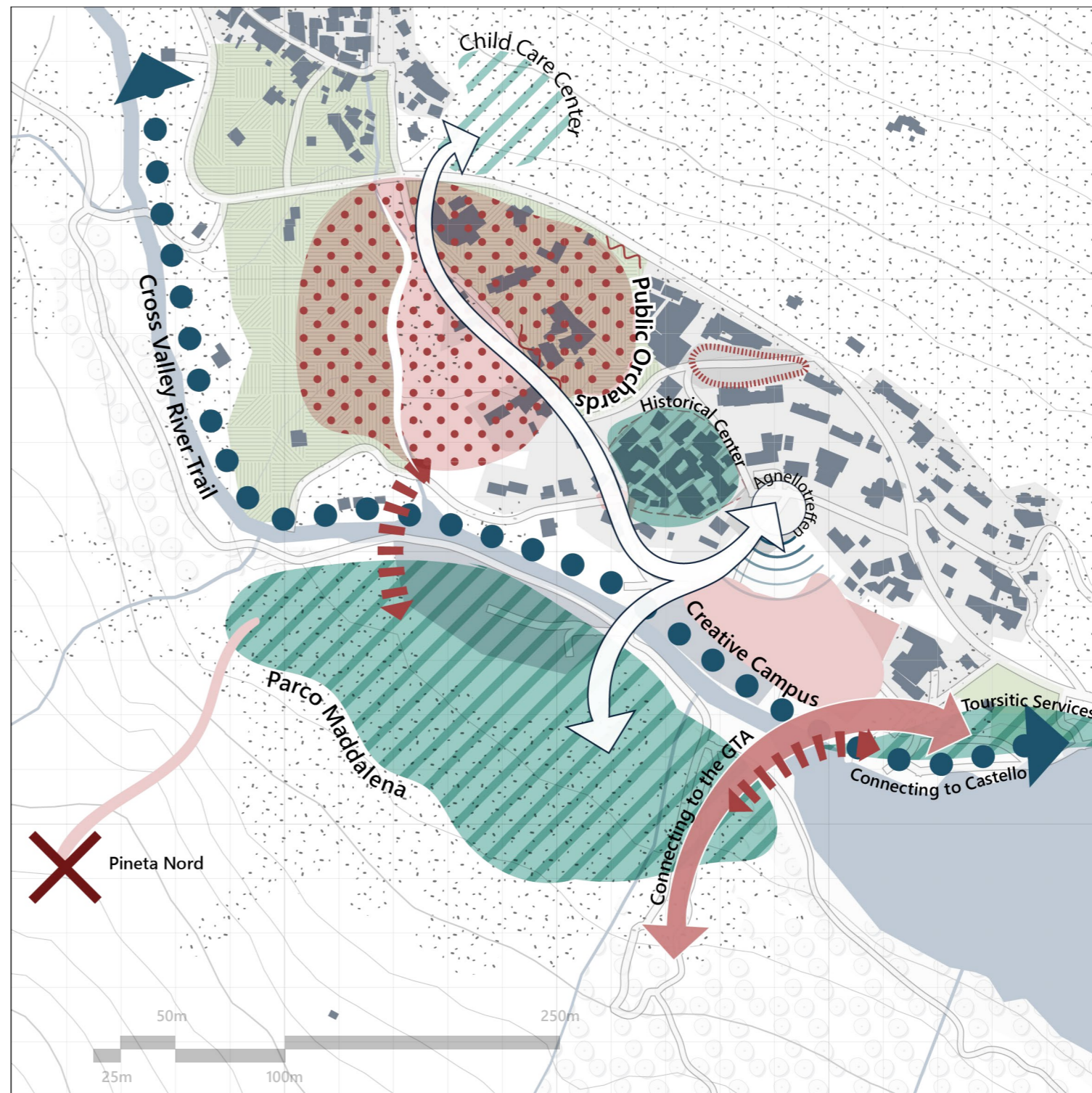
Fig. 85: Pontechianale Existing Assets



#### Proposal

The urban regeneration proposal in Pontechianale begins with restoring existing public spaces. The existing public spaces are the Agnellotreffen east of the historic centre and the piazza in front of the Hotel chalet Seggiovia which is also the Maddalena funicular station. By regenerating the Funicular public space a clear touristic purpose is given to it. The Agnellotreffen will be the main public space of the small community opening towards the renovated houses and pedestrian streets of the historic nucleus. To the south the piazza will open towards the connection to the Varaita river. This connection to the south is of vital importance as it enhances the relationship between the community and the Varaita river, it also opens towards the creative campus of the community and it retains its original function of meeting point for the agnello trekking tours and other events. Furthermore this axis, whether going uphill or downhill, is overlooking a unique view, creating a pedestrian connection through there will improve the quality of life and positively exploit the aesthetic assets of the area. The connection to the Varaita extends to the other riverbank where there will be a public park while keeping the existing function of camping space. The park will create a connection to the Pineta Nord Ice Climbing site to the south-west. Furthermore it will overlap with the existing GTA hiking path and directly connecting through a bridge across the river to the lake side activities and services thus creating a smoother transition towards the amenities of Maddalena and encouraging visitors to enter the community. Moreover the agnelloconnection splits into another main spine to the west where it connects to the western part of the community. This neighbourhood is characterized by private farming properties, low density and lack of community services and is therefore cut-off from the community. The proposal for solving this issue would be to turn a large part of the area into a horticultural activity, "Orti" as it is called in Italy, which will be profitable for the owners and also create a space with a social function. Furthermore it will make the streets around the area more safe due to the increased movement in and around the "orti". The Orti will also overlap with the small stream leading to the river. While keeping the wild character of the stream intact the proposal is to create a Promenade with the aim creating a useful recreational space for people, connecting to the "Cross Valley River Trail" and above all eliminating the physical edge created by the savage stream vegetation. Further to the north with direct access to the nearby bus station will be a child care centre with indoor and outdoor amenities. This function set in this location specifically has the purpose to create traction within the community itself while also creating interdependence between the community and smaller hamlets around it connected through the public transportation system.

Fig. 86: Pontechianale Proposal



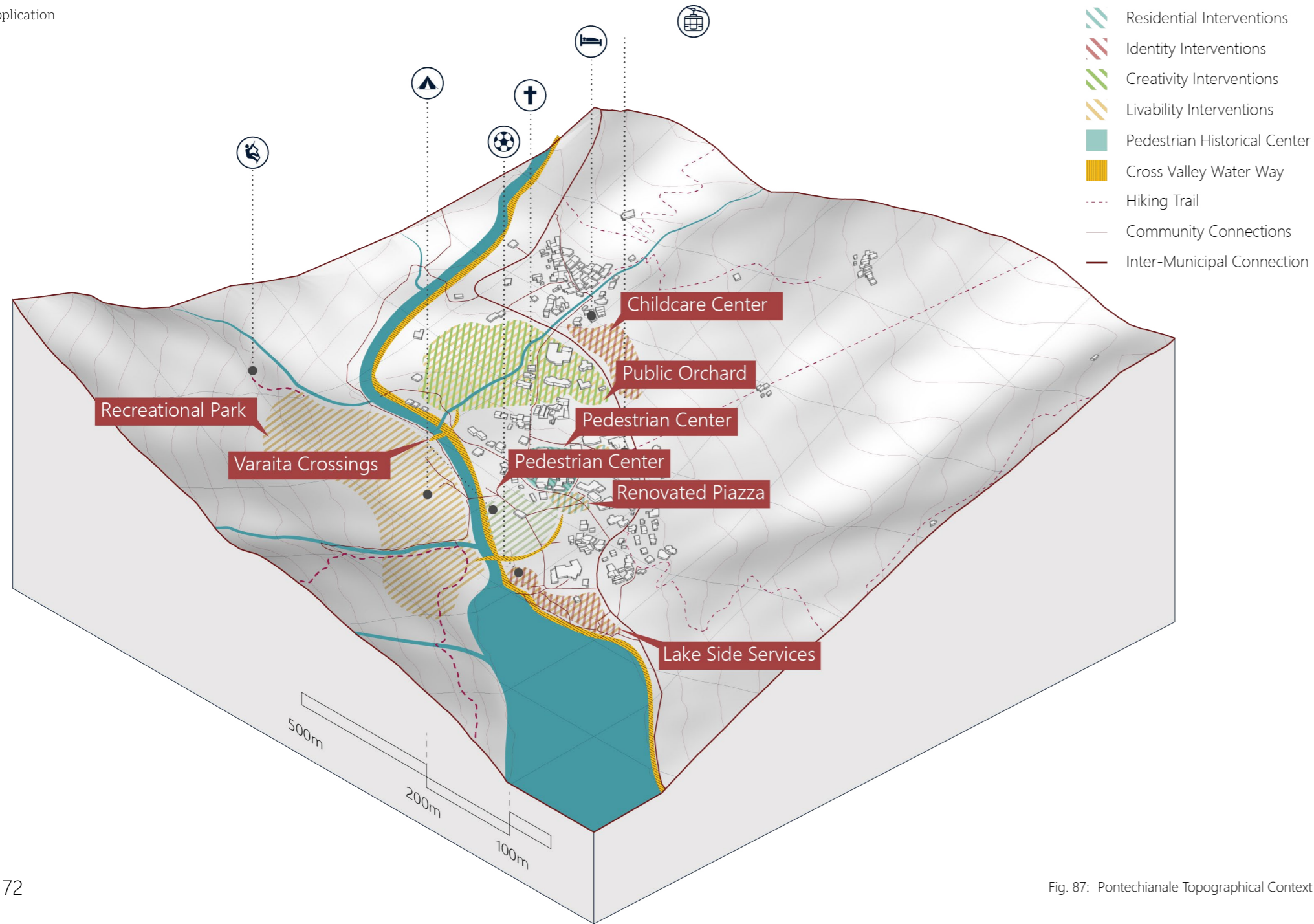
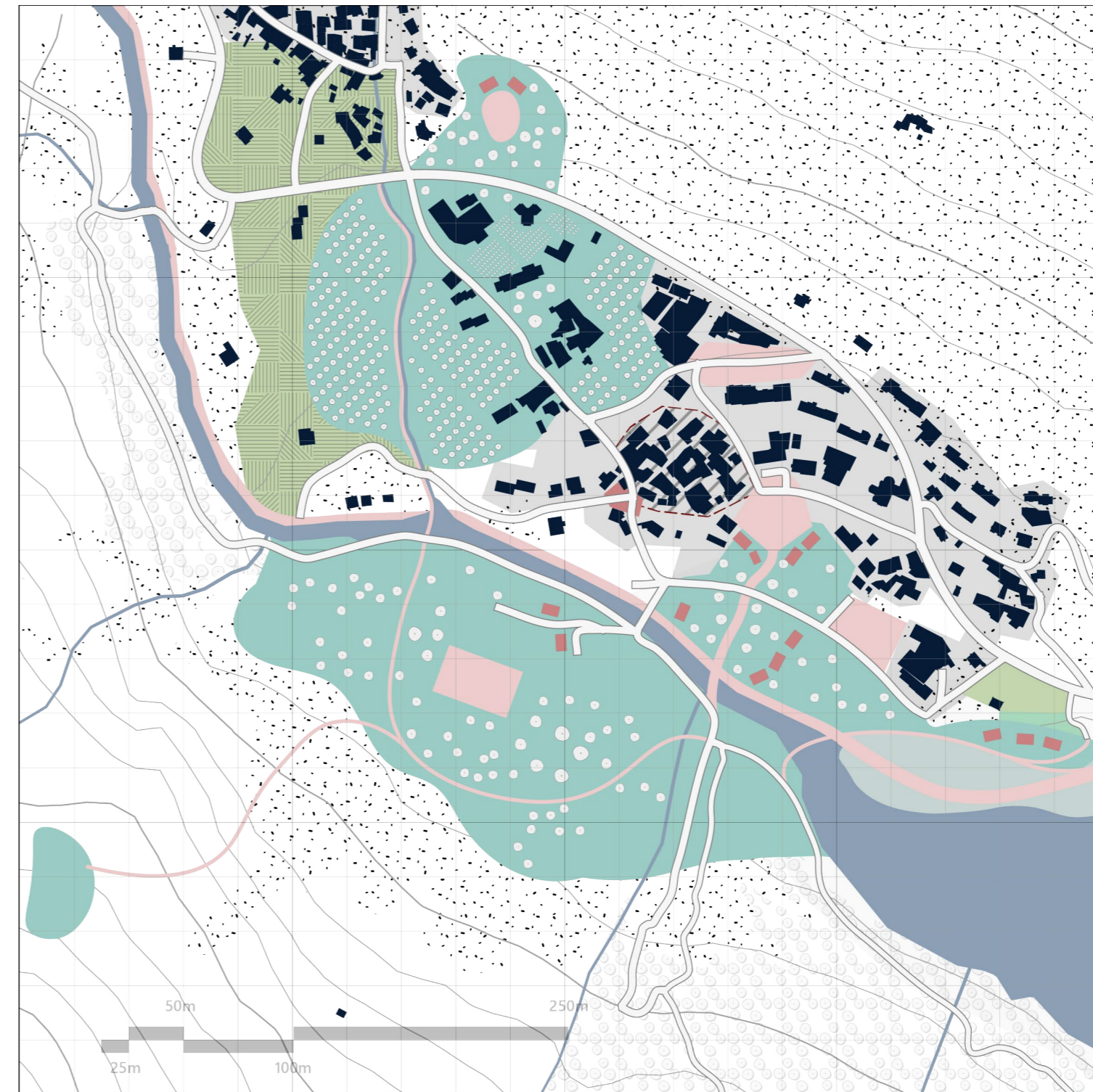


Fig. 87: Pontechianale Topographical Context



Program

The Program is specific to the immediate needs of the Maddalena and Castello communities and orbiting hamlets of Pontechianale. Larger Facilities and services shall be accessed through the interdependence to larger communities such as Sampeyre.

The **"Orti"** will include multiple agricultural settings such as orchards, plantation and land for crops and small plants and herb cultivation land. Furthermore the "Orti" will house a livestock facility including a barn and pasture and poultry coop as well as stables for equine activities. Additionally it will include a shed for farming tools and machines, storage for crops and other products as well as a vending and market place. On the other hand the orchard will include accommodations for residents as well as agrotourism facilities and gastronomical activity such as a trattoria and a bar.

The **Childcare** centre will include indoor classes indoor playgrounds and outdoor garden and playground.

The **Creative Campus** will include multiple coworking spaces Educational facilities and Workshops for youth as well as adults. It will also include a conventionhall and exhibition facilities. The facilities shall be aligned with the while creating smaller meeting point between them.

The **Park** shall include recreational promenades and picnic arrangements, a children play area and various sports facilities such as a football court and skating park.

The **Lake Side** facilities will include gastronomic activities such as a bar and a restaurant, picnic arrangements and equipment renting shop and lockers.

Fig. 88: Pontechianale Masterplan

## Bellino

### Existing Assets

Borgata Chiesa is the heart of the municipality and is developed in a group of buildings most of them of residential purpose. On numerous facades you can admire contemporary frescoes, probably works by local artists.

The Municipality offers facilities such as a bocce court, children's playgrounds in hamlets Celle and Fontanile. Summer activities include hiking, mountain biking, cycling, climbing and fishing.

While in the winter people enjoy activities such as cross-country skiing, ski mountaineering, snowshoes, ice climbing. Of particular interest is the rich heritage of sundials, recently restored and included in a suggestive and fascinating itinerary. The municipality is home to an impressive gnomonic heritage of 32 sun dials, the recovery project, called Bellino Solare, was launched in 1999 with funding from the European Union.

The gnomonic path is divided into three levels, depending on whether you follow the itineraries that can be traveled by car, or the walks inside the hamlets, or the more demanding stretches along the wooded slopes up to the mountain grange.

Furthermore the museum in the Celle hamlet is dedicated to Time and Sundials and Information material and a map of the route are available in the information points at Chiesa, Celle, Melezé and Sant'Anna.

Additionally the municipality offers touristic attractions such as the astronomical observatory in hamlet Celle (Mas di Brun). The structure was built with cultural, educational and informative purposes, completing the project to enhance the ancient sundials, St. James's parish Church in hamlet Chiesa, the historical fountains, dating back to the 19th century, made from a single block of stone dug in the form of a tank, the "têtes coupées" (anthropomorphic heads used as ornamental elements according to the custom of ancient Celtic populations) and the megalithic portals.

