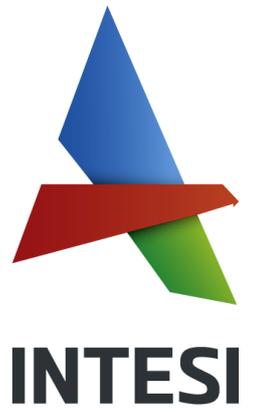


Interreg Alpine Space



WP-T2

**ASSESSMENT REGIONAL REPORT
Deliverable 3.7.2 EURAC RESEARCH**

Valchiavenna –Lombardy

August 2017 • Eurac Research

Institution

eurac
research



Eurac Research

Institute for Regional Development

Viale Druso, 1 / Drususallee 1

39100 Bolzano / Bozen – Italy

t +39 0471 055 300

f +39 0471 055 429

e regional.development@eurac.edu

w www.eurac.edu

Authors

Clare Giuliani, MA

Junior Researcher and Project Assistant

Viale Druso 1, I-39100 Bolzano

t +39 0471 055 435

f +39 0471 055 429

clare.giuliani@eurac.edu

Christian Hoffmann

Senior Researcher and Project Leader

Viale Druso 1, I-39100 Bolzano

t +39 0471 055 328

f +39 0471 055 429

christian.hoffmann@eurac.edu

Peter Laner

GIS Expert

Viale Druso 1, I-39100 Bolzano

t +39 0471 055 438

f +39 0471 055 429

peter.laner@eurac.edu

Contents

1	Introduction.....	4
2	Methodology.....	5
3	Lombardy-TA Valchiavenna	6
	3.1.1 Socioeconomic framework of the region (Deliverable 3.1.1).....	9
	3.1.2 Demographic forecast (Deliverable 3.3.1).....	11
	3.1.3 GIS maps visualizing SGI (Deliverable 3.6.1)	17
	3.1.3.1 Supermarket.....	21
	3.1.3.2 Chemist’s shop.....	23
	3.1.3.3 Kindergarten.....	25
	3.1.3.4 Primary School.....	27
	3.1.3.5 Doctor.....	29
	3.1.4 Qualitative Information	31
4	References	37

1 Introduction

Vital and more ingenious goods and services are part of our everyday needs, consequently safeguarding public services is understood as a prerequisite for a high quality of life and attractiveness especially in rural regions. However, this right of service availability, which forms a precondition to lead a self-determined life, is increasingly in the discourse at European, national and regional level.

Services of general interest (SGI) can be categorised into economic services (Services of General Economic Interest / SGEI) and non-economic services of general interest (Non-Economic Services / NSGIs) as well as social services of general interest (SSGI).¹

The main challenges in the Alpine area affecting the supply of SGI are the aging society through demographic changes, the moderate inhabitant density, as well as depopulation associated with shrinking and de-growth processes. These developments impact, that basic services are endangered of no longer being supplied. The difference in the service supply depends on the available financial resources between municipalities, which affect the quality of service provision. To find new ways and possibilities of ensuring service delivery, the Interreg Alpine Space Project INTESI was initiated in 2016, which deals with integrated territorial strategies for services of general interest in the alpine space.

The INTESI project focuses on 10 test areas (TA) located in five alpine countries (Austria, Italy, Switzerland, France and Slovenia). The TAs were selected explicitly to be able to provide a realistic and explorative first overview situation of differences and similarities regarding the provision and regulation of SGI across the Alpine area.

The objective of the project is to overcome the sectoral approach of SGI delivery and assure the delivery of SGI in the long term by promoting integrated territorial strategies (analysed in WP-T1 by the Slovenian partners) in the alpine space. For this purpose Eurac researchers of the Institute of Regional Development, responsible for WP-T2, designed regional profiles to compare the current SGI delivery of the TAs according to their availability (GIS maps), accessibility (spatial-statistics) and service quality (workshops and interviews). These, together with elaborated scenarios for the population forecast, serve to identify future challenges and provide a demand-orientated service delivery.

The following TA report will first shortly describe the method used for the accessibility, demographic and qualitative analysis done. Secondly, the report provides the deliverables of the WP-T2 including the excel charts on the accessibility and distance and the GIS maps on SGIs accessible by car as well as by public transport. Furthermore, it includes the regional services available in the TA. Thirdly, it includes

¹ Gløersen, E. et al., Research for REGI Committee- Services of General Interest in the Funding Period 2014-2020 (Study). European Parliament, Directorate-General for Internal Policies, 2016.

the demographic forecast followed by the qualitative information on the TA, which depicts the personal view of the interviewed person and not a representative opinion of the local population. The synthesised report includes the comparison between the TAs as well as the main findings on the availability, accessibility and quality (strengths and weaknesses) regarding the provision of SGI.

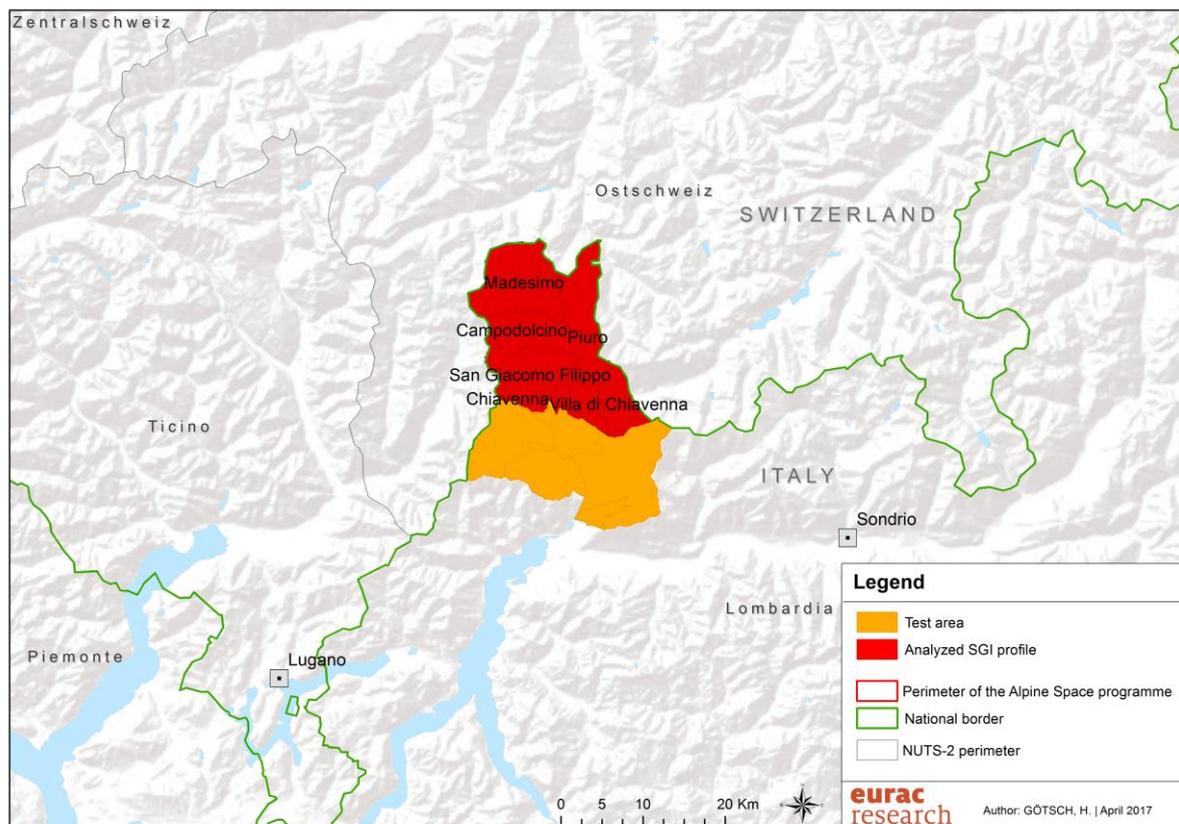
2 Methodology

The assessment report (D.3.7.2) for each test area includes a short description of the methodology and the test area including a socio-economic description followed by the results of the SGI accessibility and quality analysis – GIS maps of SGI accessibility, demographic forecast, qualitative information.

For analysing the major challenges, we used a combined methodology:

- First, we mapped the **accessibility** of five major services (supermarket, chemist, doctor, kindergarten and primary school) in GIS maps (D. 3.6.1) based on submitted addresses of the services within the selected municipalities and settlements of each TA. Therefore, a special excel template was developed (D.3.1.1), which also included selected socio-economic data.
- Secondly, we collected **demographic** figures (total inhabitants, inhabitants 0-14 and 15-64 and people over 65 and the fertility rate) for the period from 1995 until the latest figures available (2013/2014/2015) for each TA to provide a demographic forecast (D.3.3.1). In the assessment reports (D.3.7.2) we decided to depict the charts of the cohorts (total average population, 0-14 and >65) from the years 2000-2030 for a comprehensive reason. This forecast should allow to detect, which services will be required in future. The variable of fertility rate however could not always be predicted and interpreted correctly due to missing values and the uncertainty of the variable.
- Thirdly, partners (in some cases together with Eurac project partners) conducted **qualitative** workshops or interviews (face to face or via telephone) with a selected group of stakeholders e.g. majors, service providers, local representatives to find out major challenges, strengths and future investments for every service sector (basic goods, education, health & social services, transport, telecommunication and administration). This information depicts the subjective opinion of the interviewed people and cannot be seen as a representative sample. It simply allows to see a trend, similarities or differences between the test areas.

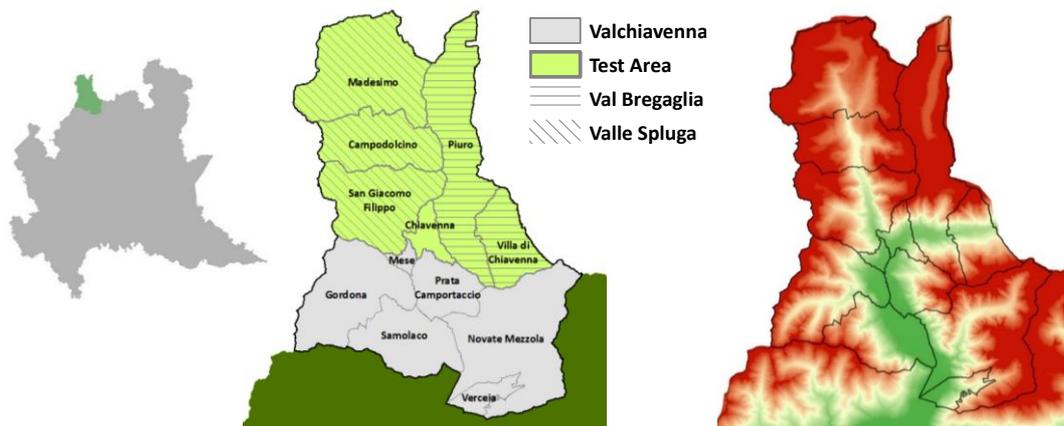
3 Lombardy-TA Valchiavenna



Test Area in Lombardy

Valchiavenna is located in the North of Lombardy, and it borders the Swiss canton of Graubünden/Grigioni on three sides: it is an important location for transboundary traffic and trade, due in particular to its proximities to the important mountain passes of Spluga and Maloja.

In the TA of Lombardy, Valchiavenna, there are 12 municipalities of which 6 municipalities: Campodolcino, Chiavenna, Madesimo, Piuro, San Giacomo Filippo and Villa di Chiavenna were selected to design the SGI profiles, however also including the SGI if available in the next closest municipality. The six municipalities that form the test area (TA) are all part of the **Valchiavenna Mountain Community**, composed of twelve municipalities. In particular, the TA includes the territories of Bregaglia valley (municipalities of Piuro and Villa di Chiavenna) and Spluga (or San Giacomo) valley (municipalities of San Giacomo Filippo, Campodolcino, Madesimo), plus the nearby municipality of Chiavenna, which is the most populated municipality in Valchiavenna. There are a total of 41 settlements in the TA that have been analysed.



Lombardy, Valchiavenna and the test area: administrative divisions and morphology

The Valchiavenna Mountain Community is included in the administrative boundaries of the Province of Sondrio, which, together with other two provinces in Italy, was granted (2014) some special forms of administrative autonomy by a national law², thanks to the peculiarity of being mountainous areas neighbouring with Switzerland.

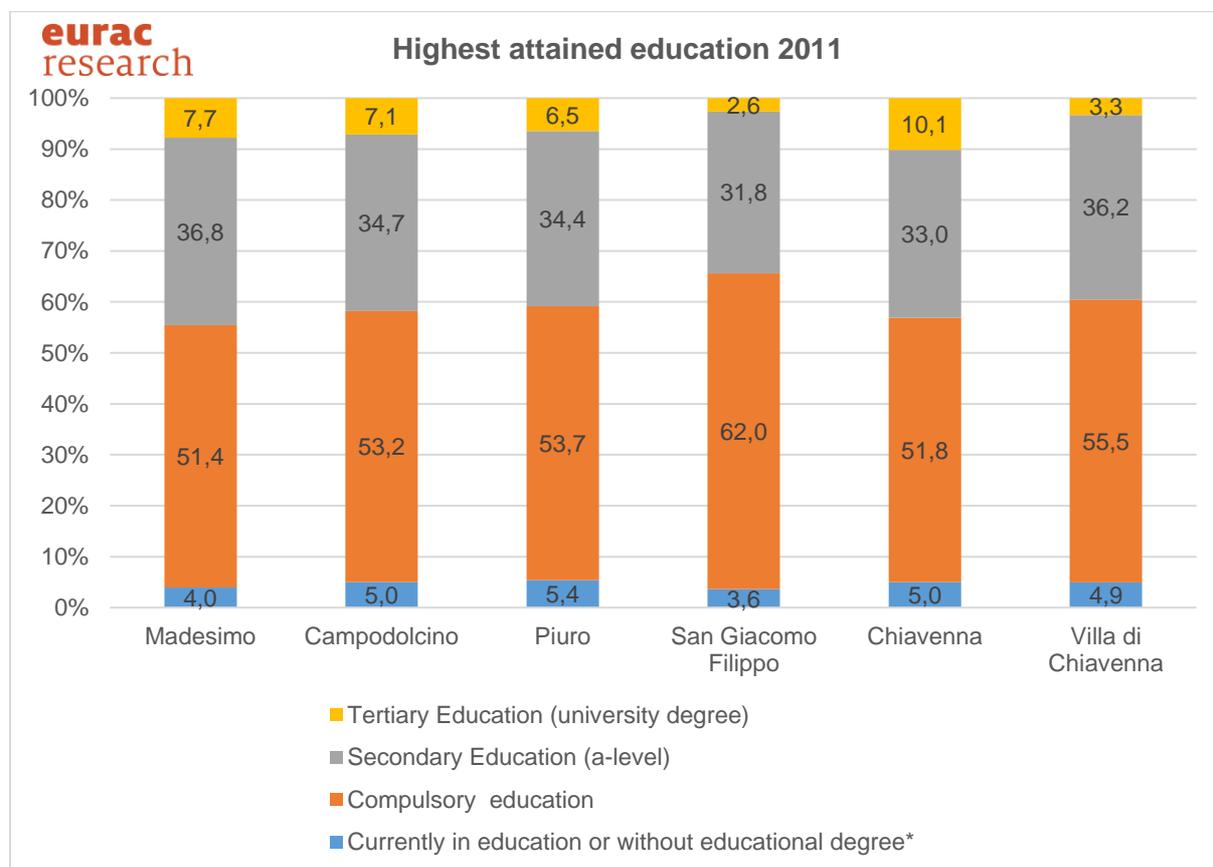
Municipality	Settlements
Campodolcino	Campodolcino
	Fraciscio
	Gualdera
	Motta di Sotto
	Mottala
	Prestone
	Splughetta
	Starleggia
Chiavenna	Chiavenna
	Pianazzola
	Uschione
Madesimo	Madesimo
	Casone
	Isola
	Montespluga
	Mottaletta
	Pianazzo
	Scalcoggia
Piuro	Prosto
	Borgonuovo
	Crana

² Del Rio law 56/2014, implemented in Lombardy with the regional law 19/2015.

