

ALPSTAR GOOD PRACTICES – IMPLEMENTATION OF GOOD PRACTICE EXAMPLES IN PILOT REGIONS

Report

February 2015



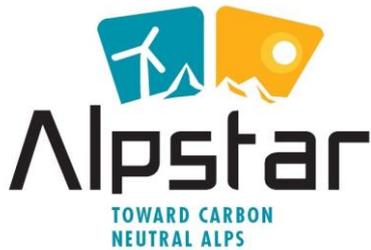
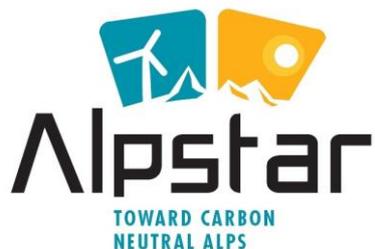
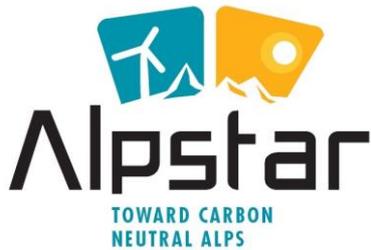


Table of content

ALPSTAR good practices – Implementation of good practice examples in pilot regions.....	1
1.1 INTRODUCTION	4
1.2 Transport.....	5
1.2.1 SUMP, Sustainable Urban Mobility Plan in VRD Region, France.....	5
1.2.2 Awareness raising campaign towards a climate neutral lifestyle with a focus on mobility, Vorarlberg (AT), Liechtenstein (LI), St. Gallen (CH).....	7
1.2.3 Company network for mobility management in Alpine Rhine Valley, Austria – Liechtenstein - Switzerland	10
1.2.4 A concept for innovative mobility offers with reduced traffic and CO ₂ emissions, focus on electric mobility, Achenal region, Germany	12
1.2.5 Enhancement of Valtellina public transport, Region Lombardia, Italy	14
1.3 Buildings & Energy	19
1.3.1 Energy renovation of buildings respecting the cultural heritage in Parc Naturel Regional du Queyras, France.....	19
1.3.2 Renewable sources and energy efficiency - integration of existing systems and scenarios for the sustainable development of new plants, together with RACEM, a network for sustainable buildings in Valtellina Valley, Region Lombardia, Italy	20
1.3.3 Zero energy office building (NZEB), zero energy quarters within the industrial zone in City of Bolzano, Italy (Contributing to the evaluation and to the knowledge transfer) 23	23
1.3.4 Promoting building retrofit through concept events, Ökomodell Achenal, Germany.....	26
1.3.5 Energy vulnerability (housing and transport) in social housing, OPAC 38 region, France 27	27
1.3.6 Establishment of value added chain of wood, North Primorska Region, Slovenia 30	30



1.3.7	Sustainable Energy Action Plan, City of Bressanone, Italy.....	32
1.4	Tourism.....	35
1.4.1	Energy efficiency in ski resorts, Pays SUD region, France.....	35
1.4.2	Creating climate neutral and climate conscious holiday services, Ökomodell Achenal, Germany.....	37
1.5	Industries and services	39
1.5.1	Foster eco-innovation processes in the SMEs, Veneto region, Italy	39
1.6	Conclusion	43
1.7	Annex I: Contact Information per Pilot Regions	45

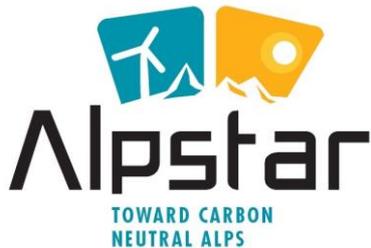


1.1 INTRODUCTION

The ALPSTAR project addressed the need expressed by international community for transnational, well-directed and cross-cutting action to effectively manage climate change in the Alps. It encouraged preparation and implementation of cross-sectoral strategies and action plans and of proven good practice measures toward carbon neutrality on regional and local level. First, through establishment of good practice transfer platform the project provided framework for knowledge transfer between regions, for capitalisation of results of other projects and for implementation of measures toward carbon neutrality in the regions. Then, in pilot regions strategies and action plans toward carbon neutrality have been prepared and implementation of measures – examples of good practices, started. Hereby the process and results of pilot action implementation is presented.

The main aim of this report is to provide information on the good practice implementation in pilot regions, clustered into four sectors (Transport, Buildings and Energy, Tourism and Industries and services) in which good practice implementation took place. In order to make it valuable for other regions beyond duration of this project, examples of good practices are described, transfer and implementation process presented more accessibly, while factors for success and barriers to success presented across the regions in the conclusion.

In case more information than provided in this compilation is requested it is available by contacting responsible project partner. The list of contacts per pilot regions is attached in Annex I at the end of this report.