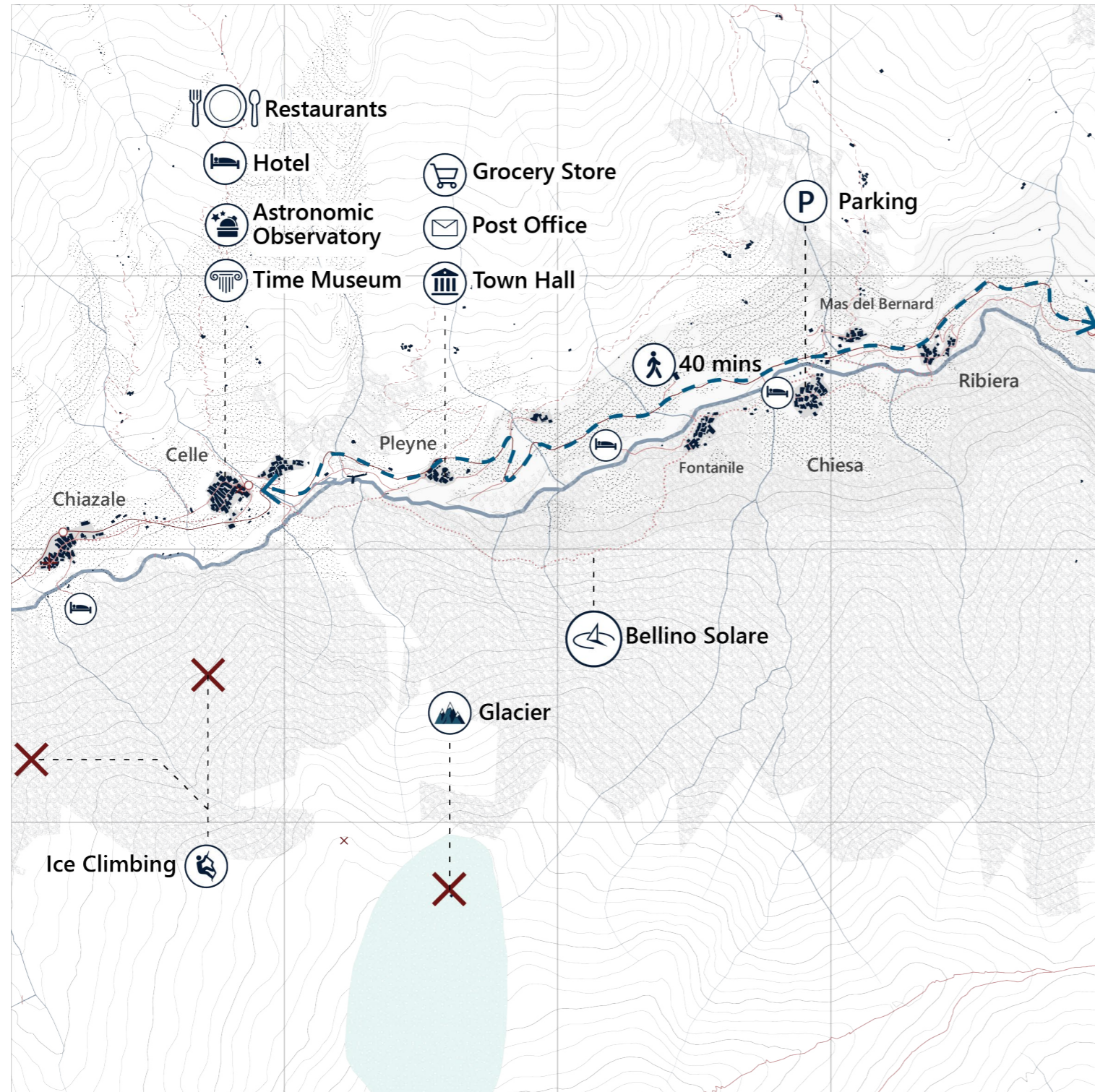


Fig. 89: Bellino Existing Assets

### Proposal

The proposal for the Bellino municipality answers to the shortcomings of weak connectivity while preserving the distinct yet fragile mountain heritage of the area. In the proposal the hamlets of Bellino have each received a specific purpose with respect to their existing functions and services. Furthermore the hamlets are linked together with the new cross valley river trail which improves liveability and augments the walk-able character of the hamlets. The hamlet of Celle which housed multiple touristic attraction is designated to include more touristic facilities and services as well as undergoing restoration procedures to render it an Albergo Diffuso. Additionally the hamlet is to be the main gateway to the ice climbing site of Celle and Sant'Anna as well as the glacier mountain peak to the south. The hamlets of Pleyne and Chiesa are both to follow a restorative direction which will lead to a residential and creative re-purposing of the hamlets. New bus stations in both hamlets as well as a new parking space in Pleyne will ease the connection and make the hamlets more accessible. Located in the centre of the Bellino hamlets, the lesser hamlet of Fontanile is to accommodate a new commercial market function.

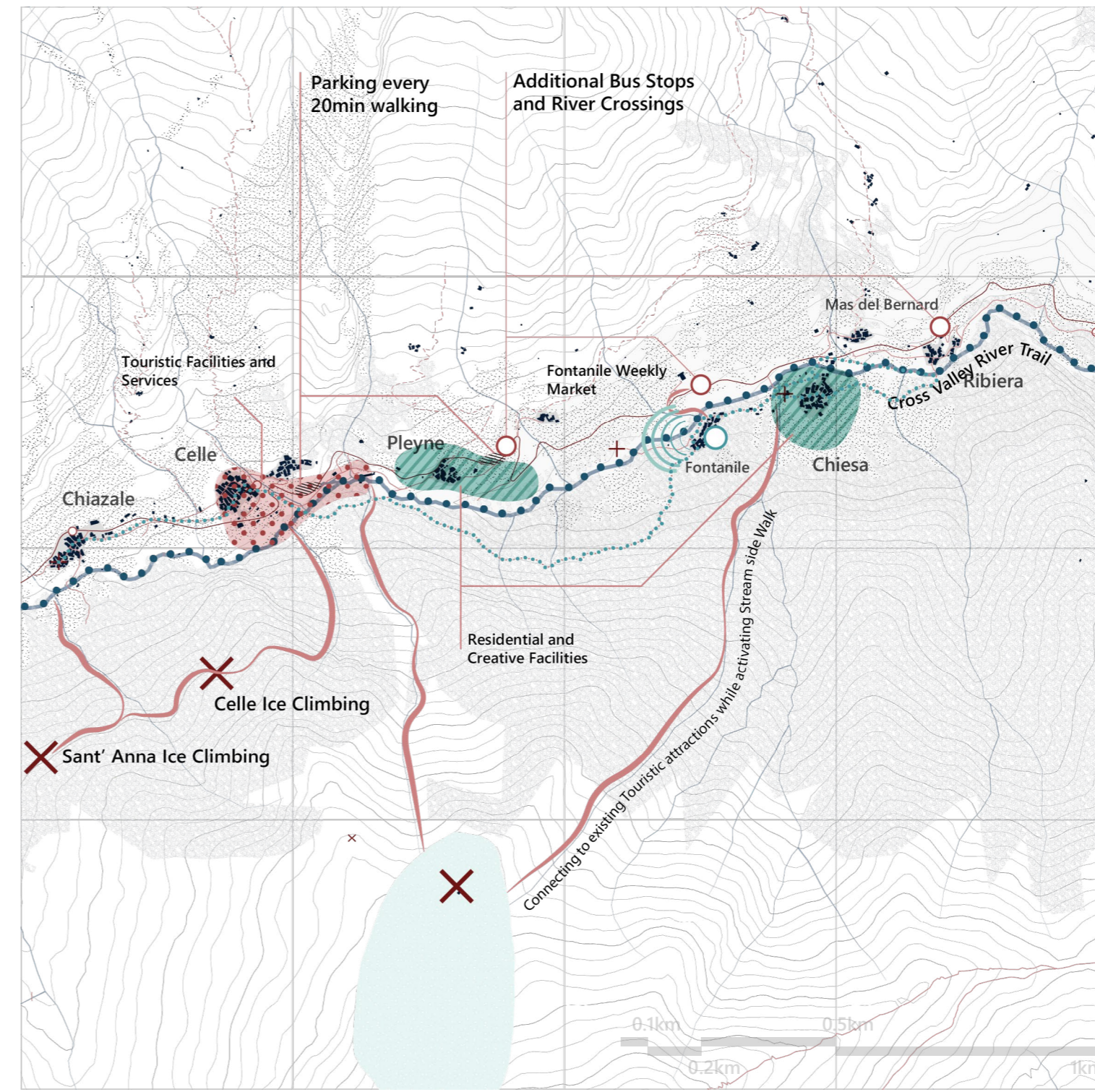


Fig. 90: Bellino Proposal

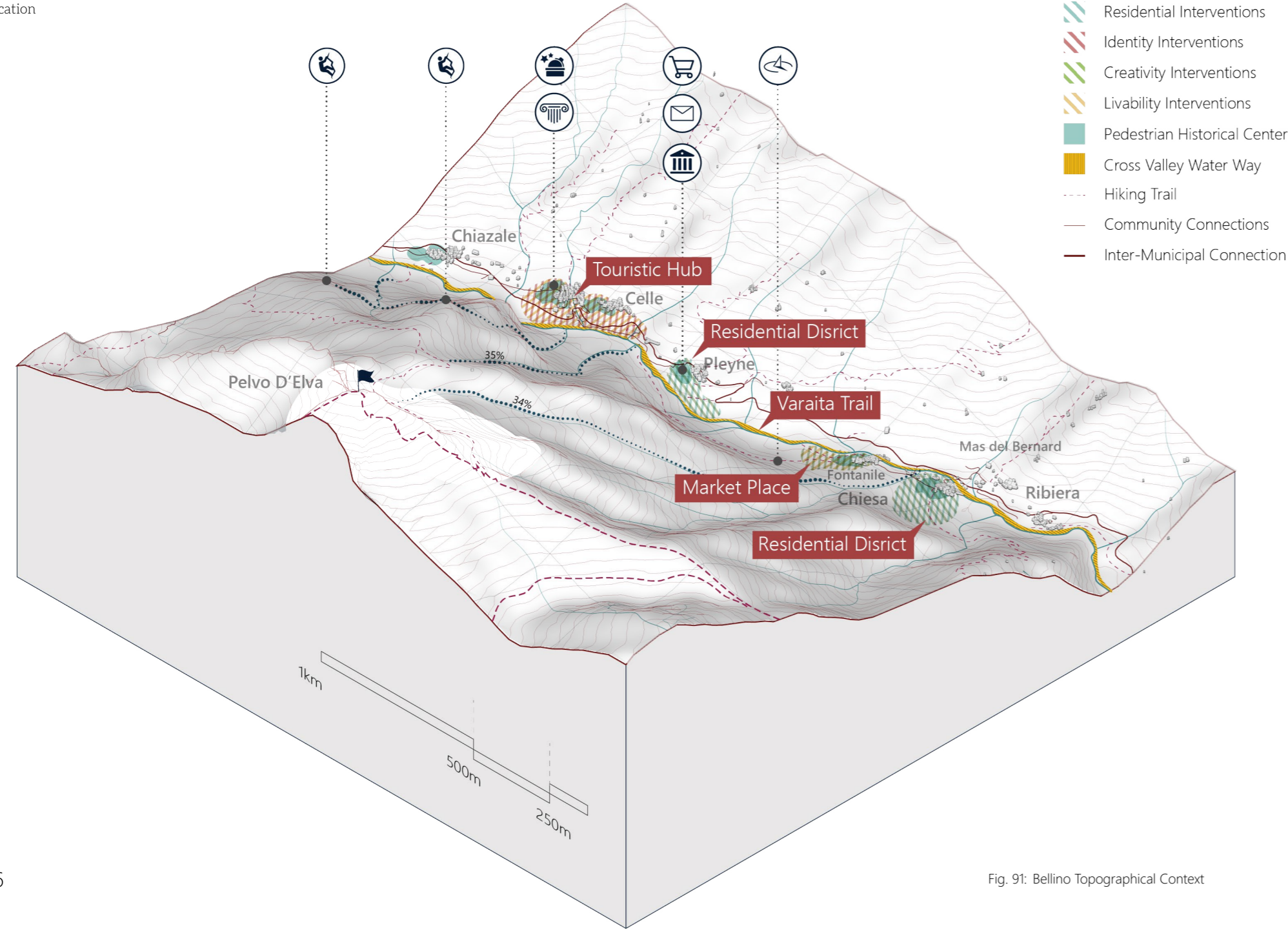


Fig. 91: Bellino Topographical Context



Fig. 93: Existing Public Space, Sampeyre



Fig. 95: Imagined Public Space



Fig. 92: Existing Meadow



Fig. 94: Imagined Indoor/Outdoor Co-Working Spaces



Fig. 97: Existing Lake Side

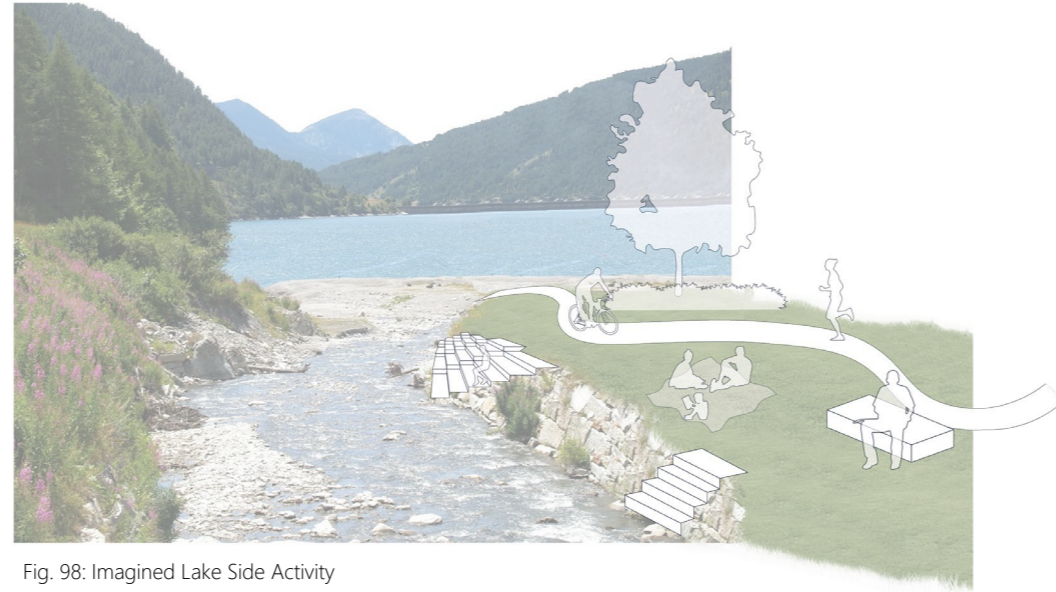


Fig. 98: Imagined Lake Side Activity



Fig. 96: Existing River Side

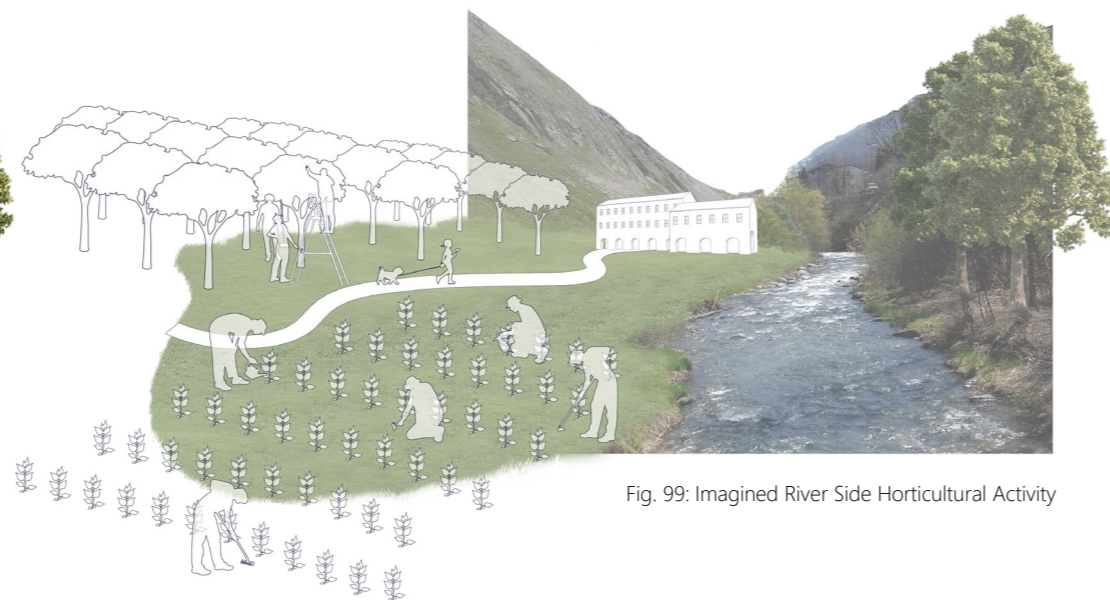


Fig. 99: Imagined River Side Horticultural Activity

Architectural Guidance

The issue of the architectural heritage of Val Varaita, their extension, modernization or new construction is of high importance and delicacy. A careful analysis of the context and some special precautions can lead to a successful preservation efforts.