	Santa Croce
	Savogno
San Giacomo Filippo	San Giacomo Filippo
	Ca' Bara
	Cimaganda
	Lirone
	Martinone
	Motta
	Motta San Guglielmo
	Olmo
	San Bernardo
	San Rocco
	Sant'Antonio Albareda
	Villa di Chiavenna
Canete	
Chete	
Dogana	
Giavera	
Pian della Ca'	
San Barnaba	

Municipalities and settlements

3.1.1 Socioeconomic framework of the region (Deliverable 3.1.1)

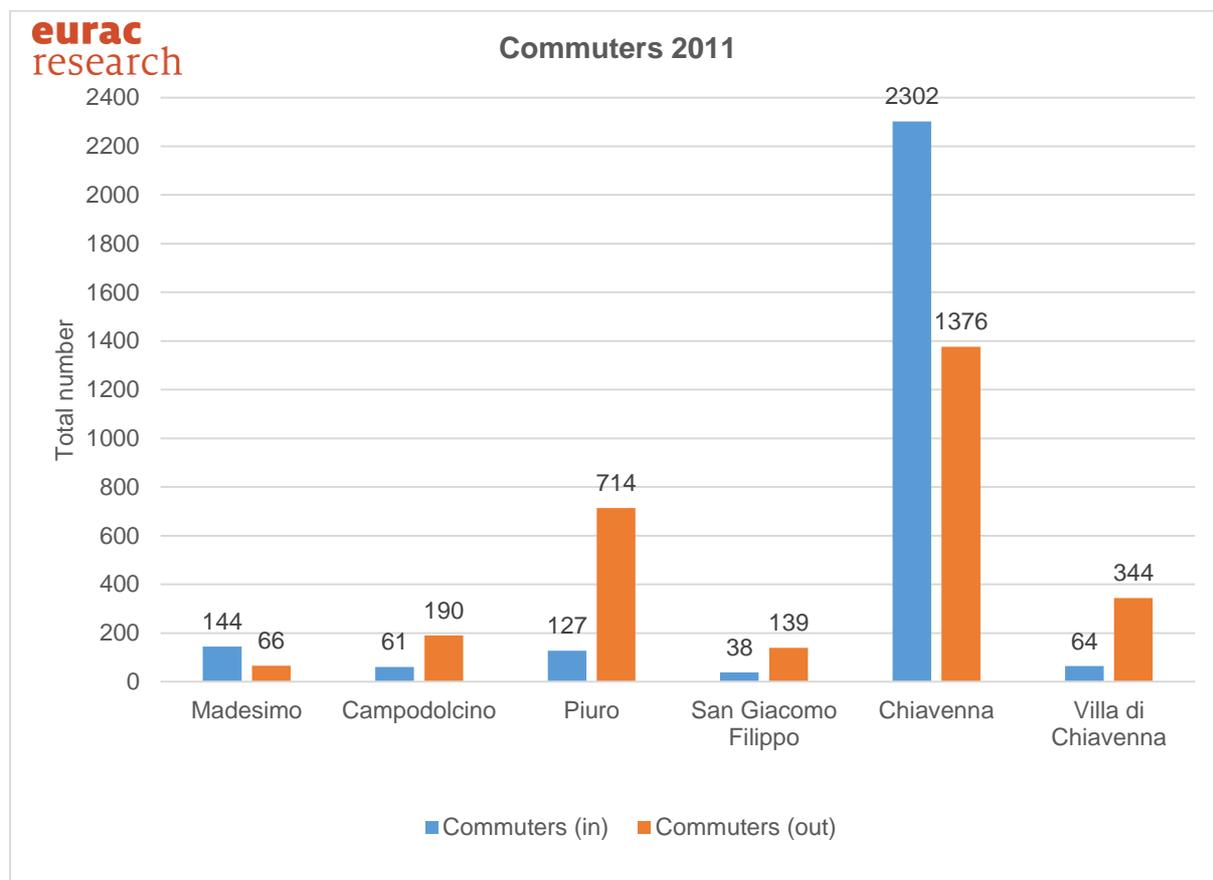


Highest attained education Valchiavenna 2011

*Note: Eurac Research harmonized this figure, due to the different availability of this data in each TA.

The percentage of people with compulsory **education** is the highest in the municipality San Giacomo Filippo. The amount of people who have a secondary education degree is more or less on the same level about 33%. Chiavenna has the highest percentage of people with a university degree.

Due to the missing data on the **budget** of the municipality, no analysis could be made.



Commuters Valchiavenna 2011

Chiavenna has the highest absolute numbers of outgoing and incoming **commuters**. Madesimo has the smallest number of outgoing commuters, San Giacomo Filippo has the fewest incoming commuters.

Concerning the **employment rate** of resident population between 20-64 years (2011) the municipality of Madesimo with 46.1% has the highest percentage of employed residents as well as the highest number of unemployed residents (3.9%).

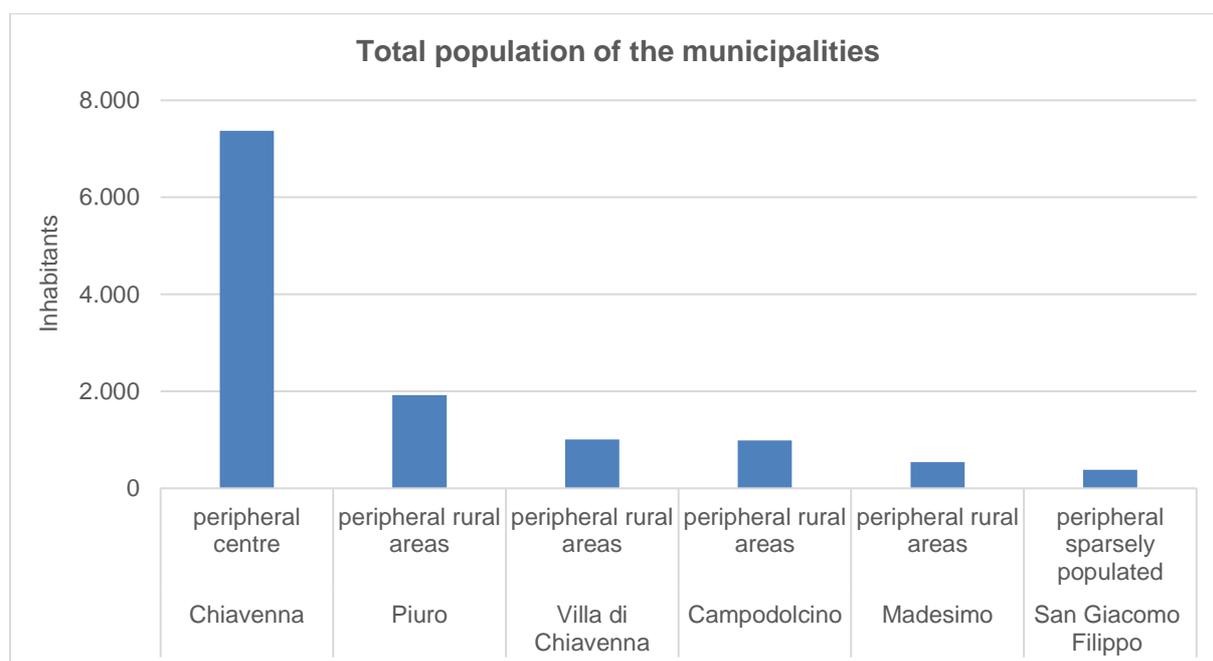
Regarding the **employment sectors** (2011) the majority is employed in the tertiary sector, which is the strongest in Madesimo (72.4%). The secondary sector is most dominant in the municipality of San Giacomo Filippo (58%) and the primary sector is the strongest in Chiavenna, with 3.7%.

From the available data on **tourism** (without San Giacomo Filippo and Villa di Chiavenna) the number of arrivals is the highest in Madesimo with 20.031 arrivals in 2010 (Eurac Research 2017).

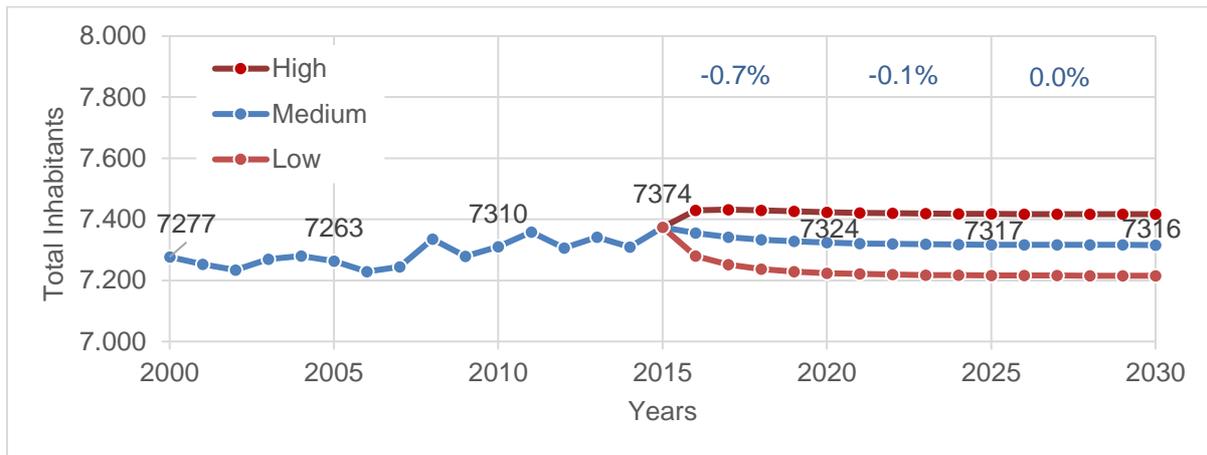
3.1.2 Demographic forecast (Deliverable 3.3.1)

Eurac Research calculated the forecast based on the average number of the inhabitants. It is not possible to reduce the forecast to a single municipality. The demographic trend of the last 20 years shows a slow decline especially in the less populated municipalities. However, the territory has a strong tourism vocation, mainly linked to the well-known ski area based in Madesimo and Campodolcino.

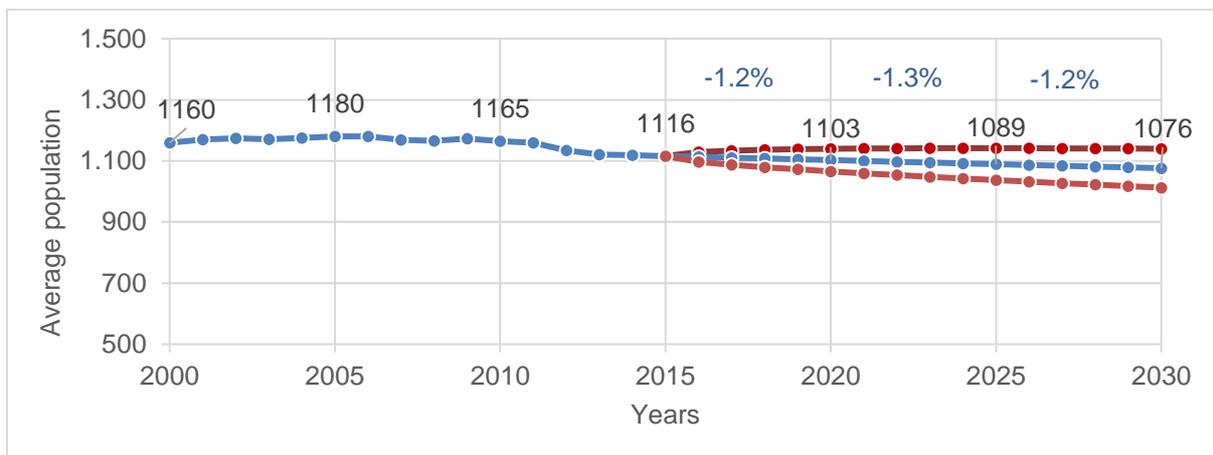
Concerning the demographic situation of the municipalities, they were divided in three different clusters: (1) rural centers, (2) rural and (3) sparsely populated areas. In each cluster the age-cohorts (0-14; 15-64; >65) were simulated separately. By means of autoregressive ARIMA models the most probable demographic change was estimated, to understand thereof future needs for SGI in these municipalities until 2030. For each TA the historic demographic data series for the three age cohorts and in combination with the future outlook from 2000 until 2030 for different scenarios with 95% confidence interval was analysed in long-time data-series line-charts.



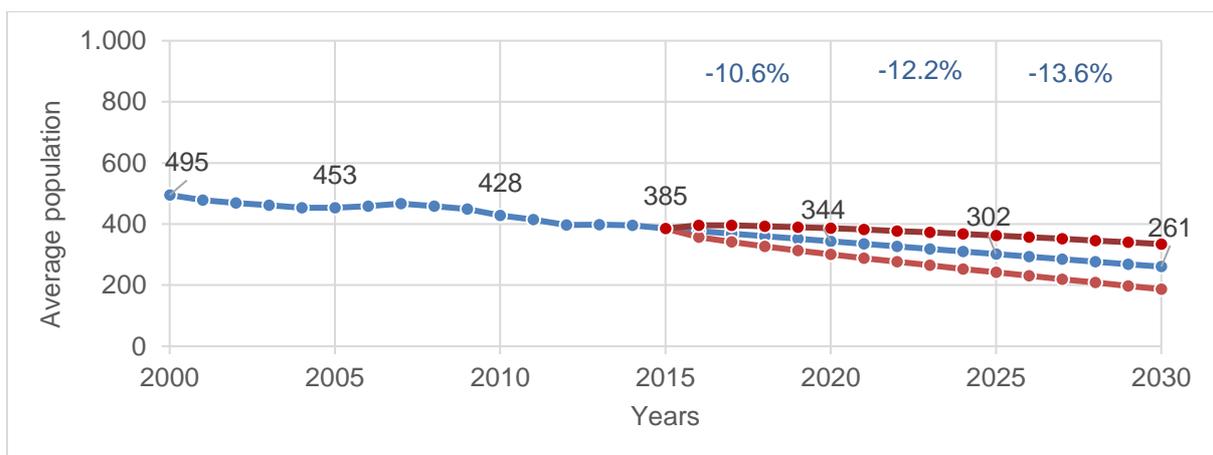
Population of the municipalities in the test area Valchiavenna in 2015 (latest figures available)