1.2 Transport

1.2.1 SUMP, Sustainable Urban Mobility Plan in VRD Region, France

Specific objectives:

The objective of the transport plan of VRD was to define conditions to reduce the rate of cars in transport, increase public transports, walking and biking, work on urban sprawling, and provide an assessment of environmental impacts and a study of freight transport.

Results:

- Elaboration of the diagnosis
- Elaboration of the environment state of the art
- Elaboration of 3 scenarios for transports
- Choice of a scenario
- Proposition of actions
- Finalisation of an action plan

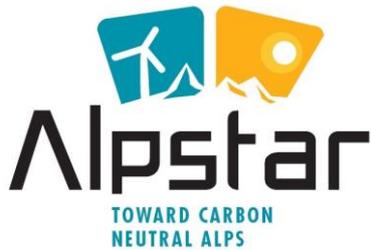
LOCATION OF THE PILOT ACTIVITY

Rhône-Alpes region France (more than 200 000 inhabitants, 39 municipalities involved)

DESCRIPTION OF THE PILOT ACTIVITY

In 2010, 39 municipalities decided to gather each other and create a union of municipalities in the field of transport. A territory of more than 200 000 inhabitants has to have a SUMP, Sustainable Urban Mobility Plan (compulsory in France). Previously different SUMP existed (in Valence and Romans) and a Territorial development plan (Schéma de Cohérence Territoriale - SCoT) was launched. It was decided to elaborate a diagnosis in the field of transports both for the SUMP and for the SCoT. Finally, the SUMP of VRD could use the results of the Territorial Energy Climate Plan (Plan Climat Energie Territoriale - PCET) of Valence.

At first the study of the SUMP and the proposition of actions have taken place. Then several dozens of meetings have been organized both to meet elected representatives and technicians of the different municipalities and to gather the steering committee which



debated the diagnostic and discuss the scenarios. Each meeting of the steering committee gathered several dozens of participants. At the end a conference on the quantification of GHG emissions in SUMP and a new meeting follows to decide on right selection of actions.

The main goals of Valence Romans Déplacements (Rhône-Alpes region, France) have firstly been defined. Two main points must be noticed : the willingness to take into account the GHG emissions and consultation with inhabitants and stakeholders.

RAEE is accompanying VRD since the beginning to the first actions of the transport plan (RAEE has been involved into the tender of the plan itself, to coach the external consultant and VRD staff, to define the GHG emissions, to manage and support consultation with stakeholders). RAEE is also systematically associated to the steering committees at each step of the studies. .

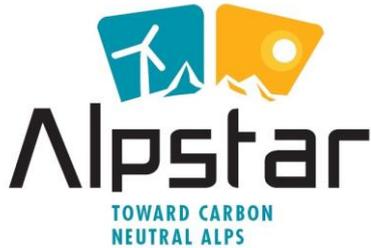
VRD has now achieved the diagnosis and has chosen the scenario and has begun to discuss the actions which form the last part of a SUMP. There were elections in spring in France so everything was been delayed. The new meetings restarted in September 2014 and discuss about actions and concertation with inhabitants, and the final approval of the SUMP.

TRANSNATIONAL RELEVANCE OF THE PILOT ACTIVITY

The SUMP in VRD is particularly interesting because of the methodology used (steering committee with politician, technical committee, committee with inhabitants) but also because of the type of territory (wide, rural, involving several public bodies). In this way the methodology and its results are of great interest for every partner in Europe.

INNOVATIVENESS OF THE PILOT ACTIVITY

In the same way the time to set up the transport plan and the type of governance are innovative.



1.2.2 Awareness raising campaign towards a climate neutral lifestyle with a focus on mobility, Vorarlberg (AT), Liechtenstein (LI), St. Gallen (CH)

Specific objective:

- Development and Roll-out of methods and tools to change the behavior of commuters.

Target groups:

commuters willing to change, **municipalities** as the source of commuters and **institutions** as a sink of commuters.

Results:

- elaboration of tailored communication concepts for specific groups in the field of mobility;
- testing the concepts; selection of municipalities and enterprises, implementation of the concepts in the municipalities and enterprises;
- evaluation of results

Cooperation with other partners at local and regional level:

several municipalities and companies in Vorarlberg, Liechtenstein and St. Gallen; HILTI as a company, Feldkirch (AT) and Buchs (CH) as municipalities as well as public transportation players (VVV from Vorarlberg)

LOCATION OF THE PILOT ACTIVITY

Vorarlberg, Liechtenstein, St. Gallen



DESCRIPTION OF THE PILOT ACTIVITY

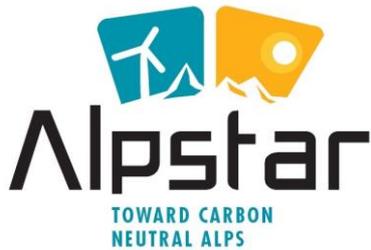
Mobility sector shows in Austria the fastest growth of energy consumption: + 73% growth since 1990. Mobility is a trans-national issue in the Rhine Valley touching the Province of Vorarlberg, the Land Liechtenstein and the Canton of St. Gallen.