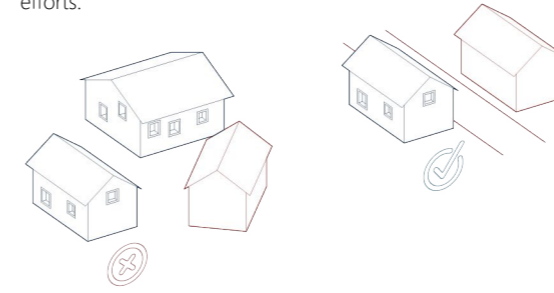


Fig. 100: Composition with Existing Context

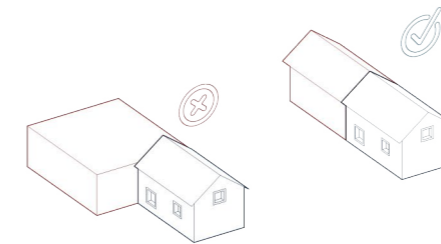


Fig. 101: Customized Solutions

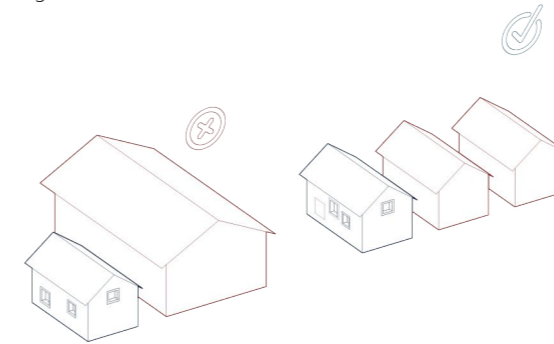


Fig. 102: Consideration of Proportions

Recapturing the morphological characteristics of the traditional pre-existing architecture is recommended to preserve the essence of the valley. The new structures shall be constructed conforming with the existing context, respecting their positions and alignments and size.

The new volumes are to be arranged in continuity with the existing one, respecting the positions and alignments; for example, by placing the new building perpendicular to the existing building or in parallel. Fig. 92

modular catalogue solutions and completely prefabricated structures are to be avoided as they preclude the possibility of customized designs based on the landscape context and pre-existing architectural structures. Fig. 93

It is advised to pay particular attention when planning on a slope, favoring the topography and reducing the presence retaining walls as much as possible and thus limiting environmental consequences and environmental engineering interventions. Fig. 94

Buildings that are completely disproportionate to the existing one are to be avoided. It is preferable to subdivide the volume to be built into several buildings of dimensions related to the context, with a courtyard arrangement or alignments inspired by the morphological characteristics of traditional settlements. Fig. 95

It is recommended to use materials similar to those of the local tradition, namely wood for windows and stone for cladding and Pitera di Luserna for roofing, avoiding large prefabricated load-bearing panels and inadequate colors. Structural technologies in laminated wood, steel, or mixed can be used. For the roofs it is allowed to use metal mantles with colors similar to the local stone used for traditional roofing. Fig. 96 It is also possible to include of eco-sustainable technologies such as photovoltaics, for which it is necessary to pay particular attention to roofing and systems of buildings during the design stage.

In addition to these measures, the insertion of vegetation elements it is necessary for a better integration. It shall be considered not as a curtain placed to camouflage the intervention, but as a screen or filter that harmonizes the building by placing it in relationship with the landscape. Fig. 97

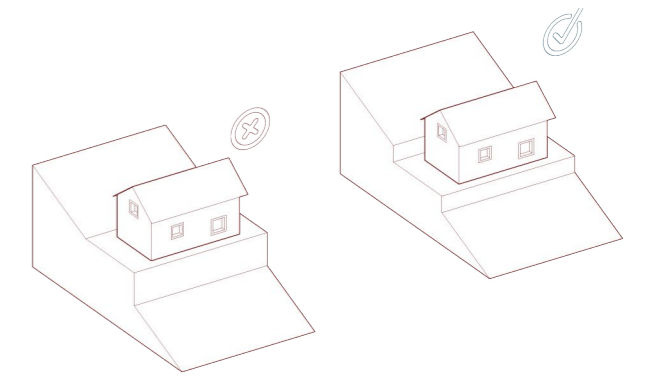


Fig. 103: Building on Slopes



Fig. 104: Facades and Building Materials



Fig. 105: Landscape Considerations



## 07 Conclusion

### Summary

The Aim of this research was to examine the possibility of repopulating and improve competitiveness for marginalized communities on the verge of turning into ghost towns. Val Varaita has been chosen as the site onto which to conduct the examination.

Following a thorough review of current patterns, and in the midst of a global pandemic that has caused dramatic shifts in the way we function, live, and engage with others, the potentials of these communities are given altered value. After understanding the life/work requirements to attract amenity migrants, a mapping of the shortcomings and developmental flaws was conducted to evaluate the needed intervention for Val Varaita.

The design of the intervention proposal has been an answer to the needs of the incoming residents and a means for a sustainable permanent residency. Thus it is safe to declare that the reasoning behind the hypothesis has been sensible. The experiments confirmed that particular urban regeneration directions might lead to repopulation and revival of the Val Varaita communities.

Furthermore the results of the findings indicate that for improvement to take place the collaboration of the administration, the community are urgent.

The study adds a tangible strategy to the theoretical understanding of the marginalization issue in alpine communities. Furthermore it contributes a topical response to the current pandemic, finding the silver-

lining to an otherwise unpleasant collective experience.

However the definitiveness of the Hypothesis can only be assured through a practical project and assessing the detailed outcomes of creating this strategy. Furthermore it is noteworthy to add that the site analysis conducted has been through literature finding and data compilation. Due to Covid-19 restrictions it was not possible to visit the site and thus the analysis lacks the hands-on knowledge of site surveying and experienced observation.

### Further Questions

Throughout my research I have come across countless articles and initiatives revolving around the concept proposed in this study. This is a clear indication that the trend of teleworking as a tool for urban revival is a reality. As Teleworking practices are expected to have a big momentum in a post-pandemic society, counter-urbanism will gain traction and competitiveness between regions with strong environmental assets will increase. Consequently research on developing marginalized and fragile alpine communities has ample room for expansion in light of this trend. Hence research questions will arise such as, identity augmentation of mountain regions as means to improve competitiveness and finding urban design and architecture solutions to answer to the needs of new citizens while preserving the delicate mountain heritage.

### Suggestions

The findings suggest several courses of action on the administrative front to ensure an improvement in rendering these alpine communities more attractive. Firstly a digital transformation has been long due for these areas. With an infrastructural upgrade and introduction of a more bold digitalized touristic offer the area can receive the attention of visitors and permanent new citizens it deserves.

Secondly greater efforts are needed in exploring innovative collaboration strategies between different mountain stakeholders such as administration, citizens, industrial and economic actors as well as prospective investors.

Last but not least, a smart and far reaching marketing campaign is necessary to advertise the potential new-found potential of the mountain communities to local and international visitors and prospective citizens.

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Acceglio	238	197	174	156	-17%	-12%	-10%	-39%
Acqui Terme	20357	19184	20054	19732	-6%	5%	-2%	-3%
Agliano Terme	1719	1697	1673	1578	-1%	-1%	-6%	-8%
Agliè	2623	2574	2644	2638	-2%	3%	0%	1%
Agrate Conturbia	1039	1184	1554	1572	14%	31%	1%	46%
Ailoche	333	317	330	328	-5%	4%	-1%	-1%
Airasca	3252	3554	3819	3696	9%	7%	-3%	14%
Aisone	309	257	254	216	-17%	-1%	-15%	-33%
Ala di Stura	503	479	462	453	-5%	-4%	-2%	-10%
Alagna Valsesia (incl. Riva Valdobbia)	671	687	671	727	2%	-2%	8%	8%
Alba	29382	29910	30804	31609	2%	3%	3%	7%
Albano Verellese	340	339	334	309	0%	-1%	-7%	-9%
Albaretto della Torre	278	254	259	231	-9%	2%	-11%	-17%
Albera Ligure	405	357	329	293	-12%	-8%	-11%	-31%
Albiano d'Ivrea	1701	1696	1791	1641	0%	6%	-8%	-3%
Albugnano	417	462	541	500	11%	17%	-8%	20%
Alessandria	90753	85438	89411	93634	-6%	5%	5%	4%
Alfiano Natta	806	793	754	742	-2%	-5%	-2%	-8%

Municipality	Census 1991	Census 2001	Census 2011	Census 2020 (estimate)	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Alice Bel Colle	852	786	774	732	-8%	-2%	-5%	-15%
Alice Castello	2474	2603	2721	2544	5%	5%	-7%	3%
Alluvioni Piovera	1758	1755	1791	1689	0%	2%	-6%	-4%
Almese	5240	5658	6303	6375	8%	11%	1%	21%
Alpette	329	300	277	246	-9%	-8%	-11%	-28%
Alpignano	16739	16648	16893	16811	-1%	1%	-0%	0%
Altavilla Monferrato	516	480	497	424	-7%	4%	-15%	-18%
Alto	118	104	121	137	-12%	16%	13%	18%
Alto Sermenza (incl. Rimasco, Rima San Giuseppe)	265	230	190	151	-13%	-17%	-21%	-51%
Alzano Scrivia	374	392	380	364	5%	-3%	-4%	-2%
Ameno	891	895	874	958	0%	-2%	10%	8%
Andezeno	1693	1705	1966	2058	1%	15%	5%	21%
Andorno Micca	3681	3549	3407	3130	-4%	-4%	-8%	-16%
Andrate	469	476	512	495	1%	8%	-3%	6%
Angrogna	724	777	870	845	7%	12%	-3%	16%
Antignano	992	1007	1025	962	2%	2%	-6%	-3%
Antrona Schieranco	604	544	467	404	-10%	-14%	-13%	-38%
Anzola d'Ossola	442	443	448	406	0%	1%	-9%	-8%
Aramengo	522	604	632	567	16%	5%	-10%	10%
Arborio	1007	1033	909	863	3%	-12%	-5%	-14%
Argentera	97	101	79	76	4%	-22%	-4%	-21%
Arguello	186	174	201	200	-6%	16%	0%	9%
Arignano	840	898	1039	1081	7%	16%	4%	27%
Arizzano	1868	1890	2040	1981	1%	8%	-3%	6%
Armeno	2166	2187	2201	2162	1%	1%	-2%	-0%
Arola	291	279	250	236	-4%	-10%	-6%	-20%
Arona	15543	14310	14195	13976	-8%	-1%	-2%	-10%
Arquata Scrivia	6121	5765	6068	6367	-6%	5%	5%	4%
Asigliano Verellese	1446	1417	1401	1420	-2%	-1%	1%	-2%

Municipality	Census 1991	Census 2001	Census 2011	Census 2020 (estimate)	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Asti	73557	71276	73899	75528	-3%	4%	2%	3%
Aurano	133	118	103	100	-11%	-13%	-3%	-27%
Avigliana	10032	11070	12129	12599	10%	10%	4%	24%
Avolasca	329	280	306	262	-15%	9%	-14%	-20%
Azeglio	1186	1274	1347	1250	7%	6%	-7%	6%
Azzano d'Asti	327	371	419	381	13%	13%	-9%	17%
Baceno	977	961	922	886	-2%	-4%	-4%	-10%
Bagnasco	1043	1012	1038	1017	-3%	3%	-2%	-2%
Bagnolo Piemonte	5123	5431	6040	5900	6%	11%	-2%	15%
Bairo	768	788	816	802	3%	4%	-2%	4%
Balangero	2891	3048	3161	3136	5%	4%	-1%	8%
Baldichieri d'Asti	995	1009	1114	1157	1%	10%	4%	16%
Baldissero Canavese	547	513	534	535	-6%	4%	0%	-2%
Baldissero d'Alba	1023	1084	1086	1066	6%	0%	-2%	4%
Baldissero Torinese	2876	3244	3783	3659	13%	17%	-3%	26%
Balme	98	101	95	112	3%	-6%	18%	15%
Balmuccia	117	100	94	115	-15%	-6%	22%	2%
Balocco	267	262	239	217	-2%	-9%	-9%	-20%
Balzola	1586	1444	1420	1335	-9%	-2%	-6%	-17%
Banchette	3784	3427	3280	3225	-9%	-4%	-2%	-15%
Bannio Anzino	619	582	518	472	-6%	-11%	-9%	-26%
Barbania	1391	1479	1623	1598	6%	10%	-2%	15%
Barbaresco	657	641	677	615	-2%	6%	-9%	-6%
Bardonecchia	3186	3038	3212	3159	-5%	6%	-2%	-1%
Barengo	941	942	852	760	0%	-10%	-11%	-20%
Barge	7057	7211	7861	7549	2%	9%	-4%	7%
Barolo	672	681	705	680	1%	4%	-4%	1%
Barone Canavese	563	588	599	578	4%	2%	-4%	3%
Basaluzzo	1884	1897	2071	2068	1%	9%	0%	10%
Bassignana	1709	1737	1742	1642	2%	0%	-6%	-4%

Municipality	Census 1991	Census 2001	Census 2011	Census 2020 (estimate)	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Bastia Mondovì	604	624	646	643	3%	4%	0%	6%
Battifollo	273	263	234	219	-4%	-11%	-6%	-21%
Baveno	4510	4554	4917	4961	1%	8%	1%	10%
Bee	675	623	729	774	-8%	17%	6%	15%
Beinasco	18744	18198	18104	17856	-3%	-1%	-1%	-5%
Beinette	2656	2719	3200	3461	2%	18%	8%	28%
Belforte Monferrato	396	448	505	502	13%	13%	-1%	25%
Belgirate	510	521	546	507	2%	5%	-7%	-0%
Bellino	234	179	135	101	-24%	-25%	-25%	-73%
Bellinzago Novarese	8140	8365	9375	9545	3%	12%	2%	17%
Belvedere Langhe	358	372	370	352	4%	-1%	-5%	-1%
Belveglio	339	320	326	328	-6%	2%	1%	-3%
Bene Vagienna	3193	3299	3671	3663	3%	11%	0%	14%
Benevello	419	448	457	481	7%	2%	5%	14%
Benna	1111	1164	1190	1146	5%	2%	-4%	3%
Bergamasco	806	765	765	708	-5%	0%	-7%	-13%
Bergolo	73	79	67	56	8%	-15%	-16%	-23%
Bernezzo	2554	3009	3785	4170	18%	26%	10%	54%
Berzano di San Pietro	354	406	431	409	15%	6%	-5%	16%
Berzano di Tortona	143	132	171	156	-8%	30%	-9%	13%
Beura-Cardezza	1351	1372	1437	1450	2%	5%	1%	7%
Biandrate	1184	1103	1200	1296	-7%	9%	8%	10%
Bianzè	2166	2038	2028	1876	-6%	0%	-7%	-14%
Bibiana	2616	2856	3376	3476	9%	18%	3%	30%
Biella	48324	45740	43818	43812	-5%	-4%	0%	-10%
Bioglio	1084	1087	986	875	0%	-9%	-11%	-20%
Bistagno	1737	1733	1930	1810	0%	11%	-6%	5%
Bobbio Pellice	608	598	566	546	-2%	-5%	-4%	-11%
Boca	1125	1186	1227	1152	5%	3%	-6%	3%