Valchiavenna peripheral centre - population forecast of total inhabitants



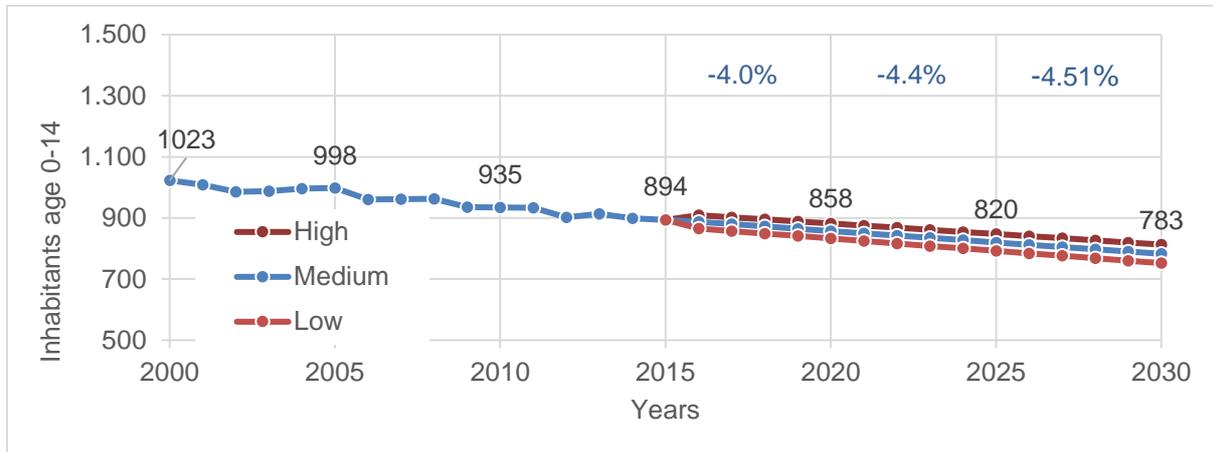
Valchiavenna peripheral rural areas - population forecast of total inhabitants



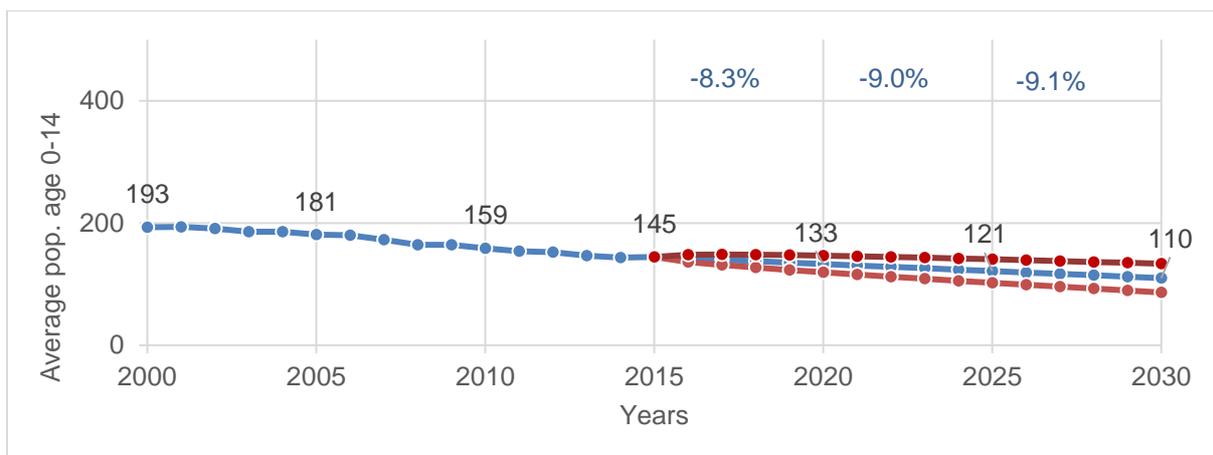
Valchiavenna peripheral sparsely populated areas - population forecast of total inhabitants

The population forecast of the peripheral centre in Valchiavenna shows a stable population trend. The peripheral rural and peripheral sparsely populated areas are losing inhabitants. Small, sparsely populated municipalities are affected more of the

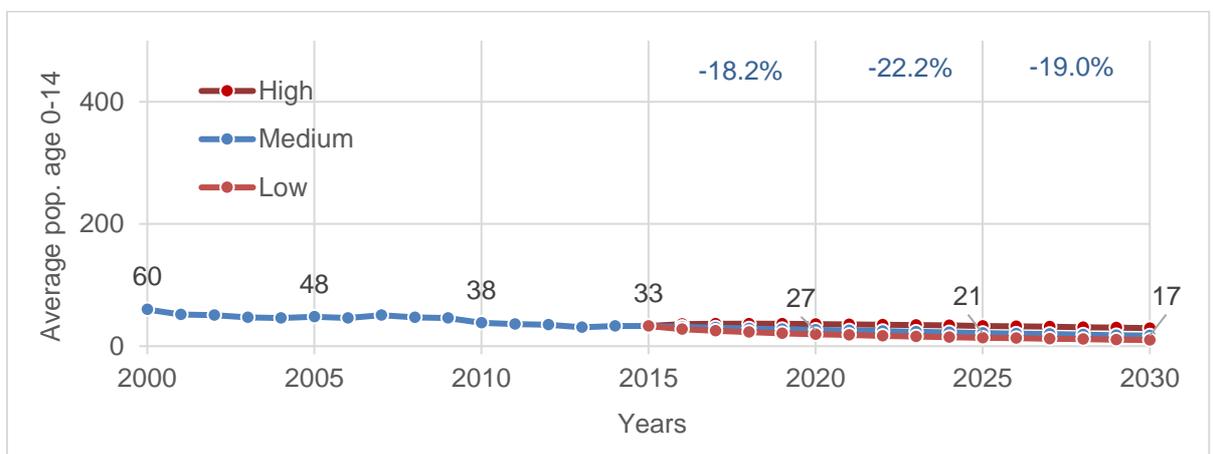
shrinking trend than the centre Chiavenna. The peripheral sparsely populated areas are estimated to have an average population decrease of -32.2% from 2015 to 2030.



Valchiavenna peripheral centre - population forecast of inhabitants aged 0-14

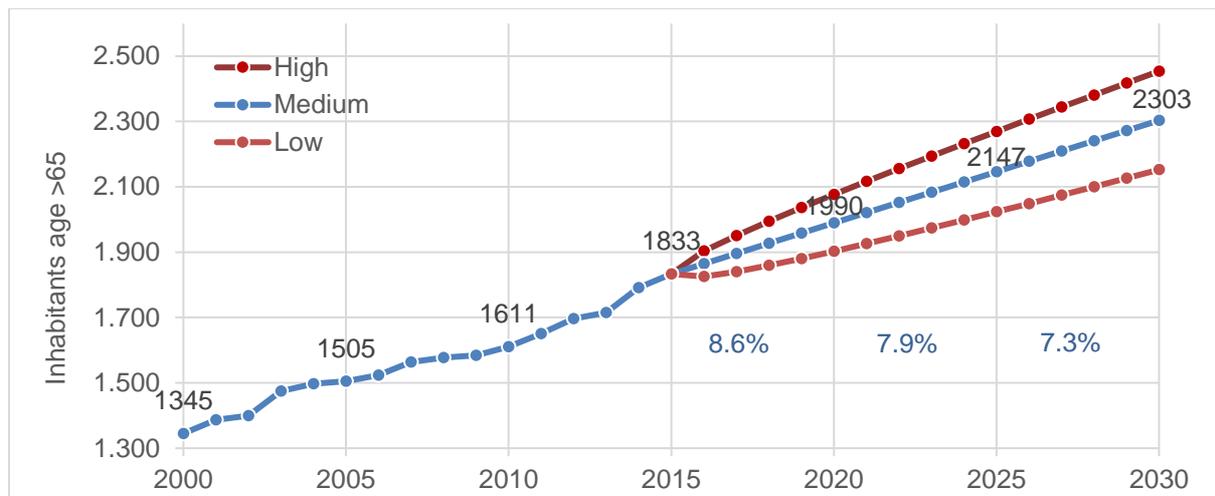


Valchiavenna peripheral rural areas - population forecast of inhabitants aged 0-14

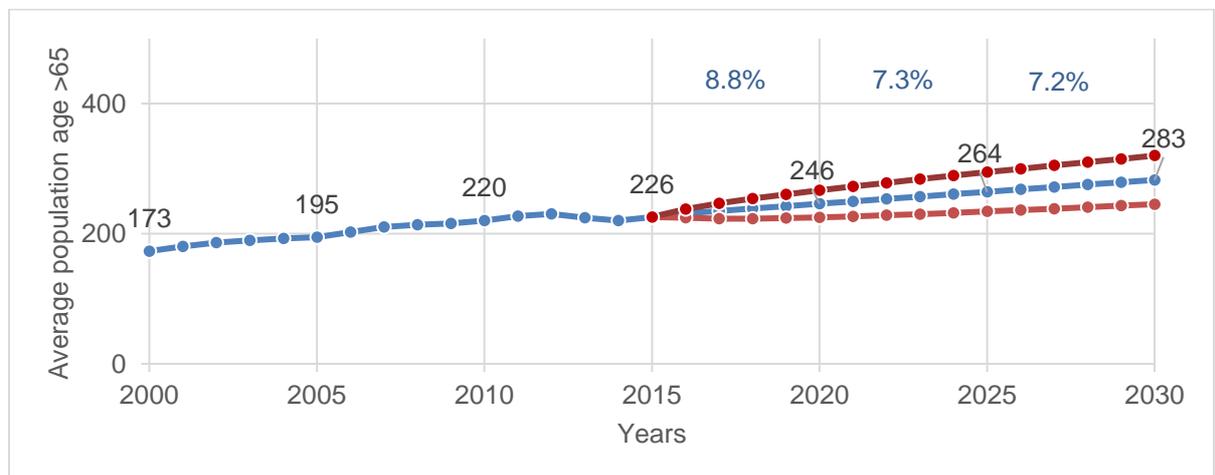


Valchiavenna peripheral sparsely populated areas - population forecast of inhabitants aged 0-14

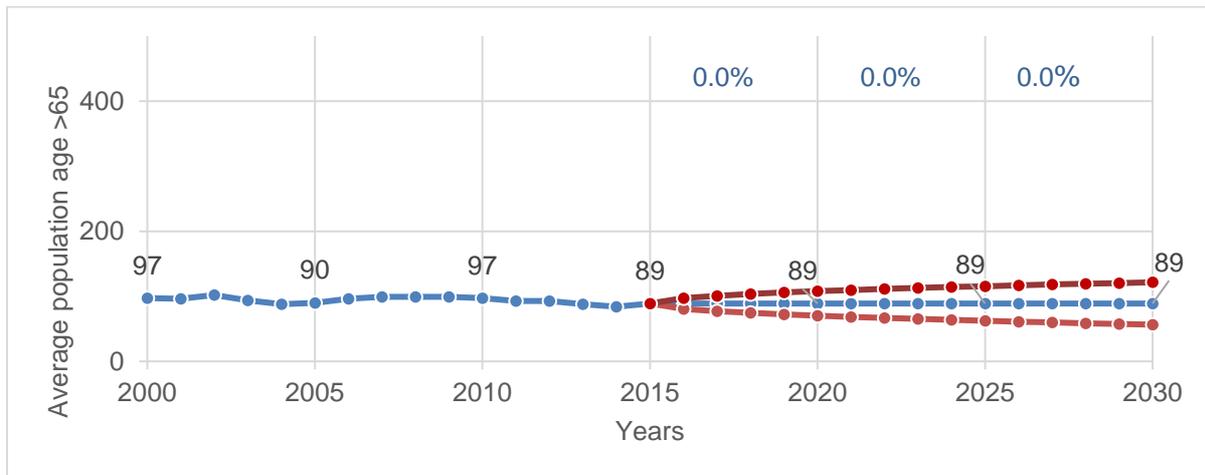
The number of children aged 0 to 14 years is declining in every statistical area. The higher the percentage of decrease, the smaller the statistical area. This correlation is a logical result, as the percentage depends on the total number of inhabitants, which is the reference number. In absolute numbers, the peripheral centre has a stronger decrease in inhabitants than sparsely populated areas. The population aged 0 to 14 years in the centre of Chiavenna is estimated to decrease by -12.4% from 2015 to 2030.



Valchiavenna peripheral centre population forecast of inhabitants aged 65 and above

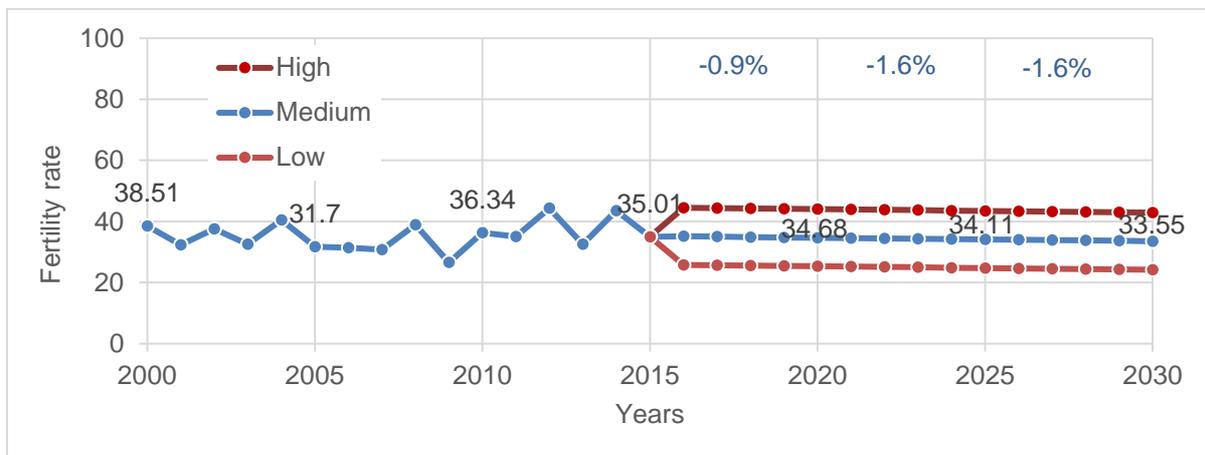


Valchiavenna peripheral rural areas population forecast of inhabitants aged 65 and above

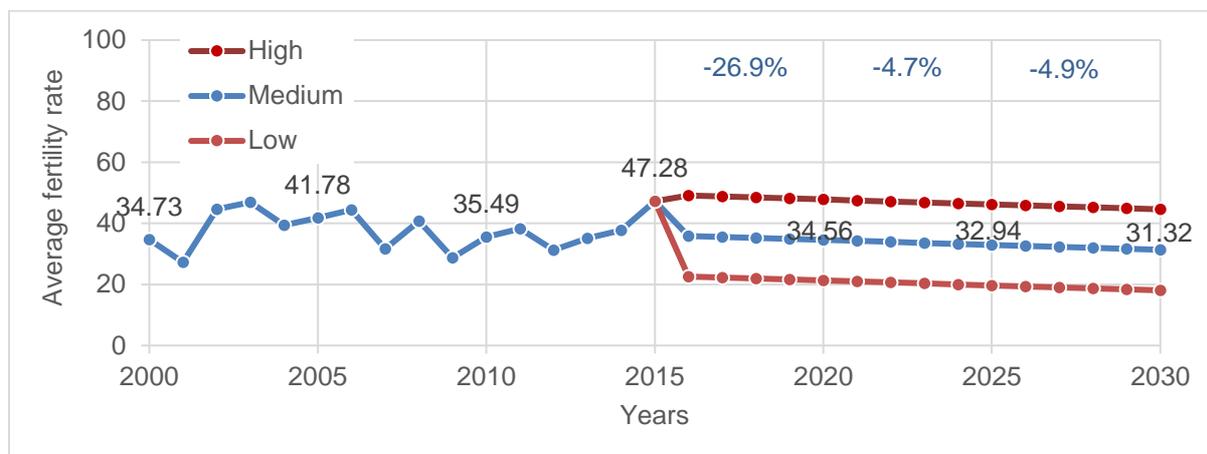


Valchiavenna peripheral sparsely populated areas population forecast of inhabitants aged 65 and above

In rural areas and the centre, an increase of inhabitants above 65 years between 7% and 9% every five years is predicted. The age cohort of over 65-year-olds in sparsely populated areas is estimated to remain constant. In general, the population forecast shows signs of an ageing population, but with a stable population, except in sparsely populated municipalities.