Energy autonomy is the central programme of the state of Vorarlberg's energy policy. Reaching energy autonomy by 2050 was a strategic decision made unanimously in the regional parliament in 2007. The decision was motivated by the will to reduce dependence on fossil fuels, to guarantee a safe energy supply and to protect the climate.

The mobility sector has strong influence on the achievement of the goal. The target until 2020, the first milestone in the process, clearly sets out a total reduction of energy consumption of about 20% (based on the reference year 2005). In total these reductions sum up to more than 500 GWh/a. In order to reach this ambitious goal in the mobility sector it is strongly needed to find new methods of convincing people to use alternative means of transport (e.g. bicycle, public transport, e-mobility).

Today, nearly 80% of the commuters from Switzerland or Vorarlberg to Liechtenstein use private cars to get to work. This increases the congestion on the road network during peak hours and produces GHG emissions. Among other factors, wrong incentives regarding the mode choice in commuting are responsible for this situation.

Project partners first developed a concept for the cross-border pilot action. On the one hand the concept of the pilot activity itself was developed and on the other hand the project partners have elaborated communication measures as parallel activities. Commuters have been divided in 2 parts – 1) those who are already using public transportation or the bicycle for their way to work, 2) those that are not using public transportation or the bicycle for their



way to work. Workshops have been held with focus groups (commuters from Feldkirch and Buchs to HILTI in Schaan) and one with a focus group within HILTI. The results of these focus group meetings built the basis for concrete measures taken to facilitate the transfer to alternative means of transportation. Several activities with focus on the bicycle were first launched whereas the focus on public transportation followed.

The bicycle activities were:

- Bicycle check for commuters in Feldkirch
- Bicycle ambassadors for commuters (guided tours from Feldkirch to Schaan)
- “Bike to work” initiative in Feldkirch
- Online Cross-border bicycle map for commuters
- Printed map for commuters in Feldkirch
- Alpstar at the Slow up event in Buchs
- Hilti internal event (posters, bicycle map, etc.)

Then the focus was on public transportation measures, the realization of a bike navigation system for the cross-border region, and planning for follow up projects:

- planning of activities in relation to public transport:
 - commuter advisory services for companies in Vorarlberg
 - Information package for companies
 - Personal advisory services for companies
 - WI-FI launch in a bus was prepared but not conducted
- Related PR activities (press conference at HILTI, information campaign at HILTI)
- Tender and implementation of the Bike Navigation System
- Final press conference of the Rhinevalley partners with politicians from all three states
- Concept and implementation of product films related to the bike activities. These films are available on the youtube channel – Nachhaltige Mobilität (also with English subtitles)

TRANSNATIONAL RELEVANCE OF THE PILOT ACTIVITY

The pilot activity is a cross-border activity (Vorarlberg, Liechtenstein, St. Gallen) and special requirements (e.g. legal aspects) are taken into account. The results of the pilot activity are transferrable to other regions as well. It is planned to expand the results of the Alpstar project to other regions in Europe. The project team is discussing different project opportunities (Alpine Space, Internationale Bodensee Konferenz)



INNOVATIVENESS OF THE PILOT ACTIVITY

The innovative aspect of the pilot activity is that commuters are taken into account. They are asked about barriers and potential benefits to change their commuter behaviour. Concrete measures are derived from these results. We are also combining the sources of traffic (municipalities) as well as the sink of the traffic (companies) in order to elaborate target group specific campaigns.

The Alpstar activities finally led to the VCÖ Mobility Prize in Austria (more than 300 submissions). The award of the prize with the federal minister of Austria was held on the 17th of September 2014.

1.2.3 Company network for mobility management in Alpine Rhine Valley, Austria – Liechtenstein - Switzerland

Specific objectives:

- sharing experiences, best practices and lessons learned in the field of mobility.

The overall goal is a relocation of the modal split in the participating companies.

Results:

- Self-sustainable Mobility network; 8 companies are sharing experiences and developing strategies to cope with upcoming challenges in the field of mobility
- 5 workshops of the companies (>1000 employees, from the producing sector)
- Network concept for further launch to other areas (e.g. public administrations, building sector, etc) – requests from other companies to join such a network have been already received

The interest of companies in Vorarlberg to join the network is extremely high and the feedbacks are very positive. Thus partner will try to share the elaborated concept with the other partners but also other regions in the Alps.