Municipality	Census 1991	Census 2001	Census 2011	Census 2020 (estimate)	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Bocciolo	339	277	219	170	-18%	-21%	-22%	-62%
Bognanco	370	319	230	185	-14%	-28%	-20%	-61%
Bogogno	1122	1159	1325	1275	3%	14%	-4%	14%
Bollengo	1941	1997	2112	2135	3%	6%	1%	10%
Bolzano Novarese	950	1040	1176	1170	9%	13%	-1%	22%
Bonvicino	127	119	107	100	-6%	-10%	-7%	-23%
Borgaro Torinese	9344	10769	11761	11931	15%	9%	1%	26%
Borghetto di Borbera	1793	1963	1991	1951	9%	1%	-2%	9%
Borgiallo	454	496	550	597	9%	11%	9%	29%
Borgo d'Ale	2685	2565	2588	2320	-4%	1%	-10%	-14%
Borgo San Dalmazzo	10939	11274	12372	12426	3%	10%	0%	13%
Borgo San Martino	1382	1366	1470	1384	-1%	8%	-6%	1%
Borgo Ticino	3329	3853	4929	5222	16%	28%	6%	50%
Borgo Vercelli	2149	2158	2295	2211	0%	6%	-4%	3%
Borgofranco d'Ivrea	3662	3631	3643	3631	-1%	0%	0%	-1%
Borgolavezzaro	1863	1879	2083	2009	1%	11%	-4%	8%
Borgomale	343	365	389	378	6%	7%	-3%	10%
Borgomanero	19102	19315	21166	21715	1%	10%	3%	13%
Borgomasino	818	784	835	796	-4%	7%	-5%	-2%
Borgomezzavalle	414	386	335	313	-7%	-13%	-7%	-27%
Borgone Susa	2127	2227	2320	2210	5%	4%	-5%	4%
Borgoratto Alessandrino	614	611	617	558	0%	1%	-10%	-9%
Borgosesia	14731	13926	13031	12502	-5%	-6%	-4%	-16%
Borriana	914	850	880	885	-7%	4%	1%	-3%
Bosco Marengo	2401	2494	2531	2311	4%	1%	-9%	-3%
Bosconero	2811	2927	3056	3107	4%	4%	2%	10%
Bosia	225	204	181	174	-9%	-11%	-4%	-24%
Bosio	1217	1177	1240	1158	-3%	5%	-7%	-5%
Bossolasco	674	683	676	636	1%	-1%	-6%	-6%

Municipality	Census 1991	Census 2001	Census 2011	Census 2020 (estimate)	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Boves	8827	9222	9725	9717	4%	5%	0%	10%
Bozzole	329	293	331	326	-11%	13%	-2%	1%
Bra	27211	27988	28935	29852	3%	3%	3%	9%
Brandizzo	7051	7430	8402	8822	5%	13%	5%	23%
Briaglia	263	288	324	298	10%	13%	-8%	14%
Bricherasio	3921	4020	4517	4600	3%	12%	2%	17%
Briga Alta	81	62	48	42	-23%	-23%	-13%	-59%
Briga Novarese	2603	2694	3050	2818	3%	13%	-8%	9%
Brignano-Frascata	563	500	451	433	-11%	-10%	-4%	-25%
Briona	1117	1133	1234	1121	1%	9%	-9%	1%
Brondello	330	349	287	279	6%	-18%	-3%	-15%
Brossasco	1177	1133	1109	1025	-4%	-2%	-8%	-13%
Brosso	505	474	460	401	-6%	-3%	-13%	-22%
Brovello-Carpugnino	437	546	721	740	25%	32%	3%	60%
Brozolo	387	435	471	443	12%	8%	-6%	15%
Bruino	6135	7308	8479	8598	19%	16%	1%	37%
Bruno	394	375	351	309	-5%	-6%	-12%	-23%
Brusasco	1585	1664	1726	1498	5%	4%	-13%	-4%
Brusnengo	2048	2101	2168	2027	3%	3%	-7%	-1%
Bruzolo	1323	1337	1545	1519	1%	16%	-2%	15%
Bubbio	936	935	912	805	0%	-2%	-12%	-14%
Buriasco	1309	1304	1405	1355	0%	8%	-4%	4%
Burolo	1322	1349	1228	1135	2%	-9%	-8%	-15%
Buronzo	1021	951	916	849	-7%	-4%	-7%	-18%
Busano	1261	1367	1588	1637	8%	16%	3%	28%
Busca (incl. Valmala)	8983	9525	10113	10164	6%	6%	1%	13%
Bussoleno	6612	6457	6363	5824	-2%	-1%	-8%	-12%
Buttiglieria Alta	6605	6541	6386	6347	-1%	-2%	-1%	-4%
Buttiglieria d'Asti	1954	1996	2552	2527	2%	28%	-1%	29%
Cabella Ligure	754	641	554	481	-15%	-14%	-13%	-42%



Municipality	Census 1991	Census 2001	Census 2011	Census 2020 (estimate)	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Cafasse	3545	3516	3511	3383	-1%	0%	-4%	-5%
Calamandrana	1459	1563	1784	1702	7%	14%	-5%	17%
Calasca-Castiglione	885	765	681	593	-14%	-11%	-13%	-37%
Callabiana	170	144	149	141	-15%	3%	-5%	-17%
Calliano	1393	1406	1392	1287	1%	-1%	-8%	-8%
Calosso	1356	1264	1331	1212	-7%	5%	-9%	-10%
Caltignaga	2212	2345	2585	2504	6%	10%	-3%	13%
Caluso	7320	7132	7483	7496	-3%	5%	0%	3%
Camagna Monferrato	596	537	510	478	-10%	-5%	-6%	-21%
Camandona	435	401	359	320	-8%	-10%	-11%	-29%
Cambiano	5769	5799	6215	6008	1%	7%	-3%	4%
Cambiasca	1523	1538	1646	1594	1%	7%	-3%	5%
Camburzano	1223	1184	1227	1148	-3%	4%	-6%	-6%
Camerana	772	723	655	591	-6%	-9%	-10%	-26%
Camerano Casasco	445	494	480	414	11%	-3%	-14%	-6%
Cameri	9331	9673	10770	10868	4%	11%	1%	16%
Camino	845	734	802	733	-13%	9%	-9%	-12%
Campertogno	234	228	243	230	-3%	7%	-5%	-1%
Campiglia Cervo (incl. Quittengo, San Paolo Cervo)	636	562	528	493	-12%	-6%	-7%	-24%
Campiglione Fenile	1173	1284	1382	1339	9%	8%	-3%	14%
Canale	4965	5215	5636	5560	5%	8%	-1%	12%
Candelo	7697	7804	7952	7420	1%	2%	-7%	-3%
Candia Canavese	1319	1302	1286	1214	-1%	-1%	-6%	-8%
Candiolo	4417	5113	5566	5644	16%	9%	1%	26%
Canelli	10425	10230	10569	10392	-2%	3%	-2%	-0%
Canischio	291	274	294	274	-6%	7%	-7%	-5%
Cannero Riviera	1220	1050	973	894	-14%	-7%	-8%	-29%

Municipality	Census 1991	Census 2001	Census 2011	Census 2020 (estimate)	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Cannobio	5234	4977	4992	5167	-5%	0%	4%	-1%
Canosio	106	93	82	78	-12%	-12%	-5%	-29%
Cantalupa	1750	2073	2527	2590	18%	22%	2%	43%
Cantalupo Ligure	582	555	549	451	-5%	-1%	-18%	-24%
Cantarana	733	839	1023	999	14%	22%	-2%	34%
Cantoira	541	544	554	585	1%	2%	6%	8%
Caprauna	171	133	120	92	-22%	-10%	-23%	-55%
Caprezzo	165	177	168	172	7%	-5%	2%	5%
Capriata d'Orba	1839	1845	1926	1835	0%	4%	-5%	-0%
Caprie	1752	1883	2116	2078	7%	12%	-2%	18%
Capriglio	230	309	300	316	34%	-3%	5%	37%
Caprile	220	210	206	185	-5%	-2%	-10%	-17%
Caraglio	5721	6215	6755	6801	9%	9%	1%	18%
Caramagna Piemonte	2406	2670	3032	3057	11%	14%	1%	25%
Caravino	1053	1008	995	911	-4%	-1%	-8%	-14%
Carbonara Scrivia	1016	966	1055	1126	-5%	9%	7%	11%
Carcoforo	84	73	75	74	-13%	3%	-1%	-12%
Cardè	1068	1069	1134	1150	0%	6%	1%	8%
Carema	883	770	772	765	-13%	0%	-1%	-13%
Carentino	326	313	325	310	-4%	4%	-5%	-5%
Caresana	1159	1068	1028	1038	-8%	-4%	1%	-11%
Caresanablot	768	988	1137	1109	29%	15%	-2%	41%
Carezzano	494	449	444	426	-9%	-1%	-4%	-14%
Carignano	8647	8647	9156	9241	0%	6%	1%	7%
Carisio	992	956	864	775	-4%	-10%	-10%	-24%
Carmagnola	24725	24911	28563	28924	1%	15%	1%	17%
Carpeneto	959	913	991	931	-5%	9%	-6%	-2%
Carpignano Sesia	2495	2543	2578	2510	2%	1%	-3%	1%
Carrega Ligure	148	119	83	85	-20%	-30%	2%	-47%

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Carrosio	474	465	481	502	-2%	3%	4%	6%
Carrù	3957	4006	4428	4345	1%	11%	-2%	10%
Cartignano	177	170	178	174	-4%	5%	-2%	-1%
Cartosio	817	805	811	726	-1%	1%	-10%	-11%
Casal Cermelli	1133	1146	1235	1191	1%	8%	-4%	5%
Casalbeltrame	673	832	1076	974	24%	29%	-9%	43%
Casalborgone	1505	1704	1820	1880	13%	7%	3%	23%
Casale Corte Cerro	3035	3292	3476	3444	8%	6%	-1%	13%
Casale Monferrato	38962	35244	34812	33592	-10%	-1%	-4%	-14%
Casaleggio Boiro	339	377	401	372	11%	6%	-7%	10%
Casaleggio Novara	766	847	930	911	11%	10%	-2%	18%
Casalgrasso	1412	1372	1448	1418	-3%	6%	-2%	1%
Casalino	1504	1456	1555	1531	-3%	7%	-2%	2%
Casalnoceto	882	877	1015	984	-1%	16%	-3%	12%
Casalvolone	797	812	867	888	2%	7%	2%	11%
Casanova Elvo	239	246	265	210	3%	8%	-21%	-10%
Casapinta	461	449	454	408	-3%	1%	-10%	-12%
Casasco	171	149	124	119	-13%	-17%	-4%	-34%
Cascinette d'Ivrea	1488	1449	1491	1517	-3%	3%	2%	2%
Caselette	2717	2643	2931	3041	-3%	11%	4%	12%
Caselle Torinese	10500	11561	13302	14003	10%	15%	5%	30%
Casorzo	697	687	657	601	-1%	-4%	-9%	-14%
Cassano Spinola	2173	1979	1965	1867	-9%	-1%	-5%	-15%
Cassinasco	610	592	590	599	-3%	0%	2%	-2%
Cassine	3130	3042	3048	2943	-3%	0%	-3%	-6%
Cassinelle	798	864	937	850	8%	8%	-9%	7%
Castagneto Po	1270	1425	1791	1757	12%	26%	-2%	36%
Castagnito	1519	1728	2113	2207	14%	22%	4%	40%
Castagnole delle Lanze	3486	3641	3784	3704	4%	4%	-2%	6%

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Castagnole Monferrato	1226	1234	1271	1171	1%	3%	-8%	-4%
Castagnole Piemonte	1634	1875	2193	2202	15%	17%	0%	32%
Castel Boglione	702	645	614	594	-8%	-5%	-3%	-16%
Castel Rocchero	464	396	396	400	-15%	0%	1%	-14%
Casteldelfino	296	227	179	155	-23%	-21%	-13%	-58%
Castell'Alfero	2580	2691	2750	2678	4%	2%	-3%	4%
Castellamonte	8976	8979	9917	9845	0%	10%	-1%	10%
Castellania	105	95	91	88	-10%	-4%	-3%	-17%
Castellar Guidobono	380	402	427	400	6%	6%	-6%	6%
Castellazzo Bormida	4248	4268	4566	4454	0%	7%	-2%	5%
Castellazzo Novarese	272	260	323	324	-4%	24%	0%	20%
Castellero	281	291	302	305	4%	4%	1%	8%
Castelletto Cervo	755	858	880	826	14%	3%	-6%	10%
Castelletto d'Erro	167	153	150	141	-8%	-2%	-6%	-16%
Castelletto d'Orba	1849	1891	2096	1925	2%	11%	-8%	5%
Castelletto Merli	486	470	484	460	-3%	3%	-5%	-5%
Castelletto Molina	165	169	184	140	2%	9%	-24%	-13%
Castelletto Monferrato	1289	1428	1558	1473	11%	9%	-5%	14%
Castelletto sopra Ticino	7965	8755	10005	9902	10%	14%	-1%	23%
Castelletto Stura	1072	1176	1351	1374	10%	15%	2%	26%
Castelletto Uzzone	395	375	365	317	-5%	-3%	-13%	-21%
Castellinaldo d'Alba	783	858	897	904	10%	5%	1%	15%
Castellino Tanaro	343	339	337	296	-1%	-1%	-12%	-14%
Castello di Annone	1713	1767	1928	1871	3%	9%	-3%	9%
Castelmagno	163	117	82	59	-28%	-30%	-28%	-86%
Castelnuovo Belbo	878	930	895	826	6%	-4%	-8%	-6%
Castelnuovo Bormida	702	648	680	636	-8%	5%	-6%	-9%

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Castelnuovo Calcea	795	779	765	726	-2%	-2%	-5%	-9%
Castelnuovo di Ceva	143	121	139	107	-15%	15%	-23%	-24%
Castelnuovo Don Bosco	2793	3038	3260	3126	9%	7%	-4%	12%
Castelnuovo Nigra	492	440	417	414	-11%	-5%	-1%	-17%
Castelnuovo Scrivia	5859	5624	5414	5033	-4%	-4%	-7%	-15%
Castelspina	371	394	422	412	6%	7%	-2%	11%
Castiglione Falletto	515	632	708	698	23%	12%	-1%	33%
Castiglione Tinella	949	877	871	839	-8%	-1%	-4%	-12%
Castiglione Torinese	4940	5480	6363	6500	11%	16%	2%	29%
Castino	549	526	500	477	-4%	-5%	-5%	-14%
Cavaglia	3612	3666	3625	3571	1%	-1%	-1%	-1%
Cavaglietto	407	396	407	389	-3%	3%	-4%	-4%
Cavaglio d'Agogna	1277	1282	1280	1185	0%	0%	-7%	-7%
Cavagnolo	2281	2281	2309	2247	0%	1%	-3%	-1%
Cavallerleone	570	561	652	665	-2%	16%	2%	17%
Cavallermaggiore	4542	5064	5472	5431	11%	8%	-1%	19%
Cavallirio	1012	1213	1249	1314	20%	3%	5%	28%
Cavatone	320	310	301	265	-3%	-3%	-12%	-18%
Cavour	5226	5283	5568	5478	1%	5%	-2%	5%
Cella Monte	516	509	528	495	-1%	4%	-6%	-4%
Cellarengo	508	605	714	709	19%	18%	-1%	36%
Celle di Macra	147	105	93	86	-29%	-11%	-8%	-48%
Celle Enomondo	502	460	480	470	-8%	4%	-2%	-6%
Cellio con Breia	1050	1094	1027	969	4%	-6%	-6%	-8%
Centallo	5846	6209	6817	6957	6%	10%	2%	18%
Ceppo Morelli	410	396	341	296	-3%	-14%	-13%	-31%
Cerano	7070	6665	6728	6785	-6%	1%	1%	-4%
Cercenasco	1632	1774	1857	1781	9%	5%	-4%	9%
Ceres	939	1030	1056	1033	10%	3%	-2%	10%

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Cereseto	426	431	457	405	1%	6%	-11%	-4%
Ceresole Alba	1940	2089	2115	2031	8%	1%	-4%	5%
Ceresole Reale	167	160	159	163	-4%	-1%	3%	-2%
Cerreto d'Asti	306	241	220	221	-21%	-9%	0%	-30%
Cerreto Grue	360	339	325	300	-6%	-4%	-8%	-18%
Cerretto Langhe	383	469	455	420	22%	-3%	-8%	12%
Cerrina Monferrato	1612	1599	1495	1347	-1%	-7%	-10%	-17%
Cerrione	2628	2809	2894	2846	7%	3%	-2%	8%
Cerro Tanaro	584	592	670	594	1%	13%	-11%	3%
Cervasca	3673	4197	4804	5136	14%	14%	7%	36%
Cervatto	51	49	48	58	-4%	-2%	21%	15%
Cervere	1682	1882	2162	2240	12%	15%	4%	30%
Cesana Torinese	937	956	1007	940	2%	5%	-7%	1%
Cesara	579	606	598	583	5%	-1%	-3%	1%
Cessole	489	456	420	368	-7%	-8%	-12%	-27%
Ceva	5568	5729	5757	5677	3%	0%	-1%	2%
Cherasco	6503	7208	8652	9368	11%	20%	8%	39%
Chialamberto	353	362	364	355	3%	1%	-2%	1%
Chianocco	1501	1690	1700	1590	13%	1%	-6%	7%
Chiaverano	2225	2198	2106	2045	-1%	-4%	-3%	-8%
Chieri	31292	32868	35962	36770	5%	9%	2%	17%
Chiesanuova	208	199	203	220	-4%	2%	8%	6%
Chiomonte	1015	1011	932	881	0%	-8%	-5%	-14%
Chiusa di Pesio	3389	3703	3730	3622	9%	1%	-3%	7%
Chiusa di San Michele	1492	1602	1691	1601	7%	6%	-5%	8%
Chiusano d'Asti	255	254	226	229	0%	-11%	1%	-10%
Chivasso	24758	23648	25914	26827	-4%	10%	4%	9%
Ciconio	347	345	371	385	-1%	8%	4%	11%
Cigliano	4654	4523	4547	4371	-3%	1%	-4%	-6%