Valchiavenna peripheral centre - forecast of fertility rate (births per women aged 15-49)

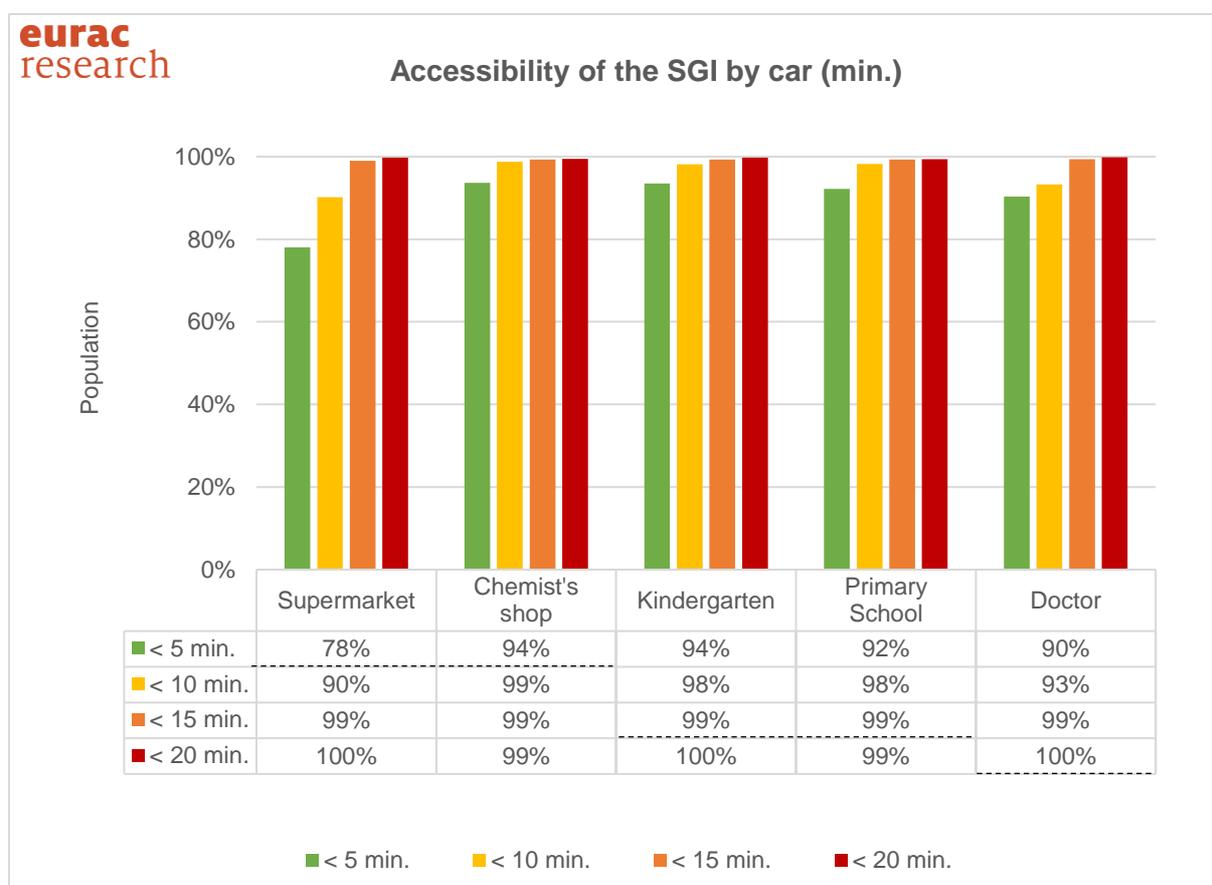


Valchiavenna peripheral rural areas - forecast of fertility rate (births per women aged 15-49)

The general fertility rate in the peripheral centre of Chiavenna is predicted to be stable. In rural areas, it shows a decline of -33.8% of births per women between 2015 and 2030. Because of the large variations in sparsely populated areas, it is hard to make a concrete prediction, but the trend shows a stable fertility rate.

3.1.3 GIS maps visualizing SGI (Deliverable 3.6.1)

In the following chapter, the accessibility analysis based on excel charts and the used benchmark from the MORO study in Germany³ (dotted line in the chart) summarises the main findings of the five selected services (supermarket, chemist shop, kindergarten, primary school and doctor). After describing the accessibility of regional services (airport, train station, hospital and provincial capital), the GIS maps for the five selected services illustrating the accessibility in minutes by car and by public transport are depicted and shortly summarise the main point.



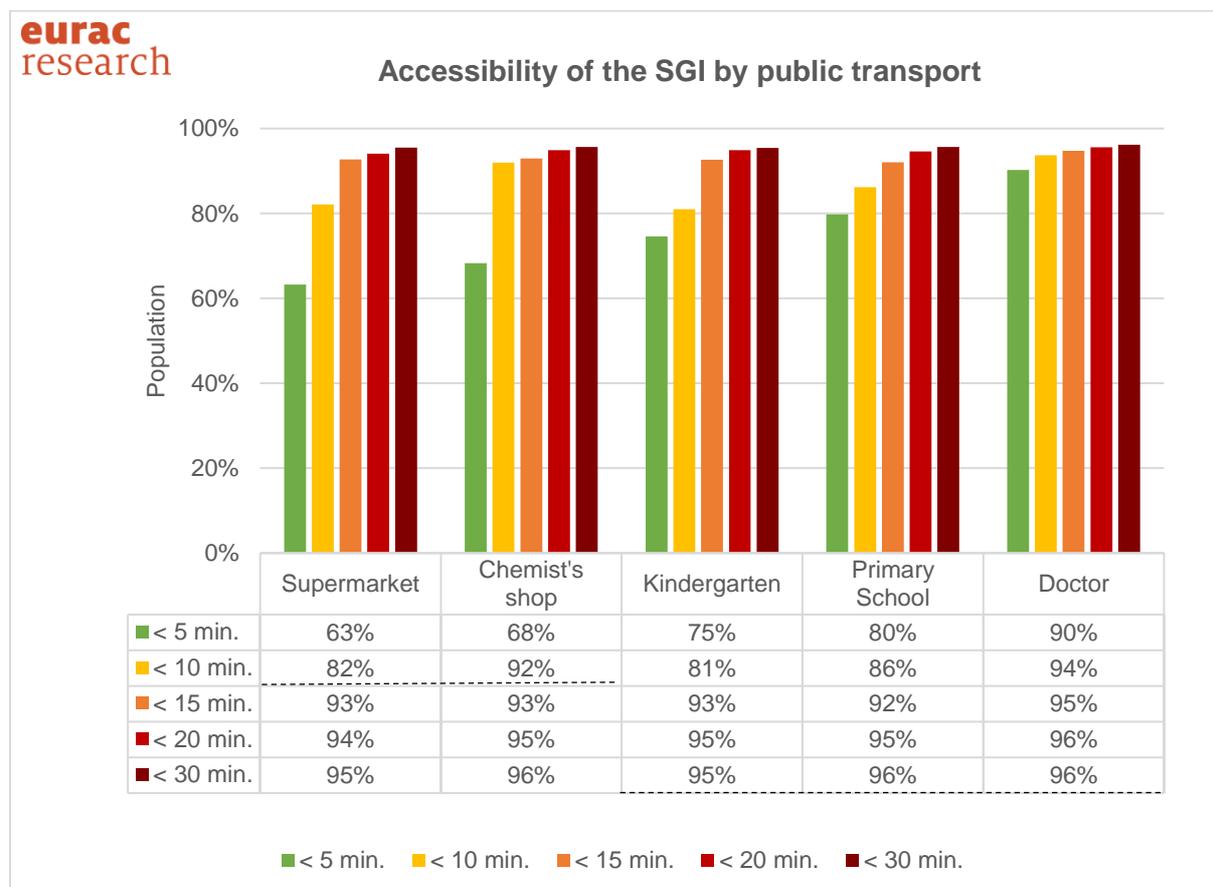
Accessibility of SGI in min by car

Comparing the surveyed accessibility by car of the selected SGI with the defined benchmarks⁴ a supermarket cannot be reached by 22% or a chemist's shop not by 6% of the population of the six selected municipalities within 5 minutes by car.

A kindergarten or primary school cannot be reached by 1% within 15 minutes and a doctor can be reached by 100% within 20 minutes by car.

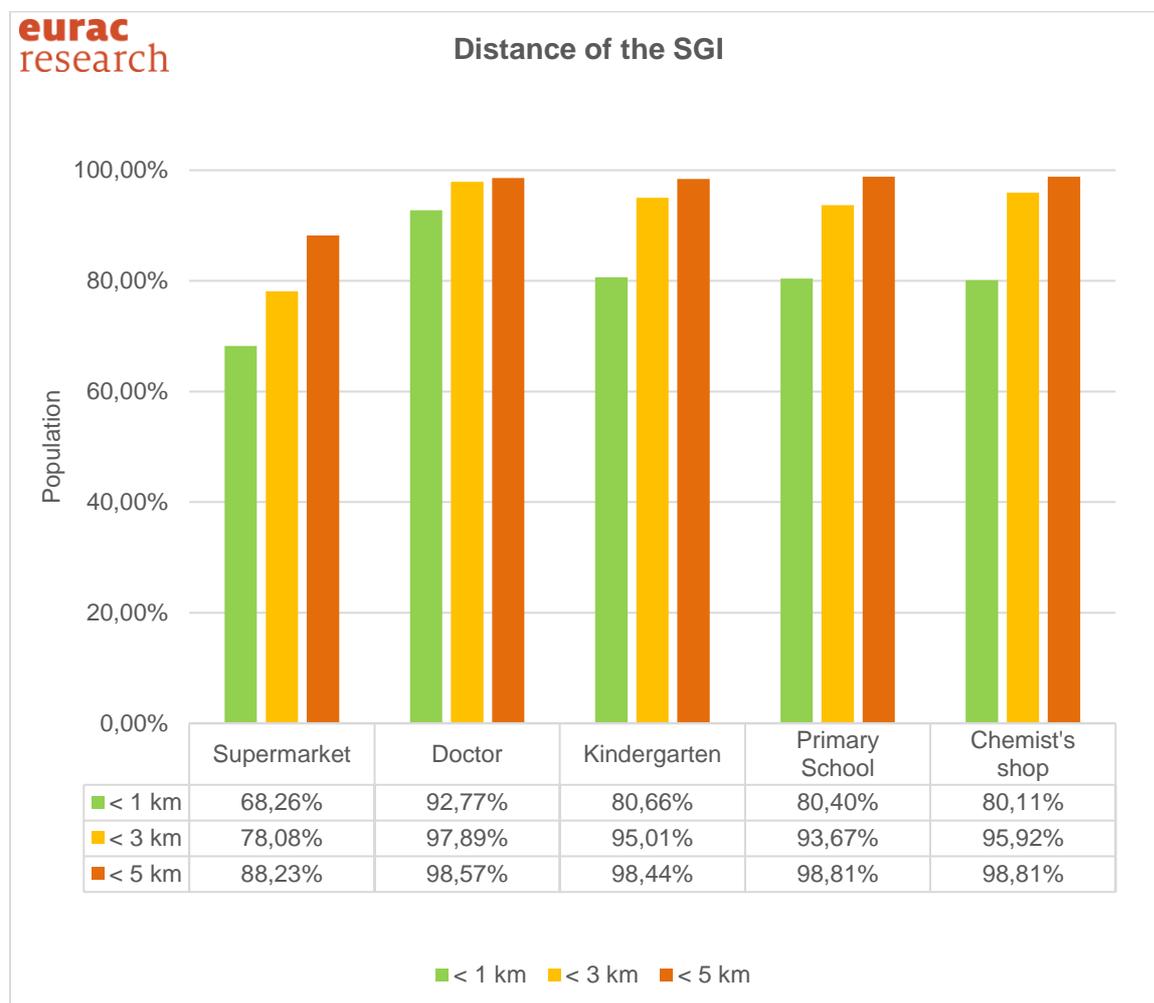
³ Burgdorf, M., Krischausky, G., Müller-Kleißler, R., 2015b: Kennzahlen in der Daseinsvorsorge, BMVI (Hrsg.), BMVI-Online-Publikation 01/2015.

⁴ MORO Studie BMVI 2015: Kennzahlen in der Daseinsvorsorge. BMVI-Online-Publikation 01/2015.



Accessibility of SGI in min by public transport

Regarding the accessibility of the SGI by public transport, 5% of the population of the six municipalities cannot access a kindergarten, 4% the population cannot access a primary school and 4% cannot access a general doctor within 30 minutes. While 18% cannot access a supermarket and 8% a pharmacy within 10 minutes.



Distance of SGI in km

21.9% of the population in the TA cannot reach a supermarket within 3 km. 2.1% of the population in the TA cannot reach a doctor and a 4.1% chemist's shop within 3 km. Only 6.3% cannot reach a primary school and 4.9% cannot reach a kindergarten within 3 km.

Regional accessibility

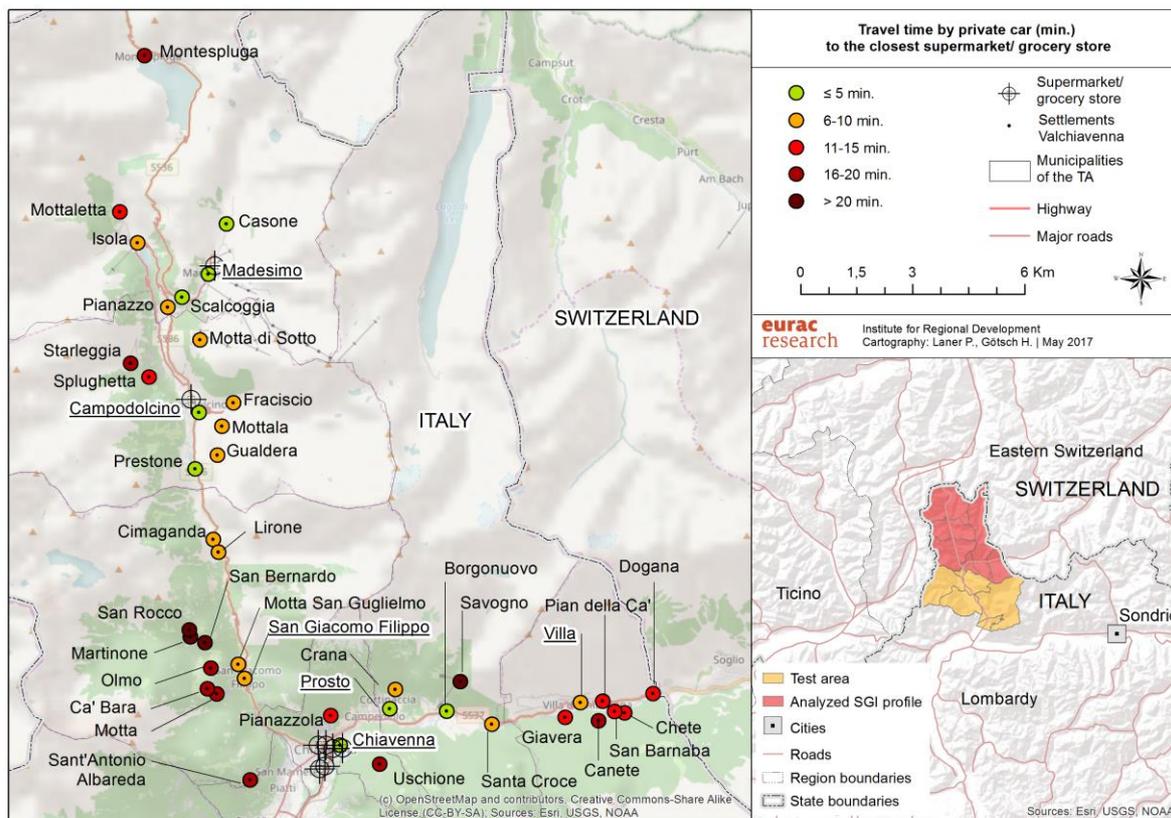
The next **airport** is Bergamo, Orio Al Serio in Milan distant 132 km away from the farthest settlement Montespluga which takes 153 minutes to reach the airport by car. By public transport, it takes a max. of 185 minutes from Canete to reach the airport of Bergamo.