LOCATION OF THE PILOT ACTIVITY

Alpine Rhine Valley, Austria (Vorarlberg) – Liechtenstein - Switzerland



DESCRIPTION OF THE PILOT ACTIVITY

Currently there are about 101 measures within the areas of renewable energy, mobility and spatial planning, industry and building sector to be implemented until 2020 (the first milestone in the process until 2050). Within the industry sector one measure clearly sets out that a “network for mobility management” for companies within Vorarlberg is needed in order to reach the overall goals to reduce energy consumption and more specifically to reach the defined goals within the sector of industry.

A detailed concept of the network was elaborated and the acquisition of relevant companies started.

A kick-off event of the network was organised in line with a big exhibition in Vorarlberg with about 90 participants. The network had its kick-off workshop and there were also 5 workshops of the network. **The mobility network will continue after the project end and the network will expand.**

Facts and Figures:

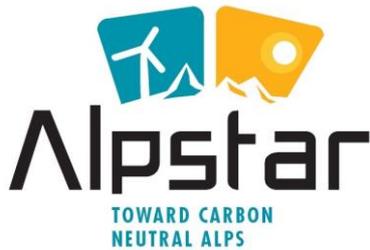
- eight partners in the mobility network Wirtschaft MOBIL
- Professional process support through Pionierbasis OG
- Kick-off meeting was held with external input
- Topics of the workshops are:
 - 03.09.2013: employee survey/key data
 - 12.11.2013: awareness raising
 - 29.01.2014: incentives
 - 08.04.2014: carpooling/change of shifts

TRANSNATIONAL RELEVANCE OF THE PILOT ACTIVITY

The concept of the pilot activity is transferable in other regions as well. As mobility is one of the most important sectors to reduce CO2 emissions this seems to be a very valuable approach also for other regions in Europe.

INNOVATIVENESS OF THE PILOT ACTIVITY

Mobility Management is still not practiced in many companies. With this network we are not only achieving single companies to start mobility activities within their companies, we facilitate the exchange of experiences among the companies.



1.2.4 A concept for innovative mobility offers with reduced traffic and CO₂ emissions, focus on electric mobility, Achenal region, Germany

Specific objectives:

- examination of the mobility structure in the Achenal valley
- elaboration of a concept to improve transport infrastructure based on electric mobility and public transport

Results:

- examination of mobility needs
- elaboration of a concrete concept
- implementation of E-Mobility and zero emission transportation in the region
- special documentation of best practice examples
- promotional activities to inform about the action
- a search of funding for the infrastructure in a second step

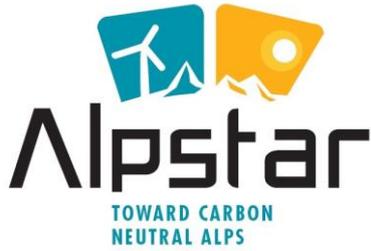
LOCATION OF THE PILOT ACTIVITY

Oekomodell Achenal

DESCRIPTION OF THE PILOT ACTIVITY

The tourist working group intends an expansion of public bus transport to the neighbouring villages and cities to achieve a more attractive offer, facilitating e.g. bus transport without charge for tourists to the neighbouring train stations. Electro mobility was an important part of the energy fairy mentioned above. The setup of an electric vehicle charging station is considered. Furthermore there are preliminary considerations to setup a natural gas fueling station. Strategies to stop emissions in the pilot region were developed at an internal meeting with the Ecomodell, the ECB-Concept and the Ecoregion Kaindorf (Austria) on 13. September 2012. A Basic research on zero emissions transportation possibilities was done. There was an internal meeting of ÖA to discuss the new Achenal valley card for expansion of public bus transport.

Calculation of CO₂ Emission was done in cooperation with ECB-Concept for the Achenal valley. Research on electric vehicles and power stations was done to develop the zero



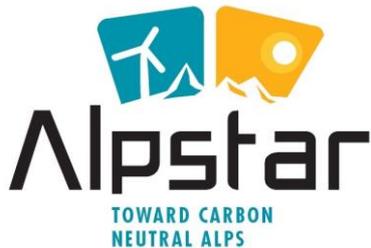
emission mobility offers. Stakeholders were contacted e.g. Hannover fair and quotations requested. Several meetings with industry and other national programs were organized. Tourist working group met again to develop the final expansion of public bus transport.

Promoting Electro mobility: A Logo with a special recognition factor on electro mobility was developed and spread as label, banner or beach flag among public and private businesses. Partner took part in stakeholder meetings on electro mobility and prepared an energy seminar for energy suppliers in the region.