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Cigliè	197	188	196	181	-5%	4%	-8%	-8%
Cinaglio	426	459	455	450	8%	-1%	-1%	6%
Cintano	265	244	261	245	-8%	7%	-6%	-7%
Cinzano	308	331	375	328	7%	13%	-13%	8%
Ciriè	18151	18188	18415	18548	0%	1%	1%	2%
Cissone	136	100	82	86	-26%	-18%	5%	-40%
Cisterna d'Asti	1206	1241	1286	1222	3%	4%	-5%	2%
Civiasco	236	257	265	253	9%	3%	-5%	7%
Clavesana	941	868	900	809	-8%	4%	-10%	-14%
Claviere	193	163	192	204	-16%	18%	6%	8%
Coassolo Torinese	1313	1470	1550	1491	12%	5%	-4%	14%
Coazze	2547	2889	3084	3196	13%	7%	4%	24%
Coazzolo	282	300	316	292	6%	5%	-8%	4%
Cocconato	1548	1540	1564	1454	-1%	2%	-7%	-6%
Coggiola	2579	2360	1996	1742	-8%	-15%	-13%	-37%
Colazza	417	416	463	467	0%	11%	1%	12%
Collegno	47161	46641	49083	49615	-1%	5%	1%	5%
Colleretto Castelnuovo	311	316	347	302	2%	10%	-13%	-2%
Colleretto Giacosa	572	627	603	584	10%	-4%	-3%	3%
Collobiano	135	114	105	88	-16%	-8%	-16%	-40%
Comignago	765	939	1223	1245	23%	30%	2%	55%
Condove	4258	4380	4670	4485	3%	7%	-4%	6%
Coniolo	398	422	451	440	6%	7%	-2%	10%
Conzano	868	1005	1015	955	16%	1%	-6%	11%
Corio	3025	3163	3330	3183	5%	5%	-4%	5%
Corneliano d'Alba	1845	1889	2037	2166	2%	8%	6%	17%
Corsione	185	169	205	203	-9%	21%	-1%	12%
Cortandone	253	290	323	308	15%	11%	-5%	21%
Cortanze	295	289	288	274	-2%	0%	-5%	-7%

Municipality	Census 1991	Census 2001	Census 2011	Census 2020 (estimate)	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Cortazzone	539	626	657	593	16%	5%	-10%	11%
Cortemilia	2587	2544	2388	2269	-2%	-6%	-5%	-13%
Cortiglione	560	568	576	536	1%	1%	-7%	-4%
Cossano Belbo	1145	1071	1030	940	-6%	-4%	-9%	-19%
Cossano Canavese	528	550	522	463	4%	-5%	-11%	-12%
Cossato	15321	15266	14810	14372	0%	-3%	-3%	-6%
Cossogno	577	537	588	672	-7%	9%	14%	17%
Cossombrato	426	488	541	521	15%	11%	-4%	22%
Costa Vescovato	363	347	357	323	-4%	3%	-10%	-11%
Costanzana	912	873	816	744	-4%	-7%	-9%	-20%
Costigliole d'Asti	5940	5882	5969	5755	-1%	1%	-4%	-3%
Costigliole Saluzzo	3097	3122	3344	3318	1%	7%	-1%	7%
Cravagliana	312	276	278	254	-12%	1%	-9%	-19%
Cravanzana	441	400	408	373	-9%	2%	-9%	-16%
Craveggia	762	723	728	764	-5%	1%	5%	1%
Cremolino	828	959	1062	1036	16%	11%	-2%	24%
Crescentino	7150	7609	7984	7777	6%	5%	-3%	9%
Cressa	1448	1431	1571	1608	-1%	10%	2%	11%
Crevacuore	1935	1876	1610	1476	-3%	-14%	-8%	-26%
Crevoladossola	4606	4695	4726	4525	2%	1%	-4%	-2%
Crissolo	247	210	172	158	-15%	-18%	-8%	-41%
Crodo	1614	1483	1472	1400	-8%	-1%	-5%	-14%
Crova	472	429	410	408	-9%	-4%	0%	-14%
Cuceglio	843	925	997	959	10%	8%	-4%	14%
Cumiana	6182	6846	7825	7876	11%	14%	1%	26%
Cuneo	55794	52334	55013	56203	-6%	5%	2%	1%
Cunico	470	497	528	452	6%	6%	-14%	-2%
Cuorgnè	10248	10032	10084	9630	-2%	1%	-5%	-6%
Cureggio	2139	2251	2604	2594	5%	16%	0%	21%
Curino	507	475	453	468	-6%	-5%	3%	-8%

Municipality	Census 1991	Census 2001	Census 2011	Census 2020 (estimate)	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Demonte	2134	2041	2059	1914	-4%	1%	-7%	-11%
Denice	243	204	190	170	-16%	-7%	-11%	-33%
Dernice	292	249	210	184	-15%	-16%	-12%	-43%
Desana	1053	1040	1055	1066	-1%	1%	1%	1%
Diano d'Alba	2734	2980	3451	3638	9%	16%	5%	30%
Divignano	1093	1232	1445	1402	13%	17%	-3%	27%
Dogliani	4666	4554	4805	4677	-2%	6%	-3%	0%
Domodossola	18865	18466	18175	18045	-2%	-2%	-1%	-4%
Donato	731	725	719	716	-1%	-1%	0%	-2%
Dormelletto	2593	2482	2643	2573	-4%	6%	-3%	-0%
Dorzano	387	446	508	545	15%	14%	7%	36%
Dronero	6969	7012	7205	7044	1%	3%	-2%	1%
Druento	7567	8235	8436	8914	9%	2%	6%	17%
Druogno	980	961	977	1056	-2%	2%	8%	8%
Dusino San Michele	822	938	1044	1072	14%	11%	3%	28%
Elva	154	114	94	89	-26%	-18%	-5%	-49%
Entracque	878	848	807	847	-3%	-5%	5%	-3%
Envie	1795	1890	2057	1967	5%	9%	-4%	10%
Exilles	261	284	266	238	9%	-6%	-11%	-8%
Fabbrica Curone	952	838	695	593	-12%	-17%	-15%	-44%
Fara Novarese	2087	2115	2113	2027	1%	0%	-4%	-3%
Farigliano	1735	1752	1747	1734	1%	-0%	-1%	-0%
Faule	389	403	496	475	4%	23%	-4%	22%
Favria	4225	4324	5230	5182	2%	21%	-1%	22%
Feisoglio	459	395	344	298	-14%	-13%	-13%	-40%
Felletto	2482	2344	2269	2240	-6%	-3%	-1%	-10%
Felizzano	2510	2395	2421	2210	-5%	1%	-9%	-12%
Fenestrelle	678	615	553	506	-9%	-10%	-8%	-28%
Ferrere	1307	1473	1602	1533	13%	9%	-4%	17%
Fiano	2432	2558	2713	2639	5%	6%	-3%	9%

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Fiorano Canavese	837	868	837	764	4%	-4%	-9%	-9%
Fobello	310	249	219	186	-20%	-12%	-15%	-47%
Fogizzo	2146	2183	2331	2284	2%	7%	-2%	6%
Fontaneto d'Agogna	2472	2549	2731	2620	3%	7%	-4%	6%
Fontanetto Po	1190	1233	1203	1091	4%	-2%	-9%	-8%
Fontanile	563	542	566	551	-4%	4%	-3%	-2%
Formazza	461	448	442	446	-3%	-1%	1%	-3%
Formigliana	625	561	550	487	-10%	-2%	-11%	-24%
Forno Canavese	4039	3716	3612	3321	-8%	-3%	-8%	-19%
Fossano	23436	23865	24710	24477	2%	4%	-1%	4%
Frabosa Soprana	1038	875	815	745	-16%	-7%	-9%	-31%
Frabosa Sottana	1197	1390	1494	1564	16%	7%	5%	28%
Fraconalto	292	328	352	311	12%	7%	-12%	8%
Francavilla Bisio	414	459	518	510	11%	13%	-2%	22%
Frascaro	412	418	446	440	1%	7%	-1%	7%
Frassinello Monferrato	614	562	533	490	-8%	-5%	-8%	-22%
Frassineto Po	1363	1465	1471	1378	7%	0%	-6%	2%
Frassinetto	316	287	272	263	-9%	-5%	-3%	-18%
Frassino	387	324	290	269	-16%	-10%	-7%	-34%
Fresonara	691	694	739	652	0%	6%	-12%	-5%
Frinco	636	690	731	731	8%	6%	0%	14%
Front	1536	1628	1726	1662	6%	6%	-4%	8%
Frossasco	2585	2707	2840	2876	5%	5%	1%	11%
Frugarolo	1873	1856	2012	1928	-1%	8%	-4%	3%
Fubine Monferrato	1701	1683	1657	1599	-1%	-2%	-4%	-6%
Gabiano	1360	1259	1212	1052	-7%	-4%	-13%	-24%
Gaglianico	3934	3837	3899	3823	-2%	2%	-2%	-3%
Gaiola	387	471	600	576	22%	27%	-4%	45%
Galliate	13341	13448	15008	15722	1%	12%	5%	17%

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Gamalero	779	778	847	816	0%	9%	-4%	5%
Gambasca	311	346	408	341	11%	18%	-16%	13%
Garbagna	661	681	707	652	3%	4%	-8%	-1%
Garbagna Novarese	851	964	1350	1424	13%	40%	5%	59%
Garessio	4018	3498	3362	2987	-13%	-4%	-11%	-28%
Gargallo	1557	1673	1869	1775	7%	12%	-5%	14%
Garzigliana	519	544	557	551	5%	2%	-1%	6%
Gassino Torinese	8470	9015	9536	9500	6%	6%	0%	12%
Gattico-Veruno	4455	4710	5205	5271	6%	11%	1%	18%
Gattinara	8701	8612	8272	7771	-1%	-4%	-6%	-11%
Gavi	4569	4506	4707	4459	-1%	4%	-5%	-2%
Genola	2110	2323	2596	2609	10%	12%	1%	22%
Germagnano	1302	1294	1256	1131	-1%	-3%	-10%	-14%
Germagno	199	204	186	188	3%	-9%	1%	-5%
Ghemme	3816	3722	3617	3467	-2%	-3%	-4%	-9%
Ghiffa	2503	2336	2394	2362	-7%	2%	-1%	-6%
Ghislarengo	793	833	899	826	5%	8%	-8%	5%
Giaglione	665	692	653	602	4%	-6%	-8%	-9%
Giarole	723	690	720	686	-5%	4%	-5%	-5%
Giaveno	12864	14554	16281	16425	13%	12%	1%	26%
Giffenga	106	111	130	109	5%	17%	-16%	6%
Gignese	850	789	943	1044	-7%	20%	11%	23%
Givoglio	1987	2188	3640	3974	10%	66%	9%	86%
Gorzegno	441	393	322	264	-11%	-18%	-18%	-47%
Gottasecca	201	188	174	129	-6%	-7%	-26%	-40%
Govone	1960	1922	2157	2294	-2%	12%	6%	17%
Gozzano	5986	5982	5601	5541	0%	-6%	-1%	-8%
Graglia	1615	1609	1588	1495	0%	-1%	-6%	-8%
Grana	675	611	622	587	-9%	2%	-6%	-13%

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Granozzo con Monticello	1065	1216	1432	1345	14%	18%	-6%	26%
Gravellona Toce	7854	7539	7751	7816	-4%	3%	1%	-0%
Gravere	617	682	715	671	11%	5%	-6%	9%
Grazzano Badoglio	705	639	618	608	-9%	-3%	-2%	-14%
Greggio	388	375	382	346	-3%	2%	-9%	-11%
Gremiasco	403	361	344	302	-10%	-5%	-12%	-27%
Grignasco	4724	4704	4691	4379	0%	0%	-7%	-7%
Grinzane Cavour	1613	1812	1938	2017	12%	7%	4%	23%
Grogardo	328	321	296	243	-2%	-8%	-18%	-28%
Grondona	511	538	545	479	5%	1%	-12%	-6%
Groscavallo	261	214	191	192	-18%	-11%	1%	-28%
Grosso	845	988	1040	1000	17%	5%	-4%	18%
Grugliasco	41115	38725	37194	37627	-6%	-4%	1%	-9%
Guardabosone	322	339	340	340	5%	0%	0%	6%
Guarene	2546	3018	3435	3589	19%	14%	4%	37%
Guazzora	353	294	313	303	-17%	6%	-3%	-13%
Gurro	466	310	247	193	-33%	-20%	-22%	-76%
Igliano	97	81	84	66	-16%	4%	-21%	-34%
Incisa Scapaccino	2054	2031	2276	2138	-1%	12%	-6%	5%
Ingria	82	61	49	47	-26%	-20%	-4%	-49%
Intragna	122	125	107	111	2%	-14%	4%	-8%
Inverso Pinasca	655	659	741	701	1%	12%	-5%	8%
Inverio	3493	3732	4464	4328	7%	20%	-3%	23%
Isasca	115	112	78	78	-3%	-30%	0%	-33%
Isola d'Asti	2061	2041	2121	2023	-1%	4%	-5%	-2%
Isola Sant'Antonio	791	766	734	659	-3%	-4%	-10%	-18%
Isolabella	279	398	393	379	43%	-1%	-4%	38%
Issiglio	435	402	425	395	-8%	6%	-7%	-9%
Ivrea	24704	23536	23592	23338	-5%	0%	-1%	-6%

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La Cassa	1056	1326	1781	1795	26%	34%	1%	61%
La Loggia	6303	6485	8631	8841	3%	33%	2%	38%
La Morra	2416	2610	2718	2738	8%	4%	1%	13%
Lagnasco	1341	1291	1405	1428	-4%	9%	2%	7%
Lamporo	500	522	546	521	4%	5%	-5%	4%
Landiona	633	587	590	547	-7%	1%	-7%	-14%
Lanzo Torinese	5228	5141	5150	4986	-2%	0%	-3%	-5%
Lauriano	1316	1398	1493	1494	6%	7%	0%	13%
Leini	12027	11804	15523	16477	-2%	32%	6%	36%
Lemie	271	218	189	164	-20%	-13%	-13%	-46%
Lenta	890	931	878	813	5%	-6%	-7%	-8%
Lequio Berria	586	524	494	451	-11%	-6%	-9%	-25%
Lequio Tanaro	629	683	819	762	9%	20%	-7%	22%
Lerma	738	801	873	817	9%	9%	-6%	11%
Lesa	2309	2401	2236	2212	4%	-7%	-1%	-4%
Lesegno	787	838	854	834	6%	2%	-2%	6%
Lessolo	1991	1956	1982	1802	-2%	1%	-9%	-10%
Lessona (incl. Crosa)	2644	2786	2835	2719	5%	2%	-4%	3%
Levice	344	270	246	196	-22%	-9%	-20%	-51%
Levone	445	491	439	445	10%	-11%	1%	1%
Lignana	480	543	579	545	13%	7%	-6%	14%
Limone Piemonte	1581	1548	1490	1456	-2%	-4%	-2%	-8%
Lisio	302	248	214	189	-18%	-14%	-12%	-43%
Livorno Ferraris	4495	4320	4450	4306	-4%	3%	-3%	-4%
Loazzolo	397	380	337	321	-4%	-11%	-5%	-20%
Locana	1983	1806	1601	1427	-9%	-11%	-11%	-31%
Lombardore	1431	1511	1706	1721	6%	13%	1%	19%
Lombriasco	937	1004	1056	1053	7%	5%	0%	12%
Loranzè	1062	1003	1126	1154	-6%	12%	2%	9%
Loreglia	357	283	262	229	-21%	-7%	-13%	-41%