The next **train station** is located in Chiavenna, which is 28.2 km from the farthest settlement Montespluga, from which it takes 46 minutes to reach the train station by car. It takes 63 minutes from Madesimo to reach the train station by public transport.

The next **hospital** is located in Chiavenna and is 27.7 km distant from Montespluga, from where the people take 45 minutes to reach the hospital. It takes 75 minutes by public transport from Madesimo to reach the hospital.

The **provincial capital** Sondrio is located 87.1 km away from Montespluga and it takes 114 minutes to reach it by car. By public transport, it takes 185 minutes from Canete to reach Sondrio.

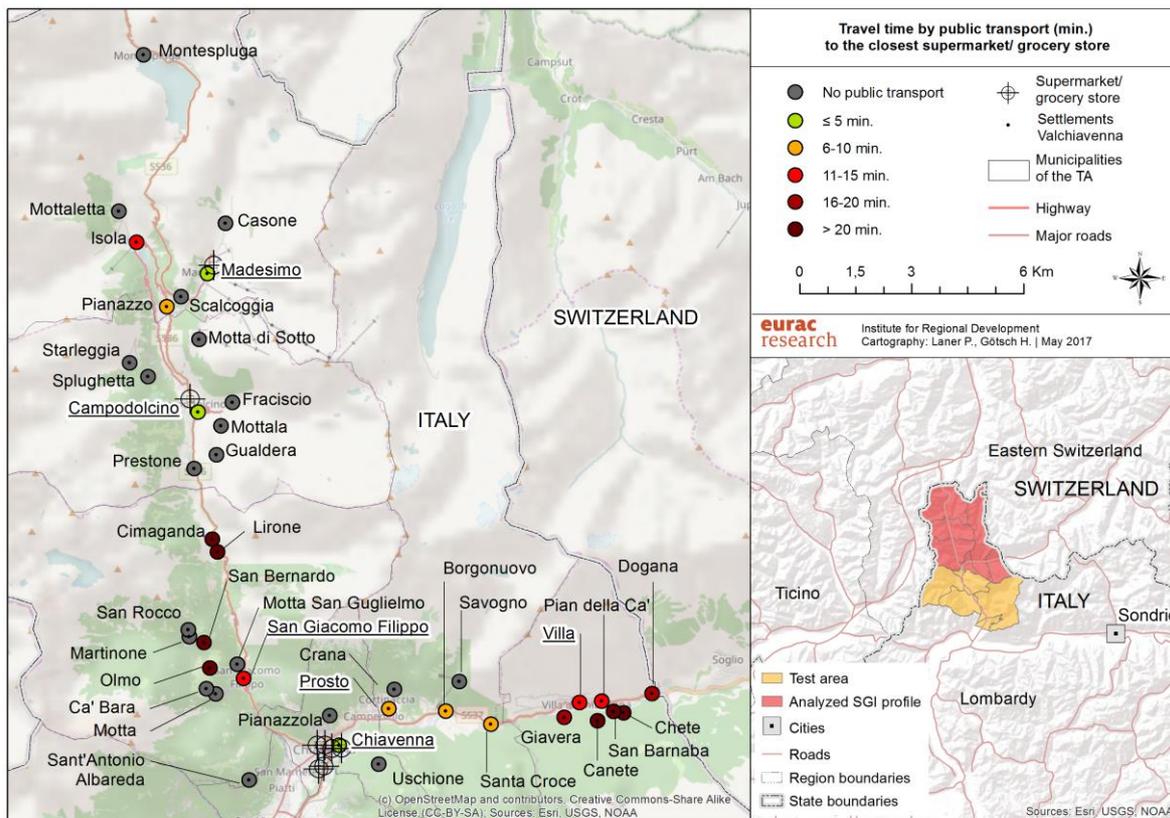
3.1.3.1 Supermarket



Accessibility of the next supermarket in min by car

22% of the population of the six selected municipalities need more than 5 minutes to reach a grocery store by car. The maximum time⁵ to reach the next grocery store takes 28 minutes.

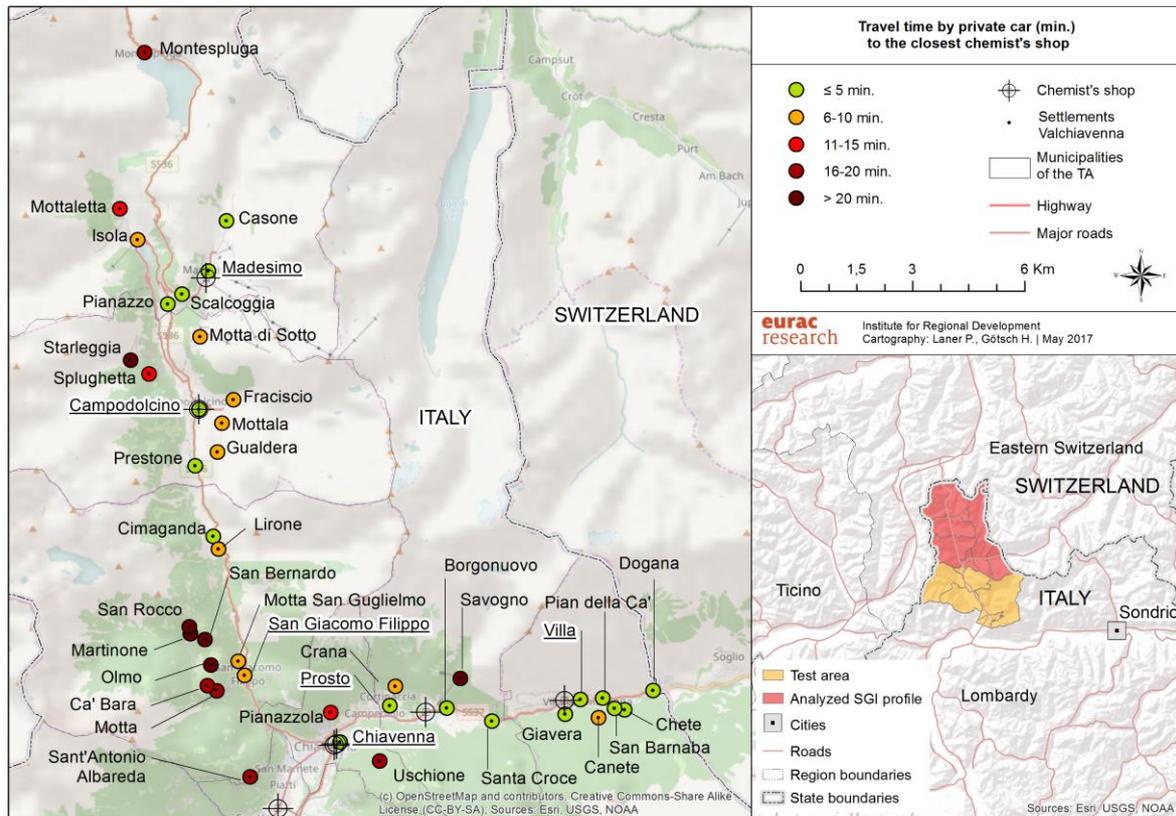
⁵ This refers to the average time at a driving speed of 50km/h.



Accessibility of the next supermarket in min by public transport

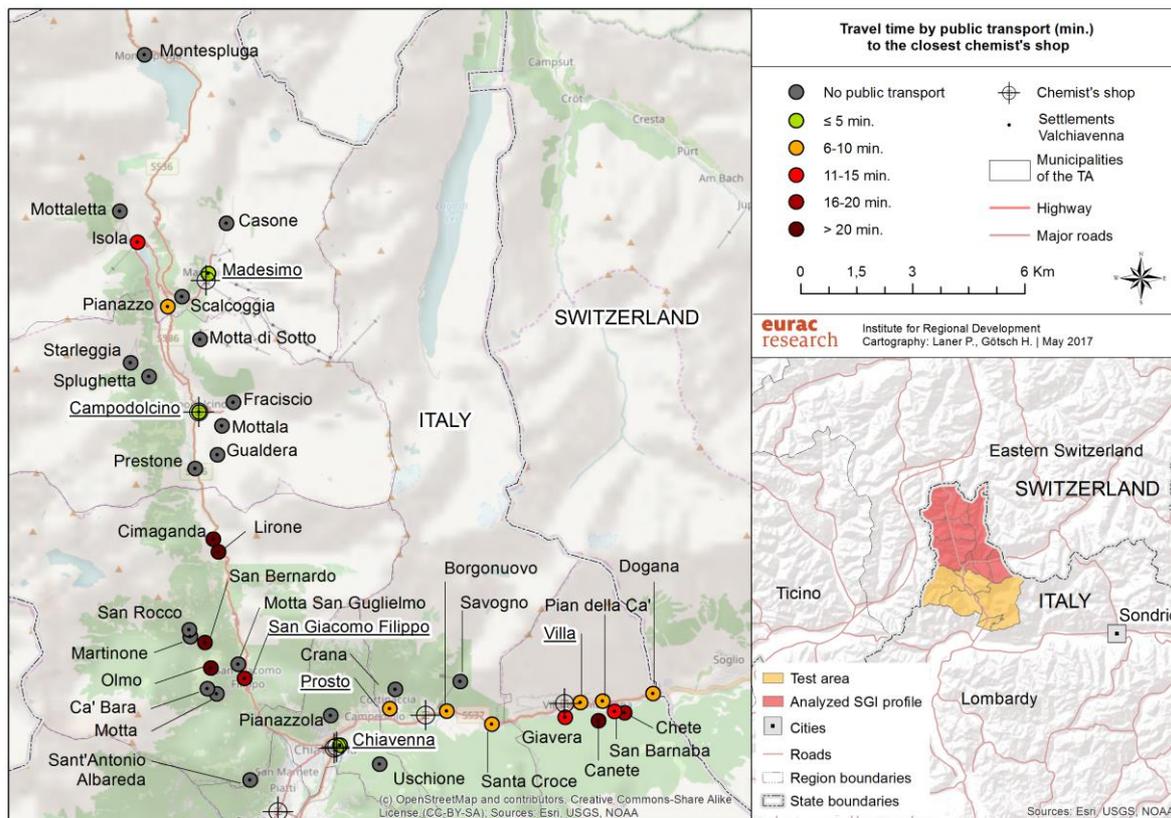
18% of the population of the six selected municipalities need more than 10 minutes to reach the next grocery store by public transport. The maximum time to reach a grocery store takes 33 minutes.

3.1.3.2 Chemist's shop



Accessibility of the next chemist's shop in min by car

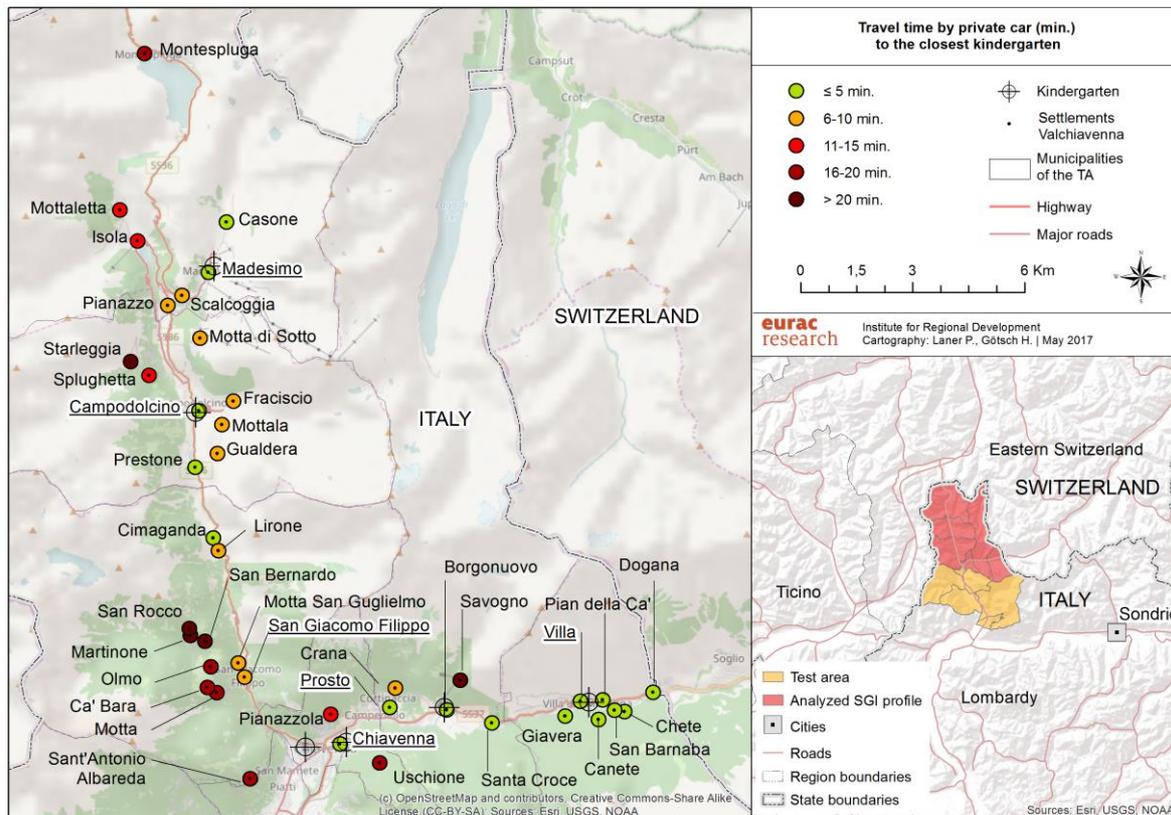
6% of the population need longer than 5 minutes to reach a chemist's shop by using a car. The maximum time to reach a chemist's shop takes 28 minutes.