12 additional charging stations for electric cars were established in Achenal valley. An energy congress was held with main local stakeholders (energy producers and mayors). Several reports were given to newspapers. Two public events were organised to demonstrate the current state and the possibilities of electric vehicles. A study visit to the model community Werfenweng was organised for representatives of public authorities. 3 additional charging stations were established. A cycling map of Achenal valley was developed.

INNOVATIVENESS OF THE PILOT ACTIVITY

Cooperation with other partners: Information exchange was stimulated with other partners having experiences in the specific sector.



1.2.5 Enhancement of Valtellina public transport, Region Lombardia, Italy

Specific objectives:

- enhancement of existing Valtellina railways connected to micro-mobility;
- improvement and optimization of public transport;
- transformation and enhancement sharing private transport.

The reasonable goals for 2020 can be estimated as follows:

1. increase of the use of public transport: from +5% to +10%;
2. average time savings per user: -10% to -15%;
3. reduction of pollutants from traffic: from -5% to -10%;
4. savings for the community: from -10% to -15%.

Results:

- Preparatory study for the implementation of a provincial and regional strategic planning on transport to be developed in the mid and long term

The urban-territorial structure of the Province of Sondrio (also named Valtellina Valley) is based on 5 small towns that serve as capital and, therefore, by the same number of daily commuting basins defined. The strong dispersion of residences and the concentration of jobs and services nearest the five cities of the valley cause important traffic flows on the valley roads, daily vehicular congestion and consequent high rates of pollution emissions.

The study has been designed to be a meaningful analytical contribution to the creation of a real alternative to cars, the dominant mode of transport in the current situation. Starting from a survey on people living and working in Valtellina, the study proposes solutions to create a well-connected public transport system based on means of transport to cover the long distance travels (Macro-Mobility: a light, modern and fast tram-train system, according to a clocked working program that will be fully compatible with traditional services, supplied by Trenitalia) and to integrate this “backbone” with several light means of transport, able to cover the first and the last mile (Micro-mobility: bicycles, electric cars, improvement and optimization of collective public transport; transformation and enhancement of private transport as a mean of shared transport).

In short:



- Increase public transport use through Preparatory study for the implementation of a provincial and regional strategic planning on transport;
- sample surveys on mobility in order to detect and evaluate the local potential travel demand, the people behaviors and the acceptable fares for the service (about 3000 filled questionnaires)
- identification of institutional stakeholders, personal meetings/workshops
- one public event dedicated to citizenship in order to share survey's results
- dissemination of pilot action's results in occasion of capacity building seminar
- the insertion of pilot action's results in the final version of the low carbon strategy

Cooperation with other actors: Sondrio provincial administration, Trenitalia

Synergies with other projects/programmes: CO2 NeutrAlp, ACCESS; TRANSITECTS

LOCATION OF THE PILOT ACTIVITY

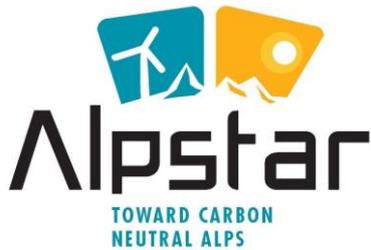
Province of Sondrio – Valtellina Valley

DESCRIPTION OF THE PILOT ACTIVITY

The urban-territorial structure of the Province of Sondrio (also named Valtellina Valley) is based on 5 small towns that serve as capital (mountain communities) and, therefore, by the same number of daily commuting basins defined and very content. Commuting, given also the strong dispersion of residences and the concentration of jobs and services nearest the five cities of the valley, regards the daily movement of one or more members of each family individually by car. Four of these cities: Chiavenna, Morbegno, Sondrio and Tirano are connected by rail; Bormio is not reached by rail.

The Valtellina railway is the historical backbone of the transport system of the Province. Starting at the south terminal in Milan, the Lombardy capital, the line goes to north and, when it reaches the town of Colico, is split in two separate directions: the first one along the Chiavenna Valley, the second one along the Valtellina, where it reaches the terminal in Tirano. The line is 156 kilometres long and the time required to reach Milano from Tirano is currently two hours and thirty minutes. It means an average speed just a little bit more than 60 kilometres per hour.

The project proposed takes into account the link between Colico and Tirano, looking particularly at the commuting catchment areas located in the cities of Morbegno, Sondrio and Tirano. It is important to remember that the Tirano station is also the terminal of the Rhaetian Railway serving the Swiss Canton of Grisons, which leads, through the Bernina Pass, to St.