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Lozzolo	815	816	819	820	0%	0%	0%	1%
Lu e Cuccaro Monferrato	1699	1580	1520	1379	-7%	-4%	-9%	-20%
Luserna San Giovanni	8054	7866	7531	7267	-2%	-4%	-4%	-10%
Lusernetta	497	496	524	508	0%	6%	-3%	2%
Lusigliè	494	536	556	565	9%	4%	2%	14%
Macello	1143	1153	1238	1158	1%	7%	-6%	2%
Macra	81	61	52	49	-25%	-15%	-6%	-45%
Macugnaga	626	651	601	537	4%	-8%	-11%	-14%
Madonna del Sasso	417	446	396	402	7%	-11%	2%	-3%
Maggiora	1579	1664	1742	1639	5%	5%	-6%	4%
Magliano Alfieri	1555	1674	2026	2220	8%	21%	10%	38%
Magliano Alpi	1974	2111	2231	2210	7%	6%	-1%	12%
Maglione	495	488	468	411	-1%	-4%	-12%	-18%
Magnano	381	376	378	386	-1%	1%	2%	1%
Malesco	1495	1473	1465	1384	-1%	-1%	-6%	-8%
Malvicino	117	121	84	78	3%	-31%	-7%	-34%
Mandello Vitta	269	262	244	227	-3%	-7%	-7%	-16%
Mango	1348	1334	1334	1313	-1%	0%	-2%	-3%
Manta	3243	3363	3735	3820	4%	11%	2%	17%
Mappano	4572	6426	6856	7457	41%	7%	9%	56%
Marano Ticino	1328	1407	1554	1639	6%	10%	5%	22%
Maranzana	335	307	307	244	-8%	0%	-21%	-29%
Marene	2523	2703	3055	3290	7%	13%	8%	28%
Marentino	975	1190	1383	1304	22%	16%	-6%	33%
Maretto	345	358	405	383	4%	13%	-5%	11%
Margarita	1228	1297	1432	1421	6%	10%	-1%	15%
Marmora	140	99	74	60	-29%	-25%	-19%	-73%
Marsaglia	357	316	261	221	-11%	-17%	-15%	-44%
Martiniana Po	729	667	781	738	-9%	17%	-6%	3%

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Masera	1257	1429	1527	1457	14%	7%	-5%	16%
Masio	1552	1440	1465	1318	-7%	2%	-10%	-16%
Massazza	619	579	542	537	-6%	-6%	-1%	-14%
Massello	88	74	58	53	-16%	-22%	-9%	-46%
Masserano	2283	2314	2202	2036	1%	-5%	-8%	-11%
Massino Visconti	967	1090	1111	1107	13%	2%	0%	14%
Massiola	192	173	137	121	-10%	-21%	-12%	-42%
Mathi	4090	3970	3985	3889	-3%	0%	-2%	-5%
Mattie	662	702	707	663	6%	1%	-6%	1%
Mazzè	3770	3973	4152	4194	5%	5%	1%	11%
Meana di Susa	858	921	880	827	7%	-4%	-6%	-3%
Meina	2089	2341	2556	2441	12%	9%	-4%	17%
Melazzo	1100	1185	1315	1294	8%	11%	-2%	17%
Melle	455	364	326	284	-20%	-10%	-13%	-43%
Merana	194	185	185	181	-5%	0%	-2%	-7%
Mercenasco	1191	1186	1267	1269	0%	7%	0%	7%
Mergozzo	1990	2038	2196	2152	2%	8%	-2%	8%
Mezzana Mortigliengo	746	647	561	490	-13%	-13%	-13%	-39%
Mezzenile	917	900	834	761	-2%	-7%	-9%	-18%
Mezzomerico	776	951	1176	1237	23%	24%	5%	51%
Miagliano	624	592	638	580	-5%	8%	-9%	-6%
Miasino	932	953	887	787	2%	-7%	-11%	-16%
Miazzina	370	391	414	365	6%	6%	-12%	-0%
Mirabello Monferrato	1355	1361	1401	1262	0%	3%	-10%	-7%
Moasca	398	401	470	502	1%	17%	7%	25%
Moiola	320	296	252	223	-8%	-15%	-12%	-34%
Molare	2034	2044	2269	2104	0%	11%	-7%	4%
Molino dei Torti	804	738	653	589	-8%	-12%	-10%	-30%
Mollia	113	100	104	96	-12%	4%	-8%	-15%

Municipality	Census 1991	Census 2001	Census 2011	Census 2020 (estimate)	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Mombaldone	291	269	221	202	-8%	-18%	-9%	-34%
Mombarcaro	370	320	274	262	-14%	-14%	-4%	-32%
Mombaruzzo	1220	1163	1153	1028	-5%	-1%	-11%	-16%
Mombasiglio	627	630	616	604	0%	-2%	-2%	-4%
Mombello di Torino	344	395	411	379	15%	4%	-8%	11%
Mombello Monferrato	1148	1095	1087	955	-5%	-1%	-12%	-17%
Mombercelli	2197	2214	2343	2126	1%	6%	-9%	-3%
Momo	2881	2732	2673	2481	-5%	-2%	-7%	-15%
Mompantero	635	668	651	643	5%	-3%	-1%	1%
Momperone	267	232	219	199	-13%	-6%	-9%	-28%
Monale	843	892	1026	1001	6%	15%	-2%	18%
Monastero Bormida	1008	970	1006	912	-4%	4%	-9%	-9%
Monastero di Lanzo	434	428	381	335	-1%	-11%	-12%	-24%
Monastero di Vasco	1107	1200	1319	1288	8%	10%	-2%	16%
Monasterolo Casotto	149	126	101	82	-15%	-20%	-19%	-54%
Monasterolo di Savigliano	1142	1173	1357	1379	3%	16%	2%	20%
Moncalieri	59700	53350	55875	57465	-11%	5%	3%	-3%
Moncalvo	3523	3320	3184	2833	-6%	-4%	-11%	-21%
Moncenisio	42	46	42	33	10%	-9%	-21%	-21%
Moncestino	229	226	228	190	-1%	1%	-17%	-17%
Monchiero	474	518	558	572	9%	8%	3%	20%
Moncrivello	1460	1477	1465	1385	1%	-1%	-5%	-5%
Moncucco Torinese	749	811	878	883	8%	8%	1%	17%
Mondovì	22155	21880	22253	22360	-1%	2%	0%	1%
Monesiglio	853	752	712	610	-12%	-5%	-14%	-31%
Monforte d'Alba	1968	1917	2042	1979	-3%	7%	-3%	1%
Mongardino	891	986	951	874	11%	-4%	-8%	-1%
Mongiardino Ligure	237	204	177	149	-14%	-13%	-16%	-43%
Mongrando	4020	4022	3977	3833	0%	-1%	-4%	-5%



Municipality	Census 1991	Census 2001	Census 2011	Census 2020 (estimate)	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Monleale	697	634	593	562	-9%	-6%	-5%	-21%
Montà	4169	4292	4715	4687	3%	10%	-1%	12%
Montabone	382	357	347	321	-7%	-3%	-7%	-17%
Montacuto	392	339	306	251	-14%	-10%	-18%	-41%
Montafia	855	934	904	935	9%	-3%	3%	9%
Montaldeo	364	318	291	237	-13%	-8%	-19%	-40%
Montaldo Bormida	663	690	708	619	4%	3%	-13%	-6%
Montaldo di Mondovì	651	587	571	544	-10%	-3%	-5%	-17%
Montaldo Roero	860	866	872	851	1%	1%	-2%	-1%
Montaldo Scarampi	605	688	788	740	14%	15%	-6%	22%
Montaldo Torinese	494	589	749	714	19%	27%	-5%	42%
Montalenghe	827	890	1030	989	8%	16%	-4%	19%
Montalto Dora	3559	3465	3450	3380	-3%	0%	-2%	-5%
Montanaro	5283	5274	5375	5212	0%	2%	-3%	-1%
Montanera	669	731	733	741	9%	0%	1%	11%
Montecastello	353	340	324	307	-4%	-5%	-5%	-14%
Montechiaro d'Acqui	585	585	568	532	0%	-3%	-6%	-9%
Montechiaro d'Asti	1395	1382	1380	1276	-1%	0%	-8%	-9%
Montcrestese	1233	1209	1255	1259	-2%	4%	0%	2%
Montegioco	276	306	326	293	11%	7%	-10%	7%
Montegrosso d'Asti	2099	2084	2264	2320	-1%	9%	2%	10%
Montelupo Albese	428	459	531	478	7%	16%	-10%	13%
Montemagno	1180	1205	1162	1080	2%	-4%	-7%	-9%
Montemale di Cuneo	238	222	218	226	-7%	-2%	4%	-5%
Montemarzino	368	352	341	304	-4%	-3%	-11%	-18%
Monterosso Grana	559	570	536	521	2%	-6%	-3%	-7%
Montescheno	460	441	414	384	-4%	-6%	-7%	-17%
Monteu da Po	764	828	901	840	8%	9%	-7%	10%
Monteu Roero	1565	1603	1667	1594	2%	4%	-4%	2%

Municipality	Census 1991	Census 2001	Census 2011	Census 2020 (estimate)	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Montezemolo	228	305	270	229	34%	-11%	-15%	7%
Monticello d'Alba	1760	1911	2216	2365	9%	16%	7%	31%
Montiglio Monferrato	1826	1747	1687	1585	-4%	-3%	-6%	-14%
Morano sul Po	1558	1569	1511	1385	1%	-4%	-8%	-11%
Moransengo	208	230	212	186	11%	-8%	-12%	-10%
Morbello	489	459	408	417	-6%	-11%	2%	-15%
Moretta	4017	4106	4237	4069	2%	3%	-4%	1%
Moriando Torinese	718	763	820	852	6%	7%	4%	18%
Mornese	725	706	726	711	-3%	3%	-2%	-2%
Morozzo	1860	1979	2115	2021	6%	7%	-4%	9%
Morsasco	687	718	712	627	5%	-1%	-12%	-8%
Motta de' Conti	896	851	804	746	-5%	-6%	-7%	-18%
Mottalciata	1343	1416	1431	1328	5%	1%	-7%	-1%
Murazzano	882	856	840	851	-3%	-2%	1%	-4%
Murello	946	899	962	933	-5%	7%	-3%	-1%
Murisengo	1670	1511	1450	1343	-10%	-4%	-7%	-21%
Muzzano	653	673	614	591	3%	-9%	-4%	-9%
Narzole	3081	3305	3532	3549	7%	7%	0%	15%
Nebbiuno	1299	1561	1856	1797	20%	19%	-3%	36%
Neive	2757	2938	3341	3363	7%	14%	1%	21%
Netro	989	1018	1015	941	3%	0%	-7%	-5%
Naviglie	428	419	425	363	-2%	1%	-15%	-15%
Nibbiola	641	720	792	814	12%	10%	3%	25%
Nichelino	44069	47791	47851	47508	8%	0%	-1%	8%
Niella Belbo	457	421	401	363	-8%	-5%	-9%	-22%
Niella Tanaro	990	1027	1035	1000	4%	1%	-3%	1%
Nizza Monferrato	10031	10019	10372	10328	0%	4%	0%	3%
Noasca	267	202	169	110	-24%	-16%	-35%	-76%
Nole	6496	6242	6910	6838	-4%	11%	-1%	6%

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Nomaglio	360	333	312	295	-8%	-6%	-5%	-19%
None	7722	7761	7998	7948	1%	3%	-1%	3%
Nonio	851	883	878	857	4%	-1%	-2%	1%
Novalesa	556	549	560	526	-1%	2%	-6%	-5%
Novara	10112	10090	101952	103985	0%	1%	2%	3%
Novello	879	931	1023	972	6%	10%	-5%	11%
Novi Ligure	30021	27223	27682	28255	-9%	2%	2%	-6%
Nucetto	461	473	432	397	3%	-9%	-8%	-14%
Occhieppo Inferiore	4194	3947	3980	3852	-6%	1%	-3%	-8%
Occhieppo Superiore	2812	2882	2821	2694	2%	-2%	-5%	-4%
Occimiano	1415	1385	1367	1270	-2%	-1%	-7%	-11%
Odalengo Grande	524	533	487	438	2%	-9%	-10%	-17%
Odalengo Piccolo	280	274	270	239	-2%	-1%	-11%	-15%
Oggebbio	925	836	881	881	-10%	5%	0%	-4%
Oglianico	1209	1291	1426	1460	7%	10%	2%	20%
Olcenengo	568	607	754	797	7%	24%	6%	37%
Oldenico	268	254	252	211	-5%	-1%	-16%	-22%
Oleggio	11314	12191	13650	14238	8%	12%	4%	24%
Oleggio Castello	1398	1729	1968	2174	24%	14%	10%	48%
Olivola	152	145	123	117	-5%	-15%	-5%	-25%
Olmo Gentile	140	104	90	71	-26%	-13%	-21%	-60%
Omegna	15371	15373	15744	15062	0%	2%	-4%	-2%
Oncino	129	102	82	82	-21%	-20%	0%	-41%
Orbassano	20650	21581	22537	23324	5%	4%	3%	12%
Orio Canavese	790	781	829	767	-1%	6%	-7%	-2%
Ormea	2284	1967	1723	1557	-14%	-12%	-10%	-36%
Ornavasso	3302	3231	3407	3418	-2%	5%	0%	4%
Orsara Bormida	418	417	406	415	0%	-3%	2%	-1%
Orta San Giulio	1009	1119	1163	1341	11%	4%	15%	30%
Osasco	884	944	1124	1168	7%	19%	4%	30%

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Osasio	593	738	913	911	24%	24%	0%	48%
Ostana	119	79	81	89	-34%	3%	10%	-21%
Ottiglio	724	659	672	616	-9%	2%	-8%	-15%
Oulx	2202	2657	3160	3316	21%	19%	5%	45%
Ovada	12212	11677	11685	11219	-4%	0%	-4%	-8%
Oviglio	1312	1294	1319	1198	-1%	2%	-9%	-9%
Ozegna	1157	1172	1235	1192	1%	5%	-3%	3%
Ozzano Monferrato	1591	1567	1506	1382	-2%	-4%	-8%	-14%
Paderna	267	243	231	200	-9%	-5%	-13%	-27%
Paesana	3182	3072	2868	2682	-3%	-7%	-6%	-17%
Pagno	506	554	572	568	9%	3%	-1%	12%
Palazzo Canavese	801	782	843	852	-2%	8%	1%	6%
Palazzolo Verellese	1325	1328	1292	1147	0%	-3%	-11%	-14%
Pallanzeno	1230	1210	1176	1138	-2%	-3%	-3%	-8%
Pamparato	543	403	329	283	-26%	-18%	-14%	-58%
Pancalieri	1797	1884	1985	2046	5%	5%	3%	13%
Parella	484	473	468	417	-2%	-1%	-11%	-14%
Pareto	703	688	602	539	-2%	-13%	-10%	-25%
Parodi Ligure	745	721	710	641	-3%	-2%	-10%	-14%
Paroldo	249	246	228	204	-1%	-7%	-11%	-19%
Paruzzaro	1396	1588	2088	2173	14%	31%	4%	49%
Passerano Marmorito	440	450	443	420	2%	-2%	-5%	-4%
Pasturana	882	1011	1256	1271	15%	24%	1%	40%
Pavarolo	836	920	1119	1127	10%	22%	1%	32%
Pavone Canavese	4060	3776	3890	3757	-7%	3%	-3%	-7%
Pecetto di Valenza	1249	1312	1233	1187	5%	-6%	-4%	-5%
Pecetto Torinese	3438	3690	3877	4102	7%	5%	6%	18%
Pella	1180	1148	1038	928	-3%	-10%	-11%	-23%
Penango	492	538	516	460	9%	-4%	-11%	-6%

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Perletto	337	328	305	268	-3%	-7%	-12%	-22%
Perlo	164	130	126	112	-21%	-3%	-11%	-35%
Perosa Argentina	3929	3731	3405	3169	-5%	-9%	-7%	-21%
Perosa Canavese	473	559	556	527	18%	-1%	-5%	12%
Perrero	902	773	723	624	-14%	-6%	-14%	-34%
Pertengo	367	338	321	289	-8%	-5%	-10%	-23%
Pertusio	652	699	773	746	7%	11%	-3%	14%
Pessinetto	667	607	607	617	-9%	0%	2%	-7%
Pettenasco	1218	1310	1368	1350	8%	4%	-1%	11%
Pettinengo (incl. Selve Marcone)	1816	1702	1624	1503	-6%	-5%	-7%	-18%
Pevegnone	4897	5207	5481	5598	6%	5%	2%	14%
Pezzana	1087	1129	1346	1291	4%	19%	-4%	19%
Pezzolo Valle Uzzone	403	370	354	329	-8%	-4%	-7%	-20%
Pianezza	11416	11236	14169	15534	-2%	26%	10%	34%
Pianfei	1695	1811	2222	2101	7%	23%	-5%	24%
Piasco	2642	2711	2821	2750	3%	4%	-3%	4%
Piatto	507	552	547	489	9%	-1%	-11%	-3%
Piea	505	568	612	559	12%	8%	-9%	12%
Piedicavallo	191	187	203	178	-2%	9%	-12%	-6%
Piedimulera	1740	1673	1559	1494	-4%	-7%	-4%	-15%
Pietra Marazzi	780	932	900	895	19%	-3%	-1%	15%
Pietraporzio	132	115	91	76	-13%	-21%	-16%	-50%
Pieve Vergonte	2811	2692	2644	2513	-4%	-2%	-5%	-11%
Pila	114	114	137	139	0%	20%	1%	22%
Pinasca	2836	2952	3049	2918	4%	3%	-4%	3%
Pinerolo	35331	33494	34854	36178	-5%	4%	4%	3%
Pino d'Asti	189	226	221	216	20%	-2%	-2%	15%
Pino Torinese	8428	8234	8481	8415	-2%	3%	-1%	-0%
Piobesi d'Alba	913	1027	1248	1395	12%	22%	12%	46%