Accessibility of the next chemist's shop in min by public transport

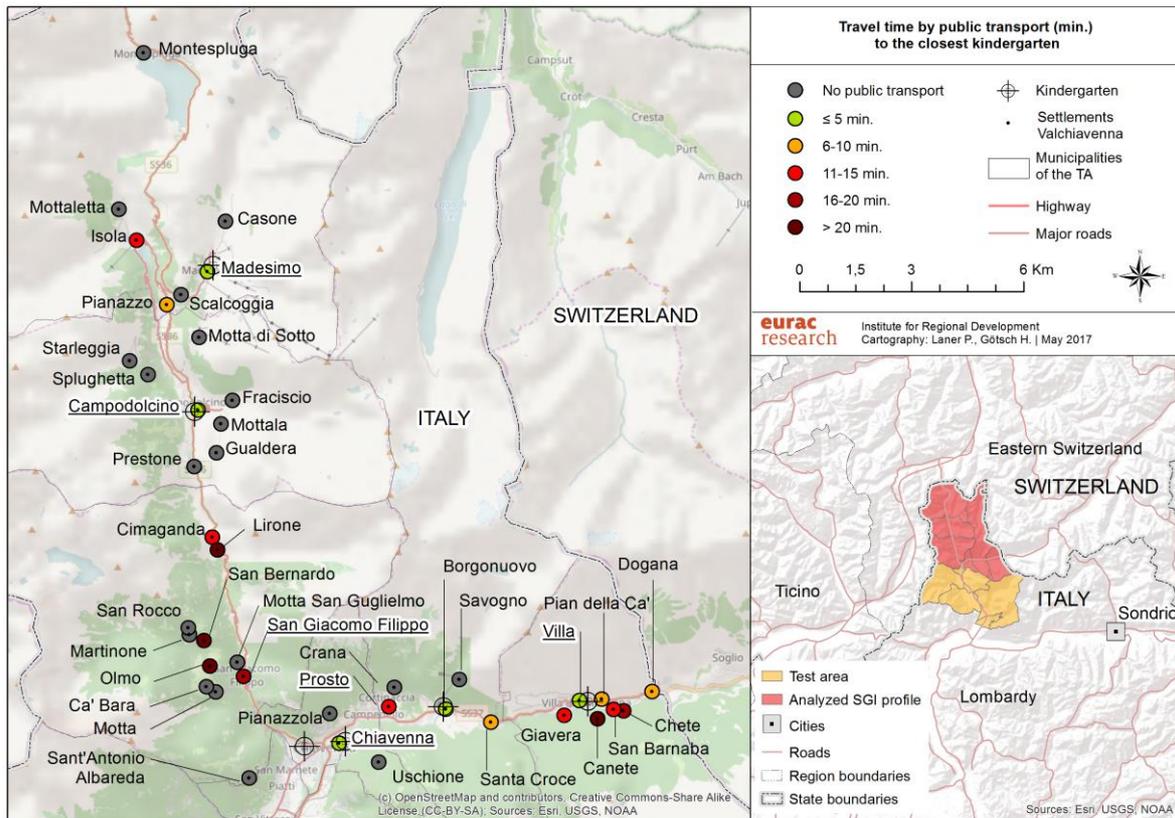
8% of the population need longer than 10 minutes to reach a chemist's shop by using the public transport. The maximum time to reach a chemist's shop takes 29 minutes.

3.1.3.3 Kindergarten



Accessibility of the next kindergarten in min by car

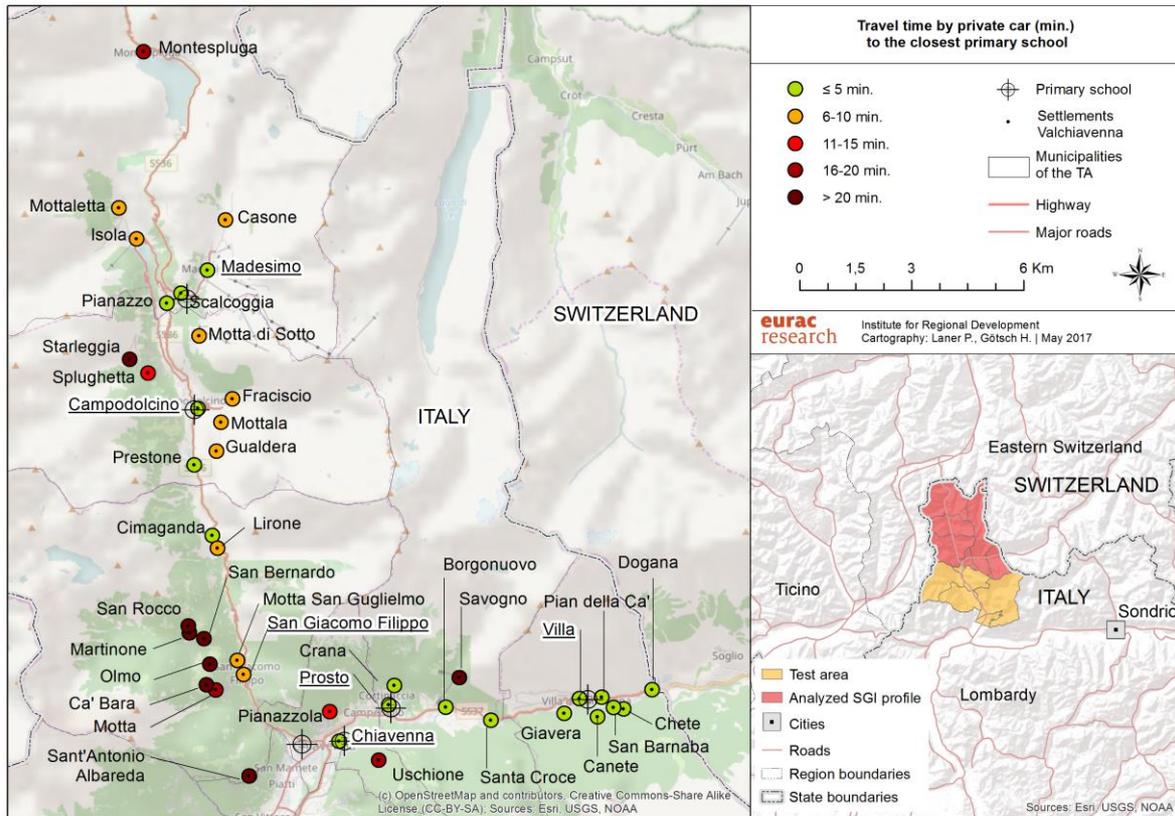
Only 1% of the population of the selected municipalities cannot reach a kindergarten within 15 minutes by car. The maximum time to reach a kindergarten takes 25 minutes.



Accessibility of the next kindergarten in min by public transport

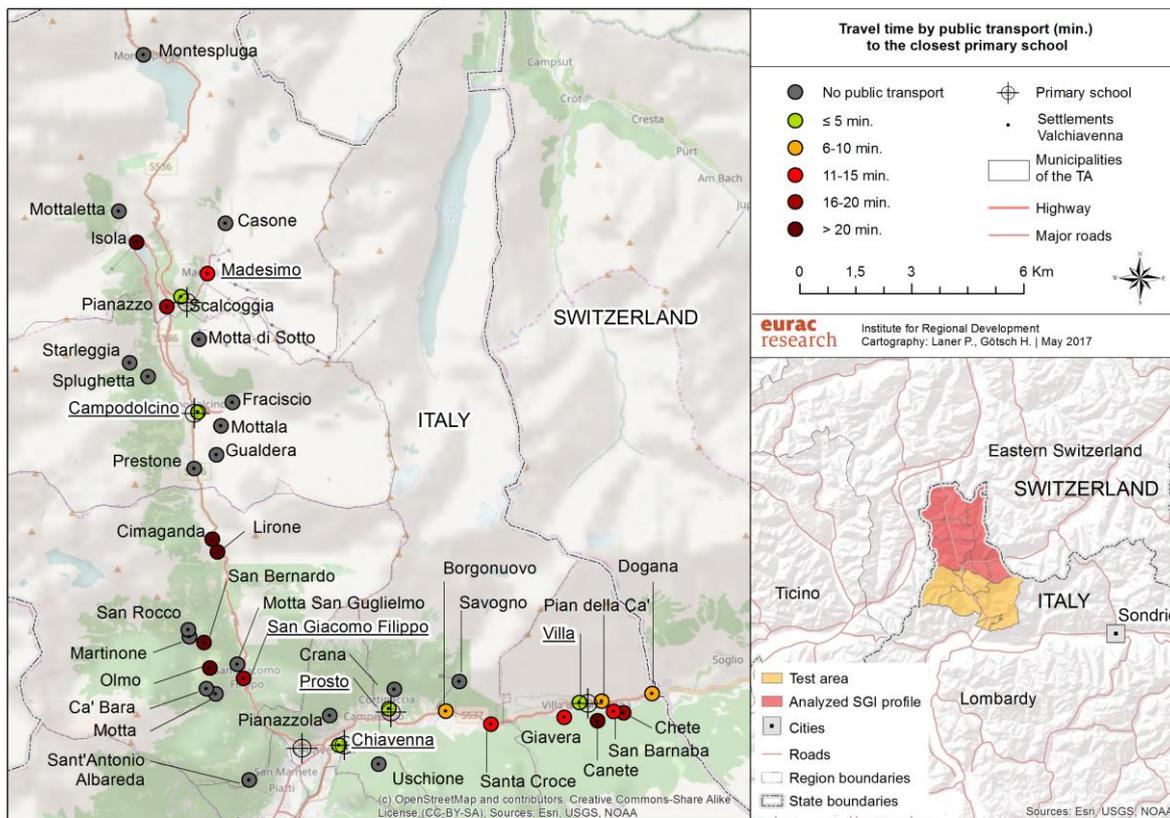
5% of the population of the six municipalities cannot access a kindergarten within 30 minutes using public transport. The maximum time to reach a kindergarten in the test area takes 30 minutes.

3.1.3.4 Primary School



Accessibility of the next primary school in min by car

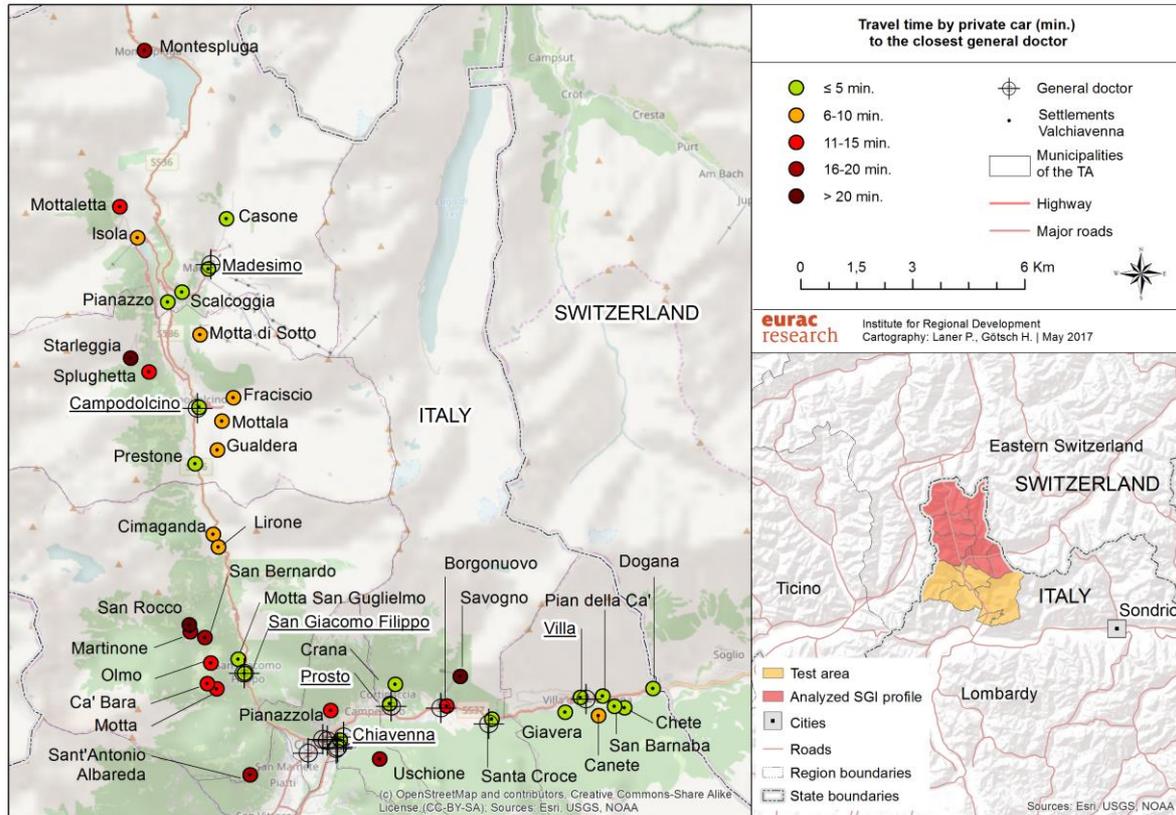
Only 1% of the population of the selected municipalities cannot access the primary school by using a car within 15 minutes. The maximum time to reach a primary school takes 29 minutes.



Accessibility of the next primary school in min by public transport

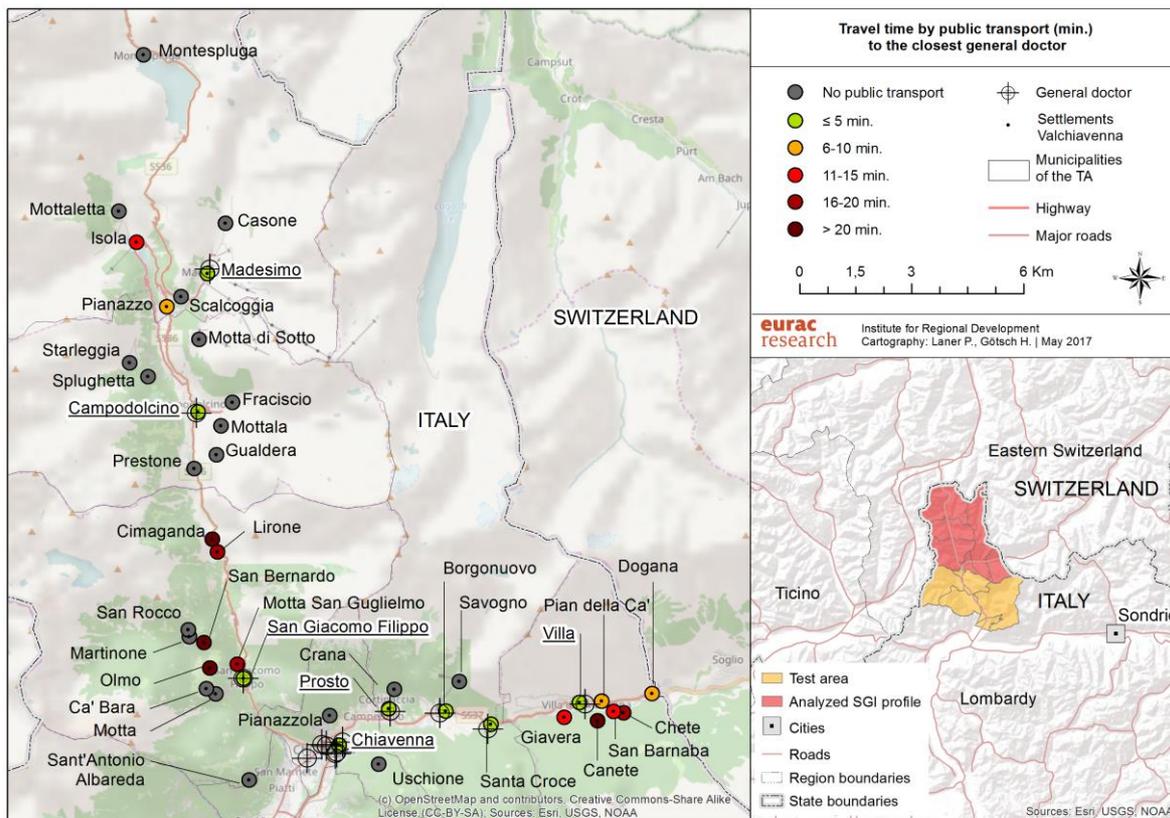
4% of the population of the six municipalities cannot access a primary school by using public transport within 30 minutes. The average maximum time to reach a primary school takes 27 minutes.