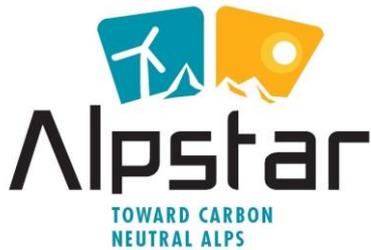
Moritz. Rhaetian Railway is considered among the UNESCO World Heritage Values. The line is therefore very important to achieve the greater metropolitan area of Milan and for international connections. In addition it allows the connections among several touristic centres inside Valtellina.

The opportunities offered by the railway, however, are only partially exploited by visitors to the Valley and even the residents mainly use private cars for their journeys. This causes important traffic flows on the valley roads, daily vehicular congestion and consequent high rates of pollution emissions. In conclusion, it is necessary to devise some incentives for rail and intermodal mode, increasing as stronger as possible the public transport use.

To create a real alternative to cars, the dominant mode of transport in the current situation, we suggest to create a well connected public transport system and to integrate this main project (that we can define as “Macro-Mobility”) with some small projects (that we can define as “Micro-Mobility”). The idea is to provide the people living and working in Valtellina with a strong means of transport to cover the long distance travels (tram-train) and to integrate this “backbone” with several light means of transport, able to cover the first and the last mile (bicycles, electric cars, improvement and optimization of collective public transport; transformation and enhancement of private transport as a mean of shared transport). In our area Macro-Mobility means an enhancement of the existing Valtellina railways, in other words the implementation of a light, modern and fast tram-train system, according to a clocked working program that will be fully compatible with traditional services, supplied by Trenitalia.

Following the collection and evaluation of available information regarding local sustainable mobility projects and existing local opportunities for sustainable mobility, and the benchmark regarding useful experiences in similar places, the survey at the primary schools located in the main villages of the Valtellina Valley has been conducted. The survey consisted of an individual questionnaire to be filled by each family’s member in order to detect and evaluate the local potential travel demand, the people behaviors and the acceptable fares for the service (about 3000 questionnaires). The survey at the primary and secondary schools located in the main villages of the Valtellina Valley has been finished. FLA evaluated and presented results to institutional, economic and social Valley representatives to share project contents and propose concrete local alternatives to cars. About 3000 questionnaires were distributed in order to study the daily mobility behaviors of valley’s families. In the end, 2125 questionnaires have been correctly filled allowing FLA to work on a wide and realistic sample of Valtellina’s population, paying always attention to the randomness of the sample so to not derive risky inductively evaluations, but taking statistics for their episodic valence.

In particular, this activity allowed FLA to establish a profitable and sound relationship with the Local Ministry of Education as well as the Province of Sondrio administration, very interested in results. Moreover, both the institutions acting as spokespersons confirm positive feedbacks coming from citizens because of their direct involvement in the implementation of local activities aimed at improving environment and living. Following these comments, FLA (in agreement with the Province and the Ministry of Education) carried out several communication and training activities in order to deep questionnaire’s contents, provide



citizens with complete information about climate change and human behavior impacts on the environment, and present the ALPSTAR best practices platform in order to give an overview on the European efforts done to achieve carbon neutrality

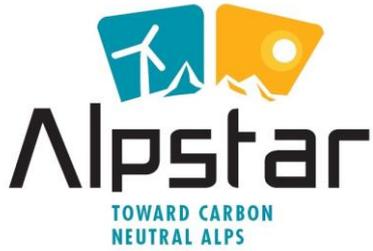
Maps contributing to a better understanding of the dimensional characters of mobility in the Valley have been created. The maps were developed exclusively for the localities that produce or attract more than 100 movements because lower values risks not to be significant. The specific actions implemented:

- preparation and printing of final questionnaire aims at carrying out sample surveys on mobility of students enrolled in schools in Valtellina and their families;
- establishment of criteria for training of staff in charge of distributing the questionnaires;
- definition of the methodology for the collection and transfer of data on the electronic device, with the aim of having information "bottom-up" able to give substance to the implementation plans, with a focus on innovative actions to propose;
- analysis of questionnaire results;
- identification of institutional stakeholders able to ensure implementation plan effective realization, and the minimum conditions which enable them to be put into practice;
- initial planning of personal meetings/workshop to be organized in the last project phase.

Following the finalization of maps contributing to a better understanding of the dimensional characters of mobility in the Valley, FLA dealt with the writing of maps' argumentation and the involvement of Province of Sondrio's public administration and citizenship. The main actions carried:

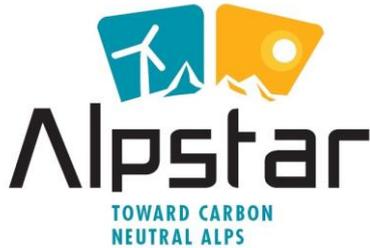
- identification of institutional stakeholders (at local and regional level) able to ensure implementation plan's effective realization, and the minimum conditions which enable them to be put into practice;
- getting in touch with the identified local institutional stakeholders in order to attract and investigate their interest as much as possible on the survey's results and to investigate their expectations so to guarantee a high participation in FLA future workshops;
- organizing of personal meetings/workshops from December 2013 to March 2014;
- planning of at least one public event dedicated to citizenship in order to share survey's results in terms of daily mobility behaviors and their impact from a climatic point of view; European good practices (ALPSTAR good practice platform) and recommendations.