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Piobesi Torinese	2838	3232	3713	3856	14%	15%	4%	33%
Piode	182	197	193	183	8%	-2%	-5%	1%
Piosasco	15554	16138	18186	18405	4%	13%	1%	18%
Piovà Massaia	619	640	680	588	3%	6%	-14%	-4%
Piozzo	956	997	1007	982	4%	1%	-2%	3%
Pisano	595	770	770	814	29%	0%	6%	35%
Piscina	2936	3146	3450	3350	7%	10%	-3%	14%
Piverone	1144	1262	1378	1373	10%	9%	0%	19%
Pocapaglia	2296	2758	3330	3333	20%	21%	0%	41%
Pogno	1513	1488	1538	1381	-2%	3%	-10%	-9%
Poirino	8750	8962	10220	10293	2%	14%	1%	17%
Pollone	2135	2223	2153	2121	4%	-3%	-1%	-1%
Polonghera	1267	1138	1193	1108	-10%	5%	-7%	-12%
Pomaretto	1128	1084	1068	986	-4%	-1%	-8%	-13%
Pomaro Monferrato	416	423	390	334	2%	-8%	-14%	-20%
Pombia	1291	1818	2182	2140	41%	20%	-2%	59%
Ponderano	3696	3833	3927	3787	4%	2%	-4%	3%
Pont-Canavese	3879	3778	3676	3210	-3%	-3%	-13%	-18%
Pontechianale	213	208	182	166	-2%	-13%	-9%	-24%
Pontecurone	4224	3781	3850	3531	-10%	2%	-8%	-17%
Pontestura	1639	1558	1508	1375	-5%	-3%	-9%	-17%
Ponti	727	677	618	578	-7%	-9%	-6%	-22%
Ponzano Monferrato	437	404	380	329	-8%	-6%	-13%	-27%
Ponzone	1120	1206	1071	1012	8%	-11%	-6%	-9%
Portacomaro	1844	1992	1976	2021	8%	-1%	2%	10%
Porte	936	940	1113	1054	0%	18%	-5%	14%
Portula	1651	1486	1365	1166	-10%	-8%	-15%	-33%
Postua	559	594	594	561	6%	0%	-6%	1%
Pozzol Groppo	419	397	365	296	-5%	-8%	-19%	-32%
Pozzolo Formigaro	4785	4771	4910	4612	0%	3%	-6%	-3%

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Pradleves	348	317	272	235	-9%	-14%	-14%	-37%
Pragelato	454	448	724	770	-1%	62%	6%	67%
Prali	350	312	272	248	-11%	-13%	-9%	-33%
Pralormo	1616	1801	1945	1908	11%	8%	-2%	18%
Pralungo	2730	2743	2639	2350	0%	-4%	-11%	-14%
Pramollo	285	258	242	217	-9%	-6%	-10%	-26%
Prarolo	585	589	672	712	1%	14%	6%	21%
Prarostino	1054	1224	1289	1270	16%	5%	-1%	20%
Prasco	493	534	552	486	8%	3%	-12%	-0%
Prascorsano	754	756	781	731	0%	3%	-6%	-3%
Pratiglione	619	601	548	481	-3%	-9%	-12%	-24%
Prato Sesia	1928	1936	1993	1868	0%	3%	-6%	-3%
Pray	2683	2439	2307	2102	-9%	-5%	-9%	-23%
Prazzo	282	218	175	172	-23%	-20%	-2%	-44%
Predosa	2104	2074	2092	1954	-1%	1%	-7%	-7%
Premeno	741	769	746	762	4%	-3%	2%	3%
Premia	660	603	577	539	-9%	-4%	-7%	-20%
Premosello-Chiovenda	2153	2054	2034	1907	-5%	-1%	-6%	-12%
Priero	405	441	487	490	9%	10%	1%	20%
Priocca	1784	1956	2001	2019	10%	2%	1%	13%
Priola	853	804	719	681	-6%	-11%	-5%	-22%
Prunetto	502	492	471	424	-2%	-4%	-10%	-16%
Quagliuzzo	320	321	331	330	0%	3%	0%	3%
Quaranti	211	199	184	166	-6%	-8%	-10%	-23%
Quaregna Cerreto	1864	1966	2018	2044	5%	3%	1%	9%
Quargnento	1281	1296	1397	1382	1%	8%	-1%	8%
Quarna Sopra	328	318	289	248	-3%	-9%	-14%	-26%
Quarna Sotto	475	427	420	386	-10%	-2%	-8%	-20%
Quarona	4114	4252	4246	3951	3%	0%	-7%	-4%

Municipality	Census 1991	Census 2001	Census 2011	Census 2020 (estimate)	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Quassolo	406	403	359	352	-1%	-11%	-2%	-14%
Quattordio	1922	1753	1668	1564	-9%	-5%	-6%	-20%
Quincinetto	1135	1080	1048	1029	-5%	-3%	-2%	-10%
Quinto Verellese	491	418	400	382	-15%	-4%	-5%	-24%
Racconigi	9912	9856	10028	9908	-1%	2%	-1%	-0%
Rassa	82	71	66	62	-13%	-7%	-6%	-27%
Re	863	830	757	705	-4%	-9%	-7%	-19%
Reano	1347	1437	1689	1776	7%	18%	5%	29%
Recetto	854	897	916	945	5%	2%	3%	10%
Refrancore	1546	1560	1669	1562	1%	7%	-6%	1%
Revello	4046	4192	4203	4253	4%	0%	1%	5%
Revigliasco d'Asti	816	859	833	779	5%	-3%	-6%	-4%
Ribordone	118	84	67	49	-29%	-20%	-27%	-76%
Ricaldone	677	687	675	640	1%	-2%	-5%	-5%
Rifreddo	975	1032	1072	1056	6%	4%	-1%	8%
Rimella	195	142	137	132	-27%	-4%	-4%	-34%
Rittana	163	149	135	109	-9%	-9%	-19%	-37%
Riva presso Chieri	3563	3833	4207	4765	8%	10%	13%	31%
Rivalba	933	966	1159	1162	4%	20%	0%	24%
Rivalta Bormida	1450	1443	1417	1388	0%	-2%	-2%	-4%
Rivalta di Torino	15971	17565	19245	20267	10%	10%	5%	25%
Rivara	2509	2687	2666	2537	7%	-1%	-5%	1%
Rivarolo Canavese	11737	11976	12356	12511	2%	3%	1%	6%
Rivarone	345	372	363	402	8%	-2%	11%	16%
Rivarossa	1211	1427	1626	1577	18%	14%	-3%	29%
Rive	385	417	469	451	8%	12%	-4%	17%
Rivoli	52683	49792	48632	48472	-5%	-2%	0%	-8%
Roaschia	209	166	138	98	-21%	-17%	-29%	-66%
Roascio	98	85	83	94	-13%	-2%	13%	-2%
Roasio	2495	2462	2465	2347	-1%	0%	-5%	-6%

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Roatto	323	373	374	374	15%	0%	0%	16%
Robassomero	2911	3028	2976	3031	4%	-2%	2%	4%
Robella	560	562	504	473	0%	-10%	-6%	-16%
Robilante	2250	2316	2424	2223	3%	5%	-8%	-1%
Roburent	623	565	513	474	-9%	-9%	-8%	-26%
Rocca Canavese	1466	1635	1754	1716	12%	7%	-2%	17%
Rocca Cigliè	218	157	154	130	-28%	-2%	-16%	-45%
Rocca d'Arazzo	919	941	944	901	2%	0%	-5%	-2%
Rocca de' Baldi	1655	1616	1698	1608	-2%	5%	-5%	-3%
Rocca Grimalda	1260	1346	1495	1484	7%	11%	-1%	17%
Roccabruna	1308	1460	1589	1535	12%	9%	-3%	17%
Roccaforte Ligure	167	167	154	125	0%	-8%	-19%	-27%
Roccaforte Mondovì	1972	2024	2148	2121	3%	6%	-1%	8%
Roccasparvera	589	672	737	743	14%	10%	1%	25%
Roccaverano	644	529	447	382	-18%	-16%	-15%	-48%
Roccavione	2786	2791	2876	2668	0%	3%	-7%	-4%
Rocchetta Belbo	204	191	181	156	-6%	-5%	-14%	-25%
Rocchetta Ligure	263	220	210	215	-16%	-5%	2%	-19%
Rocchetta Palafea	433	406	347	347	-6%	-15%	0%	-21%
Rocchetta Tanaro	1501	1410	1437	1416	-6%	2%	-1%	-6%
Roddi	1108	1323	1546	1607	19%	17%	4%	40%
Roddino	381	363	377	420	-5%	4%	11%	11%
Rodello	811	908	1004	958	12%	11%	-5%	18%
Roletto	1708	1994	1989	2026	17%	0%	2%	18%
Romagnano Sesia	4329	4216	4049	3860	-3%	-4%	-5%	-11%
Romano Canavese	3011	2943	2937	2665	-2%	0%	-9%	-12%
Romentino	4401	4240	5379	5598	-4%	27%	4%	27%
Ronco Biellese	1514	1540	1514	1486	2%	-2%	-2%	-2%
Ronco Canavese	477	377	313	299	-21%	-17%	-4%	-42%
Rondissone	1737	1655	1834	1883	-5%	11%	3%	9%

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Ronsecco	673	616	580	551	-8%	-6%	-5%	-19%
Roppolo	787	855	921	862	9%	8%	-6%	10%
Rorà	261	259	255	231	-1%	-2%	-9%	-12%
Rosazza	118	89	87	90	-25%	-2%	3%	-23%
Rosignano Monferrato	1594	1650	1641	1498	4%	-1%	-9%	-6%
Rossa	203	185	194	175	-9%	5%	-10%	-14%
Rossana	979	934	909	831	-5%	-3%	-9%	-16%
Rosta	3630	3626	4621	5043	0%	27%	9%	36%
Roure	1019	966	888	789	-5%	-8%	-11%	-24%
Rovasenda	1056	1010	979	928	-4%	-3%	-5%	-13%
Rubiana	1572	2048	2417	2385	30%	18%	-1%	47%
Rueglio	791	779	773	785	-2%	-1%	2%	-1%
Ruffia	278	311	350	354	12%	13%	1%	26%
Sagliano Micca	1811	1676	1654	1579	-7%	-1%	-5%	-13%
Sala Biellese	615	601	627	585	-2%	4%	-7%	-5%
Sala Monferrato	501	475	377	324	-5%	-21%	-14%	-40%
Salasco	240	251	237	220	5%	-6%	-7%	-8%
Salassa	1490	1671	1795	1842	12%	7%	3%	22%
Salbertrand	441	466	579	623	6%	24%	8%	38%
Sale	4363	4246	4218	3994	-3%	-1%	-5%	-9%
Sale delle Langhe	513	490	525	475	-4%	7%	-10%	-7%
Sale San Giovanni	192	193	178	162	1%	-8%	-9%	-16%
Salerano Canavese	550	532	522	468	-3%	-2%	-10%	-15%
Sali Verellese	174	131	114	102	-25%	-13%	-11%	-48%
Saliceto	1564	1500	1382	1245	-4%	-8%	-10%	-22%
Salmour	582	704	706	718	21%	0%	2%	23%
Saluggia	4063	4074	4170	3883	0%	2%	-7%	-4%
Salussola	2106	2030	2015	1914	-4%	-1%	-5%	-9%
Saluzzo	16113	15894	17224	17526	-1%	8%	2%	9%

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Salza di Pinerolo	92	78	78	75	-15%	0%	-4%	-19%
Sambuco	110	89	100	85	-19%	12%	-15%	-22%
Samone	1493	1473	1614	1532	-1%	10%	-5%	3%
Sampeyre	1355	1144	1069	998	-16%	-7%	-7%	-29%
San Benedetto Belbo	202	192	191	163	-5%	-1%	-15%	-20%
San Benigno Canavese	5160	5154	5615	6024	0%	9%	7%	16%
San Bernardino Verbano	1039	1152	1384	1302	11%	20%	-6%	25%
San Carlo Canavese	3368	3548	3874	4012	5%	9%	4%	18%
San Colombano Belmonte	341	361	376	348	6%	4%	-7%	3%
San Cristoforo	572	575	607	568	1%	6%	-6%	-0%
San Damiano d'Asti	7263	7622	8373	8221	5%	10%	-2%	13%
San Damiano Macra	548	477	439	407	-13%	-8%	-7%	-28%
San Didero	352	430	566	524	22%	32%	-7%	46%
San Francesco al Campo	3849	4351	4825	4882	13%	11%	1%	25%
San Germano Chisone	1710	1842	1874	1747	8%	2%	-7%	3%
San Germano Vercellese	1917	1811	1768	1522	-6%	-2%	-14%	-22%
San Giacomo Vercellese	435	356	329	290	-18%	-8%	-12%	-38%
San Gillio	2317	2606	3023	3148	12%	16%	4%	33%
San Giorgio Canavese	2294	2396	2705	2565	4%	13%	-5%	12%
San Giorgio Monferrato	1325	1279	1279	1207	-3%	0%	-6%	-9%
San Giorgio Scarampi	166	140	131	106	-16%	-6%	-19%	-41%
San Giorio di Susa	905	949	1040	971	5%	10%	-7%	8%
San Giusto Canavese	2861	3080	3397	3312	8%	10%	-3%	15%

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San Martino Alfieri	705	704	712	683	0%	1%	-4%	-3%
San Martino Canavese	763	772	851	807	1%	10%	-5%	6%
San Marzano Oliveto	934	1012	1067	1017	8%	5%	-5%	9%
San Maurizio Canavese	6600	7259	9646	10335	10%	33%	7%	50%
San Maurizio d'Opaglio	2818	3066	3104	3039	9%	1%	-2%	8%
San Mauro Torinese	16746	17817	18925	18908	6%	6%	0%	13%
San Michele Mondovì	2168	2069	2034	1887	-5%	-2%	-7%	-13%
San Nazzaro Sesia	701	726	690	740	4%	-5%	7%	6%
San Paolo Solbrito	856	1059	1197	1209	24%	13%	1%	38%
San Pietro Mosezzo	1674	1738	1996	1958	4%	15%	-2%	17%
San Pietro Val Lemina	1310	1477	1430	1426	13%	-3%	0%	9%
San Ponso	246	265	279	263	8%	5%	-6%	7%
San Raffaele Cimena	2384	2815	3107	3107	18%	10%	0%	28%
San Salvatore Monferrato	4767	4623	4449	4179	-3%	-4%	-6%	-13%
San Sebastiano Curone	585	543	591	571	-7%	9%	-3%	-2%
San Sebastiano da Po	1633	1791	1909	1895	10%	7%	-1%	16%
San Secondo di Pinerolo	3270	3379	3608	3645	3%	7%	1%	11%
Sandigliano	2662	2733	2762	2645	3%	1%	-4%	-1%
Sanfrè	2155	2500	2901	3014	16%	16%	4%	36%
Sanfront	2694	2611	2530	2340	-3%	-3%	-8%	-14%
Sangano	3238	3705	3807	3729	14%	3%	-2%	15%
Santa Maria Maggiore	1256	1207	1264	1290	-4%	5%	2%	3%
Santa Vittoria d'Alba	2403	2512	2748	2861	5%	9%	4%	18%