3.1.3.5 Doctor



Accessibility of the next doctor in min by car

100% of the population of the six selected municipalities can reach a general doctor by car within 20 minutes. The maximum time to reach a doctor by car takes 23 minutes.



Accessibility of the next doctor in min by public transport

4% of the population of the six selected municipalities cannot access a general doctor within 30 minutes by public transport. The maximum time to reach a doctor takes 27 minutes.

In the test area Valchiavenna the most distant settlement from **all services** is San Rocco from which it also takes the longest to reach the services by car. Chiavenna and Campodolcino have all services present close by and from Chiavenna the services are best reachable by public transport.

As seen in the GIS maps, many settlements do not have access to public transport, which corresponds to 9% of the population of the six municipalities within 15 minutes on foot.

3.1.4 Qualitative Information

Introduction⁶

In 2014 Lombardy identified⁷ Valchiavenna as an "inner area"⁸ and in 2016 approved⁹ a "Convention Scheme for the implementation of the Valchiavenna Inner Area project". This Convention Scheme, which includes the Strategy "Valchiavenna 2020", aimed at¹⁰: increasing the quality of life, with a particular "family friendly" focus; improving the accessibility to services (in particular education and healthcare); overcoming the seasonal tourism logic towards more sustainable forms; making the local public administration more efficient thanks to an increased accessibility and use of ICT. The intervention plan will make use of ESF, EARDF and ERDF funds as well as state funds and foresees 19.5 Mio. €.

The complete and detailed information on the provision of services of general interest (SGI) is depicted in the SGI TA profiles (D.3.6.1) and has been partly elaborated in chapter 1.2.1. The objective of the present chapter is to add qualitative evaluation on the provision of services of general interest. In order to collect the qualitative information required, project partners of the Region of Lombardy decided to perform telephone interviews. The contacts were selected in agreement with the Mountain Community. In each municipality the mayor (or vice-mayor in one case) and the person in charge of the municipal technical office (or secretary of the municipality in one case) were interviewed. In addition, other three local people with expertise or interest in a particular sector (the doctor in charge of the medical laboratory of the hospital, previously mayor of Chiavenna; the person in charge of the information system of the Mountain Community; a representative of the Commerce Association), for a total of 15 people were interviewed. The interviewed people do not represent a representative sample, but they provide a subjective view of the situation in the test area. Furthermore, the strategy "Valchiavenna 2020" was consulted.

The main information is summarised and reports some comments expressed during the interviews about the general situation in the TA. After that, a detail description as regards the single municipalities within the TA, discussing about similarities and differences is provided.

⁶ Part of the text is taken from chapter 1.2 of the WPT1 regional report.

⁷ DGR 2672/2014.

⁸ defined as areas characterized by geographical isolation, demographic decline and low levels in essential services (such as transport, health, education) - National Strategy for Inner Areas (2014).

⁹ DGR 5445 of 25/07/2016 http://www.lavoro.regione.lombardia.it/shared/ccurl/233/410/DGR5445_completa.pdf.

¹⁰ http://www.agenziacoesione.gov.it/it/Notizie_e_documenti/news/2016/agosto/Strategia_area_Valchiavenna.

GENERAL SITUATION OF SGI IN THE TA

Basic Goods

Small retailers or markets provide basic goods for everyday needs. Banks and post offices are present in every municipality.

Education

In the TA, public institutions provide the mandatory education services through two main comprehensive institutes. In Chiavenna there are also high schools in humanistic, scientific and technical fields and a laboratory for the study of the Alpine environment of the University of Milan. Recently the Valchiavenna “Integrated Educational System” was created with the aim of linking several educational institution and providing for the establishment of an integrated educational system also becoming a gathering force for the wider community.

Health and Social Care

In Valchiavenna health services are provided by the public system through the regional ATS-Montagna (Mountain’s Health Protection Agency), which heads the ASST (Territorial Social Care and Health Units) Valtellina and Alto Lario.

The main structure is the **hospital of Chiavenna**. The Hospital has about 70 beds, emergency room and general wards (general medicine, surgery, orthopaedics and traumatology, maternity ward/gynaecology). Some specializations are poorly covered (oncology, cardiology), with the presence of a specialist once a week. The lack of specialist services forces patients to uncomfortable “health trips” to Gravedona, Sondrio and Lecco for daily care, aggravating the condition of fragility and dependence of individuals.

The major issue, significantly felt by the population of the TA, concerns the maternity ward. It was a good centre, with over 300 deliveries/year (the minimum in Italy is 500 deliveries/year, with exceptions for mountain areas), but for a variety of circumstances the situation has worsened (210 births in 2015) and is now at risk of being closed.

Most of the interviewees expressed **concern about the future of the hospital**, which is critical since the TA is quite isolated: besides getting to the closest hospitals (Sondrio and Lecco) takes more than one hour from Chiavenna.

Some interview partners noted that a better health care (and road accessibility to medical facilities) does not only benefit the residents but also tourism attractiveness (tourists perceive higher safety).

Technology can help: for example, a CT scan done during the night in Chiavenna can be read in real time in Sondrio. But of course human resources are essential for maintaining the system. An improvement in the situation of the Hospital is also linked with the choices of its management.

The Mountain Community, which is based in Chiavenna, provides **social services** to disable people and to the elderly (e.g. coordination of home care).

In Chiavenna there is also a family counselling centre, a retirement home, a day centre for disabled and a day centre for elderly people.

Transport

Public transport service is provided in all municipalities by STPS, a company almost entirely owned by public administrations¹¹, and also by the Swiss Autopostale in Chiavenna, Piuro, Villa di Chiavenna. The service is also available during the summer in the municipalities of Campodolcino and Madesimo.

School buses are provided by the single municipalities.

There are two national **roads** (SS36 and SS37) respectively going through Val Bregaglia and Valle Spluga, both connecting Chiavenna with Switzerland and managed by ANAS, the national government-owned road maintenance company.

Chiavenna is connected to the rest of the region through one road only (SS36) and through the regional train service operated by Trenord on a single-railway track, both leading to Colico (on the northern shore of Lake Como), which is connected to Milano.

The main critical issues concern the fact that the SS36 can be subject to hydrogeological problems and no alternative roads are available. Public transport is generally evaluated by the interviewees as relatively adequate for the residents (e.g. high school students), despite the limited number of bus rides, especially at night time, and the lack of integration in the timetables among different service providers.

Telecommunication

TIM and other operators provide the landline and mobile phone services. Mobile coverage is generally good in the settlements; only in some areas the reception is weak, due to the altitude and orography.

Valchiavenna meets the definition of “white area”, where public intervention is needed to ensure coverage of ultra-broadband¹², which is in the process of being made available.

Eolo (broadband via radio) is actually used by some companies and as a back-up solution, by the Mountain Community, but it does not have the same reliability as the optical fibre.

In recent years some regional projects delivered connectivity to remote mountain areas and shelters using radio links.

¹¹ Province of Sondrio, Mountain Communities of Valtellina and Valchiavenna, municipalities of Valtellina.

¹² In agreement with the EU guidelines for the development of broadband network, in April 2016 Lombardy Region and the national Ministry for Economic Development have signed an agreement for the development of the network by public initiative, in order to reduce the digital divide in the “white areas” (or market failure areas, defined according to “EU Guidelines for the application of State aid rules in relation to the rapid deployment of broadband networks (2013/C 25/01)” ([http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013XC0126\(01\)&from=IT](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013XC0126(01)&from=IT)) and according to EC-approved state aid for intervention on ultrabroad band).

SGI at the municipal level

Annex 1 shows the “SWOT” tables that were used to register the interviews of the twelve interviewees of the single municipalities. Such contents of course reflect the issues and the quality of service provision as perceived by the interviewees. The following table summarizes the assessment of the level of service, the average evaluation of each service throughout the TA, and the average evaluation of the SGI for each municipality.

Evaluation of SGI (1 very bad - 5 very good)	Campodolci no	Chiavenna	Madesimo	Piuro	San Giacomo	Villa di Chiavenna	AVERAGE
Basic goods	4	4	3	3	3	4	3,5
Education	3	4	3	5	1	4	3,3
Health/ social services	3	4	2	3	3	4	3,2
Transport	4	2	3	4	3	3	3,2
Telecommunication	3	5	3	4	3	3	3,5
Administration	4	3	5	5	1	4	3,7
AVERAGE	3,5	3,7	3,2	4,0	2,3	3,7	3,4

In the following, an integrated interpretation of the main comments expressed by the interviewees is provided.

One of the findings of the qualitative assessment of SGI provision in the TA lies in the different attitude found in the municipality of Chiavenna with respect to the other municipalities.

Chiavenna is, by far, the most populated municipality in the test area (7.374 inhabitants in 2015 out of a total of 12.222 for the six TA municipalities combined). The municipality of Chiavenna assesses the provision of SGI rather differently not necessarily in terms of quantitative evaluation (Chiavenna's figures are in line with those of the other 5 municipalities), but in terms of the explanations given to the single figure.

In terms of provision of **basic goods**, Chiavenna displays a slightly different attitude with respect to the other 5 municipalities: although well served by all sorts of supermarkets and grocery stores, Chiavenna laments the lack of a mall, whereas the other municipalities are satisfied with the offer in service provision they find either locally or in Chiavenna. In almost all municipalities, however, the provision of postal services is perceived as worsened: the number of opening and delivery days has decreased, in particular Campodolcino and Madesimo.

The interviewed partners of San Giacomo Filippo, also evaluate **education** services in the municipality very negatively, due to the demographic framework of the commune. Basically all other municipalities are either very satisfied (Chiavenna, Piuro, Villa di Chiavenna) or satisfied (Madesimo, Campodolcino); Villa di Chiavenna is the only municipality that expresses a concern over the risk of losing its secondary schools due to severe demographic changes. In Villa di Chiavenna there was also a project of a joint schooling system with the Swiss municipality of Bregaglia, with Italian students accessing higher professional education in Switzerland and Swiss students accessing higher lyceum education in Italy: however, the project was unfortunately quit.

Also regarding **health and social services** the interviewed stakeholders of Chiavenna have different perspective. The safeguard of the hospital, starting from its maternity ward, is of course the main issue for the whole TA: whereas the 5 smaller municipalities mostly express the hope of maintaining present services, Chiavenna also displays a more future-oriented approach, reflecting on the need of increasing and improving helicopter services for emergencies, especially during night hours and on the need of improving the attractiveness of the hospital for physicians and practitioners, in order to preserve it and its quality in a general context of spending review.

When discussing **transports**, the 5 smaller municipalities declare a medium-to-high degree of satisfaction and mainly refer to their links to Chiavenna, whereas Chiavenna itself mostly reflects in terms of connections with the rest of the Region, if not the world: railway connections are deemed as rather unpractical, and the distance to the nearest airports also is underlined.

Interestingly, as far as concerns **telecommunication**, all municipalities are aware of ultra-broadband having been laid and being almost ready to work: this is widely seen positive, although some municipalities have expressed dissatisfaction with respect to the inconveniences felt by the population during the laying works for the optical fibre.

Also the evaluation of **administrative services** reflects different approaches: whereas the smaller municipalities either argue about the dangerously understaffed (San Giacomo Filippo) or are satisfied with the balance of services available locally or in Chiavenna. The interview partners of Chiavenna point out a lack of more general state services, such as the judge of peace or the prosecutor's office, and the downscaling of the revenue services.

The precarious situation of provision of administrative services in San Giacomo Filippo, the smallest municipality in the TA with respect to the number of inhabitants (roughly 270 effective residents, living there all year and excluding owners of holiday residences), sets it out with respect to all other municipalities. Although there is a general worry related to budgetary restrictions effectively hampering the possibility of hiring new staff, (with permanent positions being replaced by part time ones in San Giacomo Filippo, present lack of a technical officer in Madesimo, lack of a financial officer in Piuro, only 1 traffic policeman in Campodolcino, and a general feeling of being overwhelmed by bureaucratic requests to be faced by severely understaffed municipalities), most of the municipalities are rather proud of the quality of services they manage to provide, and of the commitment of their staff to serve the needs of the population. Some of the municipalities, in this context, express a desire for a wider Valchiavenna aggregated municipality (most namely San Giacomo Filippo): in fact

there was a referendum in 2013 for the aggregation of Chiavenna with four other municipalities (Mese, Gordona, Menarola, Prata Camportaccio) that failed due to the fact that the overall “yes” result was only due to the demographic weight of Chiavenna, and majorities for the aggregation were not achieved in the other municipalities. A future aggregated municipality is mostly hampered by the characteristic *campanilismo* of Italian culture (a mixture of parochialism and pride in local specificities, with traditional rivalries with neighbouring municipalities), that can be a strong cause of lock-ins at all administrative levels in the country.

Another significant difference within the TA can be found in the different approaches between the municipalities with an extremely marked **tourist vocation** (Campodolcino and Madesimo) on one side and the other municipalities on the other side: seasonality of presences, and the consequent stress on local services (traffic in Campodolcino, postal services in both municipalities, GPs and emergency physicians in both municipalities) have been highlighted, whereas similar problems are far less relevant elsewhere. Services such as transports sometimes are increased in the summer and they are almost invariably perceived as adequate for both locals and visitors. In the summer the Swiss Autopostale, that normally serves Piuro, Chiavenna and Villa di Chiavenna, is also available from Chiavenna to the Spluga pass, through Campodolcino and Madesimo: the service is rather good and appreciated, although the lack of coordination of timetables between the Italian STPS and the Swiss Autopostale is also highlighted.

As regards **future investments and improvements**, the general context is of a somehow outward-looking municipality (Chiavenna) and the general conservatism of all the others, mainly hoping for the safeguard of existing services in the face of an uncertain economic future in Italy.

However, all municipalities, regard ultra-broadband as greatly welcome and beneficial, and also point out at the rather recent development of a good communication effort on typical high-quality food offer from the area, that can be even better served by reliable and fast ICT connections or via the development of e-commerce services. A reliable connectivity is considered an asset also for the access to public tenders, the participation in which it is often opened in specific click days on the websites of public authorities.

The Mountain Community is regarded as an absolutely positive and welcome presence in the TA, working very closely with the municipalities mostly in services related to health care and social services and in supporting some administrative services.

The Strategy “Valchiavenna 2020” represents an opportunity for improvement. The project Mountain Virtual Hospital (MVH), for example, intends to create an experimental model of mountain hospital by making use of innovative services and new technologies, such as tele-medicine, home-based tele-radiology, points of care, de-localised diagnostic treatment-rooms. Our impression is that the strategy is not really known so far, but there is hope that more funds will be allocated to Valchiavenna because of it. Some interviewees are aware of the inner area project in Alta Valtellina, and of the positive impacts, it has had on the area. Thus, they wish to see the same positive impacts resulting from the Valchiavenna Inner Area project.

4 References

Burgdorf, M., Krischausky, G., Müller-Kleißler, R., 2015b: Kennzahlen in der Daseinsvorsorge, BMVI (Hrsg.), BMVI-Online-Publikation 01/2015.