Presentation of pilot actions' results on the occasion of meetings with stakeholders was carried out in the process of strategy preparation (20/01/2014; 31/01/2014; 13/02/2014; 25/03/2014). Dissemination of pilot action's results in occasion of capacity building seminar (26/06/2014); pilot action's results were part of the final version of ALPSTAR strategy.



TRANSNATIONAL RELEVANCE OF THE PILOT ACTIVITY:

Lying exactly in the middle of the Alps, the pilot area chosen by FLA (Valtellina Valley) is a representative sample of the typical Alpine region. As a matter of fact, it is characterized by a urban-territorial structure based on one administrative central town (Sondrio) and few small towns (mountain communities) concentrating the greatest number of daily commuting basins of the Valley. Considering the strong dispersion of residences and the concentration of jobs and services nearest the biggest cities, Valtellina as well as the majority of Alpine areas, is affected by the daily movement of one or more members of each family individually by car.



1.3 Buildings & Energy

1.3.1 Energy renovation of buildings respecting the cultural heritage in Parc Naturel Regional du Queyras, France

Specific objectives:

- To define a typology of buildings in the territory
- To propose technical solutions for renovation for better energy efficiency and preservation of cultural heritage
- To propose arguments to influence urbanism rules to better take into account energy efficiency

Results:

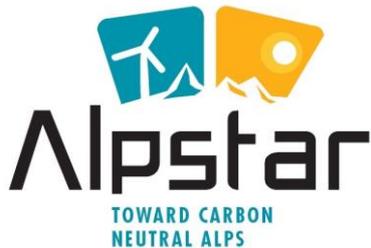
- Guidelines for buildings renovation respecting cultural heritage

DESCRIPTION OF THE PILOT ACTIVITY

The Park of Queyras has an objective of energy self-sufficiency for 2050. The sustainable energy action plan will give to decision makers the intermediate objectives to reach this goal. The Park with the help of ALPSTAR project launched the elaboration of an action plan, prepare a strategy, increase mobilization of various stakeholders (Professionals of tourism, Farmers, Citizens) in order to start concrete projects involving these stakeholders. In parallel, the Parc will elaborate guidelines for buildings renovation.

The process of producing guidelines for buildings renovation respecting cultural heritage with the aim to reduce energy consumption in buildings, respect cultural heritage of mountains, and improve comfort and quality of main houses and touristic residences will involve press releases, conference and forums, announcements on the website of the Park and including social network existing on the territory.

The regional nature park of Queyras (PNR Queyras) was working on the document "Guidelines for buildings renovation respecting cultural heritage". The Guideline was finished in May 2013, published and can be downloaded at the project website: <http://alpstar-project.eu/downloads-resources/>). The responsible technician for the energy and climate aspects of the PNR Queyras took part in the workshop 'La commune, maître d'ouvrage: vers



des bâtiments neutres en carbon', organized by Alpine Town of the year association, and illustrated the work done during the Alpstar project in regard to the building renovation. A statement of the technician during the workshop can be seen online under: https://www.youtube.com/watch?v=_KrNxnBpRVU

After developing and creating the brochure 'Guideline for buildings renovation respecting cultural heritage', it was distributed to local stakeholders and local enterprises at seminars and workshops. Furthermore the document was distributed also to associations and organisations in the French Alpine Arc to sensitivize also stakeholders in the northern part of the French Alps.

1.3.2 Renewable sources and energy efficiency - integration of existing systems and scenarios for the sustainable development of new plants, together with RACEM, a network for sustainable buildings in Valtellina Valley, Region Lombardia, Italy

Specific objectives:

- Evaluation of existing heating and cogeneration plants on biomass and/or biogas and development of scenarios for new plants;
- Establishment of a "network (coordinated) for sustainable building" (in line with the best European standards: ClimaHouse, Minergie Habitech), which includes all the players in the sector HOUSE (builders, installers electrical systems, heating systems installers, fabricators, mills).

Other objectives are increase of renewable energy use; reduction of primary energy consumption; reduction of pollutants; saving for the community, proposing several scenarios for the development of new biomass plants, quantifying the potential energy, environmental and economic benefits (in conjunction with the existing ones), facilitating the diffusion of RACEM disciplinary to the whole building sector of Valtellina.