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Sant'Agata Fossili	362	413	441	384	14%	7%	-13%	8%
Sant'Albano Stura	2064	2084	2380	2359	1%	14%	-1%	14%
Sant'Ambrogio di Torino	3993	4275	4753	4711	7%	11%	-1%	17%
Sant'Antonino di Susa	3930	4023	4333	4197	2%	8%	-3%	7%
Santena	10369	10189	10738	10736	-2%	5%	0%	4%
Santhià	9308	9253	8825	8379	-1%	-5%	-5%	-10%
Santo Stefano Belbo (incl. Camo)	4372	4275	4255	3959	-2%	0%	-7%	-10%
Santo Stefano Roero	1161	1236	1407	1374	6%	14%	-2%	18%
Sardigliano	460	441	452	394	-4%	2%	-13%	-14%
Sarezzano	1086	1156	1193	1157	6%	3%	-3%	7%
Sauze di Cesana	153	186	219	245	22%	18%	12%	51%
Sauze d'Oulx	938	984	1111	1090	5%	13%	-2%	16%
Savigliano	18949	19884	20935	21665	5%	5%	3%	14%
Scagnello	220	209	207	182	-5%	-1%	-12%	-18%
Scalenghe	2740	3072	3303	3267	12%	8%	-1%	19%
Scarmagno	776	740	812	826	-5%	10%	2%	7%
Scarnafigi	1771	1910	2094	2133	8%	10%	2%	19%
Sciolze	1375	1437	1513	1455	5%	5%	-4%	6%
Scopa	390	369	391	372	-5%	6%	-5%	-4%
Scopello	454	442	402	365	-3%	-9%	-9%	-21%
Scurzolengo	569	637	596	539	12%	-6%	-10%	-4%
Serole	189	163	142	113	-14%	-13%	-20%	-47%
Serralunga d'Alba	479	491	524	561	3%	7%	7%	16%
Serralunga di Crea	644	617	579	523	-4%	-6%	-10%	-20%
Serravalle Langhe	318	352	323	300	11%	-8%	-7%	-5%
Serravalle Scrivia	6243	5820	6322	5974	-7%	9%	-6%	-4%
Serravalle Sesia	5040	5008	5141	4870	-1%	3%	-5%	-3%
Sessame	303	285	284	251	-6%	0%	-12%	-18%

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Sestriere	796	838	838	922	5%	0%	10%	15%
Settime	520	537	581	530	3%	8%	-9%	3%
Settimo Rottaro	543	517	503	468	-5%	-3%	-7%	-14%
Settimo Torinese	45984	46982	46875	46925	2%	0%	0%	2%
Settimo Vittone	1684	1585	1543	1542	-6%	-3%	0%	-9%
Sezzadio	1445	1291	1294	1264	-11%	0%	-2%	-13%
Sillavengo	588	567	595	554	-4%	5%	-7%	-6%
Silvano d'Orba	1775	1830	2056	1911	3%	12%	-7%	8%
Sinio	483	461	516	493	-5%	12%	-4%	3%
Sizzano	1434	1458	1446	1407	2%	-1%	-3%	-2%
Soglio	150	135	160	152	-10%	19%	-5%	4%
Solero	1718	1685	1660	1634	-2%	-1%	-2%	-5%
Solonghello	254	245	221	209	-4%	-10%	-5%	-19%
Somano	426	386	361	323	-9%	-6%	-11%	-26%
Sommariva del Bosco	5884	5779	6394	6345	-2%	11%	-1%	8%
Sommariva Perno	2279	2626	2828	2723	15%	8%	-4%	19%
Sordevolo	1304	1334	1330	1342	2%	0%	1%	3%
Soriso	767	730	781	747	-5%	7%	-4%	-2%
Sostegno	773	784	751	763	1%	-4%	2%	-1%
Sozzago	732	859	1055	1078	17%	23%	2%	42%
Sparone	1223	1174	1085	962	-4%	-8%	-11%	-23%
Spigno Monferrato	1403	1216	1126	976	-13%	-7%	-13%	-34%
Spineto Scrivia	349	322	332	359	-8%	3%	8%	4%
Stazzano	1987	2108	2425	2387	6%	15%	-2%	20%
Strambinello	239	258	264	270	8%	2%	2%	13%
Strambino	6041	6035	6336	6198	0%	5%	-2%	3%
Stresa	4684	4836	4816	4816	3%	0%	0%	3%
Strevi	1835	1972	2039	1910	7%	3%	-6%	5%
Strona	1216	1175	1157	1052	-3%	-2%	-9%	-14%

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Stroppiana	1179	1200	1258	1180	2%	5%	-6%	0%
Stroppio	124	108	107	101	-13%	-1%	-6%	-19%
Suno	2734	2834	2808	2731	4%	-1%	-3%	-0%
Susa	6691	6577	6629	6173	-2%	1%	-7%	-8%
Tagliolo Monferrato	1392	1457	1606	1538	5%	10%	-4%	11%
Tarantasca	1822	1940	2009	2153	6%	4%	7%	17%
Tassarolo	558	611	636	617	9%	4%	-3%	11%
Tavagnasco	843	820	813	774	-3%	-1%	-5%	-8%
Tavigliano	861	936	960	919	9%	3%	-4%	7%
Terdobbiate	486	470	500	467	-3%	6%	-7%	-4%
Ternengo	320	307	298	270	-4%	-3%	-9%	-16%
Terruggia	767	812	901	922	6%	11%	2%	19%
Terzo	858	846	907	854	-1%	7%	-6%	-0%
Ticineto	1357	1384	1424	1341	2%	3%	-6%	-1%
Tigliole	1489	1605	1734	1713	8%	8%	-1%	15%
Toceno	751	758	771	724	1%	2%	-6%	-3%
Tollegno	2928	2679	2645	2457	-9%	-1%	-7%	-17%
Tonco	919	891	899	796	-3%	1%	-11%	-14%
Tonengo	186	192	197	246	3%	3%	25%	31%
Torino [Turin]	962507	865263	872367	870952	-10%	1%	0%	-9%
Tornaco	839	878	876	921	5%	0%	5%	10%
Torrazza Piemonte	2194	2373	2816	2974	8%	19%	6%	32%
Torrazzo	195	188	224	202	-4%	19%	-10%	6%
Torre Bormida	243	232	211	165	-5%	-9%	-22%	-35%
Torre Canavese	604	628	589	604	4%	-6%	3%	0%
Torre Mondovì	579	521	494	490	-10%	-5%	-1%	-16%
Torre Pellice	4601	4570	4573	4543	-1%	0%	-1%	-1%
Torre San Giorgio	660	672	709	731	2%	6%	3%	10%
Torresina	84	67	65	46	-20%	-3%	-29%	-52%
Tortona	27220	25227	25986	27248	-7%	3%	5%	1%

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Trana	3083	3343	3881	3814	8%	16%	-2%	23%
Trarego Viggiona	456	379	392	413	-17%	3%	5%	-8%
Trasquera	370	279	211	172	-25%	-24%	-18%	-67%
Traversella	460	386	350	322	-16%	-9%	-8%	-33%
Traves	506	545	553	524	8%	1%	-5%	4%
Trecate	14845	16915	19856	20712	14%	17%	4%	36%
Treiso	709	763	820	773	8%	7%	-6%	9%
Treville	296	280	271	276	-5%	-3%	2%	-7%
Trezzo Tinella	363	356	341	312	-2%	-4%	-9%	-15%
Tricerro	637	621	709	697	-3%	14%	-2%	10%
Trinità	1939	1981	2188	2235	2%	10%	2%	15%
Trino	8217	7605	7437	6984	-7%	-2%	-6%	-16%
Trisobbio	646	682	671	676	6%	-2%	1%	5%
Trofarello	8905	10352	10911	10860	16%	5%	0%	21%
Trontano	1654	1710	1702	1663	3%	0%	-2%	1%
Tronzano Vercellese	3524	3519	3558	3430	0%	1%	-4%	-3%
Usseaux	231	204	185	189	-12%	-9%	2%	-19%
Usseglio	309	256	219	200	-17%	-14%	-9%	-40%
Vaglio Serra	273	298	284	281	9%	-5%	-1%	3%
Vaie	1123	1351	1455	1418	20%	8%	-3%	25%
Val della Torre	3021	3529	3812	3960	17%	8%	4%	29%
Val di Chy	1202	1178	1289	1276	-2%	9%	-1%	6%
Valchiusa	1197	1150	1106	1026	-4%	-4%	-7%	-15%
Valdengo	2440	2525	2532	2397	3%	0%	-5%	-2%
Valdieri	1054	964	924	908	-9%	-4%	-2%	-14%
Valdilana	14533	13477	12067	10773	-7%	-10%	-11%	-28%
Valduggia	2416	2363	2117	1933	-2%	-10%	-9%	-21%
Valenza	21402	20339	19671	18674	-5%	-3%	-5%	-13%
Valfenera	1993	2128	2519	2418	7%	18%	-4%	21%
Valgioie	587	728	948	928	24%	30%	-2%	52%



Municipality	Census 1991	Census 2001	Census 2011	Census 2020 (estimate)	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Valgrana	775	797	817	774	3%	3%	-5%	0%
Vallanzengo	262	250	239	202	-5%	-4%	-15%	-24%
Valle Cannobina	807	659	518	478	-18%	-21%	-8%	-47%
Valle San Nicolao	1206	1141	1086	921	-5%	-5%	-15%	-25%
Vallo Torinese	721	734	785	792	2%	7%	1%	10%
Valloriate	206	166	121	104	-19%	-27%	-14%	-61%
Valmacca	1153	1099	1055	982	-5%	-4%	-7%	-16%
Valperga	3285	3144	3163	3026	-4%	1%	-4%	-8%
Valprato Soana	176	127	112	95	-28%	-12%	-15%	-55%
Valstrona	1348	1270	1268	1209	-6%	0%	-5%	-11%
Vanzone con San Carlo	505	512	435	385	1%	-15%	-11%	-25%
Vaprio d'Agogna	920	950	1015	976	3%	7%	-4%	6%
Varallo Pombia	4107	4403	5004	4922	7%	14%	-2%	19%
Varallo (Varallo Sesia; incl. Sabbia)	8159	7490	7542	7101	-8%	1%	-6%	-13%
Varisella	668	690	830	851	3%	20%	3%	26%
Varzo	2409	2218	2106	2008	-8%	-5%	-5%	-18%
Vauda Canavese	1273	1410	1465	1452	11%	4%	-1%	14%
Veglio	706	660	566	464	-7%	-14%	-18%	-39%
Venaria Reale	30614	35660	33741	33249	16%	-5%	-1%	10%
Venasca	1538	1512	1472	1384	-2%	-3%	-6%	-10%
Venaus	984	976	959	880	-1%	-2%	-8%	-11%
Verbania	30517	30128	30332	30391	-1%	1%	0%	-0%
Vercelli	49458	45132	46308	46558	-9%	3%	1%	-6%
Verduno	430	512	577	528	19%	13%	-8%	23%
Vernante	1477	1332	1217	1155	-10%	-9%	-5%	-24%
Verolengo	4415	4469	4962	4846	1%	11%	-2%	10%
Verrone	1133	1134	1253	1240	0%	10%	-1%	10%
Verrua Savoia	1282	1477	1459	1389	15%	-1%	-5%	9%
Verzuolo	6020	6196	6409	6421	3%	3%	0%	7%

Municipality	Census 1991	Census 2001	Census 2011	Census 2020 (estimate)	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Vesime	779	678	661	609	-13%	-3%	-8%	-23%
Vespolate	2108	2076	2067	2028	-2%	0%	-2%	-4%
Vestignè	900	861	830	802	-4%	-4%	-3%	-11%
Veza d'Alba	2008	2073	2206	2313	3%	6%	5%	15%
Viale	258	267	261	241	3%	-2%	-8%	-6%
Vialfrè	214	229	254	248	7%	11%	-2%	16%
Viarigi	1103	1003	955	861	-9%	-5%	-10%	-24%
Vicoforte	2859	3024	3167	3162	6%	5%	0%	10%
Vicolungo	815	842	883	867	3%	5%	-2%	6%
Vidracco	417	522	500	513	25%	-4%	3%	24%
Vigliano Biellese	8286	8416	8180	7744	2%	-3%	-5%	-7%
Vigliano d'Asti	792	823	887	821	4%	8%	-7%	4%
Vignale Monferrato	1147	1141	1068	959	-1%	-6%	-10%	-17%
Vignole Borbera	1991	2037	2245	2061	2%	10%	-8%	4%
Vignolo	1745	2054	2487	2605	18%	21%	5%	44%
Vignone	922	1090	1220	1198	18%	12%	-2%	28%
Vigone	5081	5051	5217	5131	-1%	3%	-2%	1%
Viguzzolo	3036	2884	3209	3111	-5%	11%	-3%	3%
Villa del Bosco	405	375	363	331	-7%	-3%	-9%	-19%
Villa San Secondo	408	384	410	387	-6%	7%	-6%	-5%
Villadeati	572	521	523	479	-9%	0%	-8%	-17%
Villadossola	7469	6908	6777	6408	-8%	-2%	-5%	-15%
Villafalletto	2977	2876	2899	2936	-3%	1%	1%	-1%
Villafranca d'Asti	2867	2942	3250	2985	3%	10%	-8%	5%
Villafranca Piemonte	4746	4795	4825	4602	1%	1%	-5%	-3%
Villalvernia	914	932	966	896	2%	4%	-7%	-2%
Villamiroglio	331	312	332	300	-6%	6%	-10%	-9%
Villanova Biellese	209	196	190	190	-6%	-3%	0%	-9%
Villanova Canavese	992	1010	1135	1214	2%	12%	7%	21%
Villanova d'Asti	4391	4717	5774	5647	7%	22%	-2%	28%

Municipality	Census 1991	Census 2001	Census 2011	Census 2020 (estimate)	$var_1 = 100 \times \frac{(census_{2001} - census_{1991})}{census_{1991}}$	$var_2 = 100 \times \frac{(census_{2011} - census_{2001})}{census_{2001}}$	$var_3 = 100 \times \frac{(census_{2020} - census_{2011})}{census_{2011}}$	$var_{total} = var_1 + var_2 + var_3$
Villanova Mondovì	4757	5445	5769	5802	14%	6%	1%	21%
Villanova Monferrato	1700	1743	1849	1804	3%	6%	-2%	6%
Villanova Solaro	808	782	777	745	-3%	-1%	-4%	-8%
Villar Dora	2151	2718	2951	2847	26%	9%	-4%	31%
Villar Focchiardo	2009	2037	2068	1940	1%	2%	-6%	-3%
Villar Pellice	1207	1187	1120	1056	-2%	-6%	-6%	-13%
Villar Perosa	4241	4170	4149	3990	-2%	-1%	-4%	-6%
Villar San Costanzo	1207	1396	1502	1537	16%	8%	2%	26%
Villarbasse	2711	2814	3323	3482	4%	18%	5%	27%
Villarboit	581	547	465	410	-6%	-15%	-12%	-33%
Villareggia	993	963	1012	1010	-3%	5%	0%	2%
Villaromagnano	690	758	700	662	10%	-8%	-5%	-3%
Villastellone	4657	4641	4864	4624	-0%	5%	-5%	-0%
Villata	1620	1624	1618	1554	0%	0%	-4%	-4%
Villette	233	244	264	268	5%	8%	2%	14%
Vinadio	801	732	684	607	-9%	-7%	-11%	-26%
Vinchio	725	698	657	567	-4%	-6%	-14%	-23%
Vinovo	13435	13425	14108	15245	0%	5%	8%	13%
Vinzaglio	607	609	588	546	0%	-3%	-7%	-10%
Viola	498	461	425	364	-7%	-8%	-14%	-30%
Virle Piemonte	919	1065	1191	1152	16%	12%	-3%	24%
Vische	1345	1417	1314	1226	5%	-7%	-7%	-9%
Visone	1201	1160	1257	1207	-3%	8%	-4%	1%
Vistrorio	426	496	521	519	16%	5%	0%	21%
Viù	1273	1225	1118	1021	-4%	-9%	-9%	-21%
Viverone	1351	1417	1423	1408	5%	0%	-1%	4%
Vocca	151	139	162	160	-8%	17%	-1%	7%
Vogogna	1837	1702	1751	1750	-7%	3%	0%	-5%
Volpedo	1214	1191	1212	1186	-2%	2%	-2%	-2%
Volpeglino	161	160	160	133	-1%	0%	-17%	-17%

Volpiano	12536	12991	14998	15453	4%	15%	3%	22%
Voltaggio	815	770	759	709	-6%	-1%	-7%	-14%
Volvera	6894	6966	8690	8520	1%	25%	-2%	24%
Vottignasco	559	573	547	501	3%	-5%	-8%	-10%
Zimone	404	404	425	393	0%	5%	-8%	-2%
Zubiena	1129	1271	1251	1140	13%	-2%	-9%	2%
Zumaglia	989	1073	1129	981	8%	5%	-13%	1%