Eurac Research 2017: Projekte MONAS – Monitoring the Alpine Space und AGRALP – Entwicklung der Agrarstrukturen im Alpenraum, alpenweite Gemeindedaten basierend auf den folgenden offiziellen statistischen Daten: Statistik Austria (1980): Land- und Forstwirtschaftliche Betriebszählung 1980. Wien; Statistik Austria (2012): Agrarstrukturerhebung 2010. Betriebsstrukturerhebung, Schnellbericht 1.17. Wien; Statistik Austria (2010): Agrarstrukturerhebung 2010. Wien; Bundesamt für Statistik Schweiz (1980): Landwirtschaftliche Betriebszählung 1980. Neuchâtel; Bundesamt für Statistik Schweiz (2010): Landwirtschaftliche Betriebsstrukturerhebung 2010. Neuchâtel; Bundesamt für Statistik Schweiz (2013): Arealstatistik Gemeindetabellen 2004-2009, 1979-1985 (revidierte Daten), 1992-1997 (revidierte Daten). Neuchâtel; Bayerisches Landesamt für Statistik und Datenverarbeitung (1979): Landwirtschaftszählung 1979; Bayerische Landesanstalt für Landwirtschaft (2010): Invekos-Daten 2010; Service de la statistique et de la prospective du Ministère de l'Agriculture, de l'Agroalimentaire et de la Forêt (AGRESTE) (1979, 2010): Recensement généraux de l'agriculture 1979, 2010. Paris; Service de la statistique et de la prospective du Ministère de l'Agriculture, de l'Agroalimentaire et de la Forêt (AGRESTE) 2010. Paris; Istituto Nazionale di Statistica (ISTAT): Censimento generale dell'agricoltura 1980, 2010. Roma; Statistical Office of the Republic of Slovenia (1981): Agricultural Statistics 1981. Ljubljana; Statistical Office of the Republic of Slovenia (2010): Agriculture Census 2010. Ljubljana.

Gløersen, E. et al., Research for REGI Committee- Services of General Interest in the Funding Period 2014-2020 (Study). European Parliament, Directorate-General for Internal Policies, 2016.

Appendix – “SWOT” tables

Municipality: <i>CAMPODOLCINO</i>	Quality of SGI					Future investments and improvements		
	Evaluation of SGI (1 very bad - 5 very good)						Positive (strengths)	Negative (challenges/weaknesses)
Services of General Interest	1	2	3	4	5			
Basic Goods				X		<ul style="list-style-type: none"> Basic goods are adequately available (especially in the main settlement): 1 supermarket, grocery stores, 2 banks Considering the tourist vocation of the municipality, the offer in basic goods is sometimes oversized with respect to the number of inhabitants 	<ul style="list-style-type: none"> Post office is open only 3 times a week Mail delivery is considered insufficient 	
Education			X			<ul style="list-style-type: none"> Kindergarten Primary school Secondary school also serves Madesimo 	<ul style="list-style-type: none"> No nurseries 	
Health/ Social Services			X			<ul style="list-style-type: none"> Adequate emergency medical services, especially in the tourist season (summer) Home care available, in cooperation with the MC 	<ul style="list-style-type: none"> GP does not live in Campodolcino Concerns regarding the Hospital in Chiavenna 	<ul style="list-style-type: none"> Concern that a decrease in services (and quality) at the Hospital in Chiavenna will lead more people to leave the municipality
Transport				X		<ul style="list-style-type: none"> Bus services are adequate (STPS), particularly for the tourist season (summer) Swiss Autopostale is also available in the summer School bus seasonal tickets paid for by the municipality Road maintenance is considered adequate 	<ul style="list-style-type: none"> Public transports are not adequate for commuters to/from other municipalities (their number are however very low) 	
Telecommunication			X			<ul style="list-style-type: none"> Fibre is about to be available Good mobile coverage 	<ul style="list-style-type: none"> ADSL does not always work properly Mobile coverage is not always perfect, due to altitude and orography 	<ul style="list-style-type: none"> Mobile signals should be improved
Administration				X		<ul style="list-style-type: none"> Services provided by the municipality cover all basic needs and are rather good Carabinieri Voluntary fire brigade (highly appreciated) 	<ul style="list-style-type: none"> IRS in Chiavenna Only 1 traffic policeman (too little for tourist season) Legal constraints on hiring in public administrations 	

Municipality: CHIAVENNA	Quality of SGI					Positive (strengths)	Negative (challenges/weaknesses)	Future investments and improvements
	Evaluation of SGI (1 very bad - 5 very good)							
Services of General Interest	1	2	3	4	5			
Basic Goods				X		<ul style="list-style-type: none"> Chiavenna is very well served by provision of basic goods (post office, 5 banks, all sorts of supermarkets and grocery stores) 	<ul style="list-style-type: none"> No malls Decrease in delivery days in the mailing services 	
Education				X		<ul style="list-style-type: none"> All educational levels are adequately covered, from nurseries up to several types of technical and professional high schools. A new high school (Liceo Linguistico) has been recently re-opened. 	<ul style="list-style-type: none"> Not many students enroll in the once traditional professional high school specialized in Mechanics 	<ul style="list-style-type: none"> Due to budgetary restrictions for the public sector, it is next to impossible to hire new people in schools (also true for administrative roles)
Health/ Social Services				(X)		<ul style="list-style-type: none"> Hospital is an asset for the whole valley, but it is in danger All other services are adequately covered (from GP to home care, also thanks to fruitful cooperation with the MC). Night helicopter flights for the transport of patients are being envisioned and experimented 	<ul style="list-style-type: none"> Fear of decreasing quality of services, plus decreasing attractiveness of the hospital: the Maternity ward is at risk of being closed; negative spiral of lack of attractiveness and decreasing quality Lack of heliports in some communities hampers the efforts for helicopter rescue. 	<ul style="list-style-type: none"> Perception of increasing poverty among elderly people. Concern about the future of the hospital
Transport		X				<ul style="list-style-type: none"> Local services are adequate Roads are adequate Railway station serves train connections with Lecco, Milan, Sondrio 	<ul style="list-style-type: none"> Chiavenna, as an outward looking town, feels poorly connected with the rest of the region: there is an obligatory change to get to Milan by train, and the town itself is very far from any airport. Feeling of isolation and consequent missing of economic opportunities. 	<ul style="list-style-type: none"> Strong dependence on border workers commuting to Switzerland. Incomes depend on the political decisions of the canton of Grisons and CH.
Telecommunication					X	<ul style="list-style-type: none"> Ultrabroad band is about to be available The Gordona Industrial Area Consortium has been funded by the MC to equip themselves with fibre connection; it will consequently equip Chiavenna's schools with fibre (only infrastructure) 		

<p>Administration</p>			<p>X</p>		<ul style="list-style-type: none"> • <i>All services are present and adequately covered</i> • <i>Police forces are present</i> 	<ul style="list-style-type: none"> • <i>Revenue Agency is no longer present (only a helpdesk)</i> • <i>Only a few State offices are present</i> 	<ul style="list-style-type: none"> • <i>Situation has worsened due to budgetary restrictions</i> • <i>No more Judge of Peace present at Chiavenna</i>
------------------------------	--	--	----------	--	--	---	---

Municipality: <i>MADESIMO</i>	Quality of SGI					Positive (strengths)	Negative (challenges/weaknesses)	Future investments and improvements
	Evaluation of SGI (1 very bad - 5 very good)							
Services of General Interest	1	2	3	4	5			
Basic Goods			X			<p><i>Adequate presence of:</i></p> <ul style="list-style-type: none"> Banks Grocery and basic goods stores 	<ul style="list-style-type: none"> Post office is open 3 days a week (in the past it was open 6 to 7 days a week) 	<ul style="list-style-type: none"> Post services need to be improved
Education			X			<ul style="list-style-type: none"> 1 kindergarten in a restructured villa 1 primary multi-class school (very few kids) 	<ul style="list-style-type: none"> No nurseries Secondary school in Campodolcino High schools in Chiavenna 	<ul style="list-style-type: none"> There used to be a project for a student exchange with the neighbouring Swiss municipality of Bregaglia. It has been unfortunately suspended Hope for maintaining secondary school in the municipality
Health/ Social Services		X				<ul style="list-style-type: none"> 1 GP for both Madesimo and Campodolcino 1 pediatrician paid by the municipality 1 doctor on call by the AST (local health agency) 	<ul style="list-style-type: none"> GP is available for maximum 30'-1h per day 	
Transport		X roads		X buses		<ul style="list-style-type: none"> Good bus services (in the summer further bus services from Chiavenna to Spluegen) 	<ul style="list-style-type: none"> Municipality has to pay season tickets for students No Swiss AutoPostale Road maintenance should be improved 	
Telecommunication			X			<ul style="list-style-type: none"> ADSL is available Ultra-broadband is about to be available No problems with mobile phones 	<ul style="list-style-type: none"> Some problems with works for the laying of ultra-broadband Still unclear when the ultra-broadband will be available 	
Administration					X	<ul style="list-style-type: none"> Complete assistance to the population (except technical office, vacant at the moment) Carabinieri in Campodolcino Cadastral service is present, in cooperation with MC 	<ul style="list-style-type: none"> Need to go to Chiavenna/Morbegno for the Revenue Agency 	<ul style="list-style-type: none"> Technical officer is being hired by the municipality

Municipality: <i>PIURO</i>	Quality of SGI					Positive (strengths)	Negative (challenges/weaknesses)	Future investments and improvements
	Evaluation of SGI (1 very bad - 5 very good)							
Services of General Interest	1	2	3	4	5			
Basic Goods			X			<ul style="list-style-type: none"> Well located small groceries 2 post offices (1 working well, the other one less so) 	<ul style="list-style-type: none"> No supermarkets No banks 	<ul style="list-style-type: none"> The services are adequate, so far. Concern for the future
Education					X	<ul style="list-style-type: none"> 2 nurseries (private and public) Kindergarten Primary schools 	<ul style="list-style-type: none"> Secondary schools in Chiavenna 	<ul style="list-style-type: none"> Same as above
Health/ Social Services			X			<ul style="list-style-type: none"> 2 GPs available 2 days a week 3 treatment rooms in 3 settlements 	<ul style="list-style-type: none"> Concern for the future of Chiavenna Hospital 	<ul style="list-style-type: none"> Same as above
Transport				X		<ul style="list-style-type: none"> Bus services are adequate (STPS + Swiss Autopostale) School bus seasonal tickets paid for by the municipality 	<ul style="list-style-type: none"> Problems with maintenance of roads Isolation of Piuro within Valchiavenna (crossings and interruption on the local highway) 	<ul style="list-style-type: none"> Same as above
Telecommunication				X		<ul style="list-style-type: none"> Fibre is about to be available Good mobile coverage in the valley, slightly less so in mountain areas Municipal newsletter to citizens "Centro dell'Allegria"-> IT course for elderly people organised by the municipality Facebook page of the municipality active and frequently updated 	<ul style="list-style-type: none"> Some overlapping of Italian and Swiss mobile signals Visiting some mountain areas can be risky as they are not adequately covered by mobile networks 	<ul style="list-style-type: none"> Same as above
Administration					X	<ul style="list-style-type: none"> Services provided by the municipality cover all basic needs and are rather good 	<ul style="list-style-type: none"> Lack of personnel to face all bureaucratic requirements A person dealing with financial responsibilities of the municipality would be needed 	<ul style="list-style-type: none"> Same as above

Municipality: <i>SAN GIACOMO FILIPPO</i>	Quality of SGI					Positive (strengths)	Negative (challenges/weaknesses)	Future investments and improvements
	Evaluation of SGI (1 very bad - 5 very good)							
Services of General Interest	1	2	3	4	5			
Basic Goods			X			<ul style="list-style-type: none"> • 1 grocery store • 1 restaurant • 1 bar • Post office (open 3 days a week) 		<ul style="list-style-type: none"> • Post services need to be improved
Education	X						<ul style="list-style-type: none"> • No education services available in the municipality. Students go to Chiavenna, and there are very few kids 	
Health/ Social Services			X			<ul style="list-style-type: none"> • 1 treatment room • 2 GPs available some days per week 	<ul style="list-style-type: none"> • Concern for the future of Chiavenna Hospital 	<ul style="list-style-type: none"> • Services are adequate, so far. Concern for the future
Transport			X			<ul style="list-style-type: none"> • Roads are adequate • Bus services are adequate (STPS) • Private school bus paid by the municipality 	<ul style="list-style-type: none"> • Problems with maintenance of roads in case of landslides and important snowfalls 	
Telecommunication			X			<ul style="list-style-type: none"> • Optical fibre is about to be available 	<ul style="list-style-type: none"> • ADSL is a bit too slow 	<ul style="list-style-type: none"> • Expectations from the fibre
Administration	X					<ul style="list-style-type: none"> • Services provided by the MC are very good 	<ul style="list-style-type: none"> • Only 1 full-time public servant • Some offices have being closed after the retirement of 2 former p.s., who have not been replaced. Funds are very scarce • Subsequent worsening of the service 	<ul style="list-style-type: none"> • No expectations for an improvement • Possible sharing of services in a future aggregated municipality?

Municipality: VILLA DI CHIAVENNA	Quality of SGI					Future investments and improvements		
	Evaluation of SGI (1 very bad - 5 very good)						Positive (strengths)	Negative (challenges/weaknesses)
Services of General Interest	1	2	3	4	5			
Basic Goods				X		<ul style="list-style-type: none"> • Post office (open every day in the mornings) • Banks • A new grocery store has opened, and two more small grocery stores are also present. Customers come from CH as well. 		<ul style="list-style-type: none"> • Aiming at an improvement in hospitality services (most namely hotels)
Education				X		<ul style="list-style-type: none"> • Nursery, kindergarten, primary AND secondary schools. • For higher education, Villa is very close (8km) to the high schools in Chiavenna 	<ul style="list-style-type: none"> • The secondary school is at risk of being closed. 	<ul style="list-style-type: none"> • There used to be a project for a student exchange with the neighbouring Swiss municipality of Bregaglia. It has been unfortunately suspended. • Hope for maintaining secondary school in the municipality
Health/ Social Services				X		<ul style="list-style-type: none"> • Treatment room with 2 GPs every day • On request, the Mountain Community provides home social care to elderly people 	<ul style="list-style-type: none"> • Problems with declining quality of the hospital in Chiavenna. Problems related also to the future of Chiavenna hospital maternity ward 	
Transport			X			<ul style="list-style-type: none"> • STPS (public bus transport Province of Sondrio) plus Swiss Autopostale to Lugano and Sankt Moritz 	<ul style="list-style-type: none"> • STPS and Autopostale do not have an agreed timetable: the joint service is not optimized • Road maintenance can be improved, especially when compared with CH 	
Telecommunication			X			<ul style="list-style-type: none"> • Ultrabroad band is about to be available (not ready yet) 	<ul style="list-style-type: none"> • Some problems with the mix-up of IT and CH mobile signals 	<ul style="list-style-type: none"> • Waiting for improvements on fiber plus ultrabroad band
Administration				X		<ul style="list-style-type: none"> • Carabinieri • Financial police (Guardia di Finanza) • Complete assistance to the population (Mon to Sat): technical office, basic administration, financial offices 	<ul style="list-style-type: none"> • Revenue Agency is based in Chiavenna 	<ul style="list-style-type: none"> • Services are rather good, and there is hope to maintain them. The municipality is confronted by a severe demographic change.