Results:

- Preparatory study for the implementation of a provincial and municipal energy planning that will be developed in the medium-long term



The study will propose different scenarios for the penetration of the best technologies for the exploitation of available "bioenergy" (forestry, agriculture and food, manure, waste and scraps of wood, organic fraction of municipal solid waste, short rotation forestry).

As a matter of fact, the territory of Valtellina, for its natural structure, is particularly rich in bioenergy both of forest and agro-livestock type that already promote a high contribution to the provincial energy (12%). The main contributions of this preparatory study are an assessment in detail the current state of existing systems from the energetic, environmental and economic point of view; assessment of the potential maximum development of the various "bioenergy" (wood, agriculture, biogas, organic waste, rotation forest) across the province, depending on the availability of actual and sustainably used and proposal of various scenarios of development of new systems, quantifying the potential benefits of energy, environmental and economic benefits (also in combination and / or development existing ones). Moreover, the preparatory study analyzed also the existing local best energy policies for the building sector able to ensure a high quality standard of energy efficiency of the building stock of new construction in both the residential sector and tourism.

On the basis of the results obtained it is possible to make an important contribution to the provincial and municipal energy planning to be developed gradually in the medium and long term.

Cooperation with other actors: Province of Sondrio, Local energy companies (exe: TVCCC), Agro-energy consortium of Valtellina, CCIAA Sondrio;

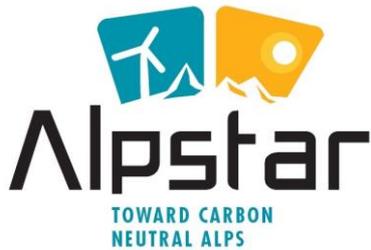
Confartigianato Imprese Sondrio, Polytechnic of Milan, Politec Valtellina

Synergies with other projects/programmes: BIOENERGIS Project (Biopole)(2011); European project SMART-ECO.

LOCATION OF THE PILOT ACTIVITY: Province of Sondrio – Valtellina Valley

DESCRIPTION OF THE PILOT ACTIVITY

With regard to the evaluation of existing heating and cogeneration plants on biomass and/or biogas and the development of scenarios for new plants, all phases of data collection and evaluation related to the biomass facilities available in the area have been launched, in



agreement with the Province of Sondrio and with particular attention to those recently built in the field of public administration (5 small mountain communities). A similar evaluation has already been realized for the 3 large forestry biomass and / or biogas plants connected to local networks of district heating and cogeneration in the service of local communities of Tirano, Sondalo Furva Valley and Santa Caterina (TCVVV Local energy companies) and also in another 2 large forestry biomass and biogas plants not connected to local networks of district heating (Fusine, existing) and Postalesio (in construction) .

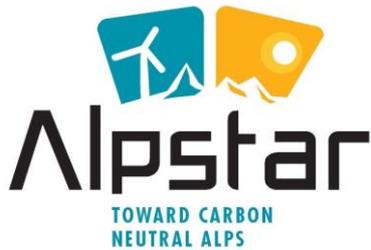
Moreover, FLA has been evaluating the potential availability of the main types of biomass (forest, agricultural and agri-food, manure, waste and scraps of wood, organic fraction of municipal solid waste, short rotation Forestry) used in a sustainable way in various areas of the province, through the BIOPOLE software (European project BioenerGIS, 2011). The final results have been critically evaluated in close collaboration with the Province of Sondrio in order to include the tools in the provincial and municipal energy planning.

With regard to the energy efficiency in buildings (build and rehabilitate according to criteria of high efficiency), all the actions undertaken in recent years in the province have been detected and analyzed, identifying the RACEM project as an action perfectly in line with the objectives of this ALPSTAR pilot

Following the acquisition, analysis and processing of biomass and biogas existing data, the evaluation of energetic potential from bio-energies in Valtellina (Biopole program) has completed. In 2013, FLA dealt with the development of different energy and environmental scenarios showing the penetration potential of available bio-energies (January-June 2013) in order to give contributions to the energy planning at the provincial and / or municipal level (July-December 2013).

Moreover, FLA completed the acquisition, analysis and evaluation of final results of RACEM project monitoring its developments and those of Valtellina EcoEnergy project. In doing this, FLA established a close and profitable relationship with Polytechnic of Milan, Sondrio Confartigianato and Province of Sondrio in order to define and plan concrete local activities (implemented in 2013) aiming at the transformation of RACEM from a pilot disciplinary to a standard procedure for all building companies in Valtellina Valley with particular emphasis to those of the artisan sector.

FLA completed the evaluation on existing heating and cogeneration plants on biomass and/or biogas and it's developing scenarios for new plant; established a profitable dialogue with the public and private bodies committed in the management of bio-energies (wood, agriculture, biogas, organic waste, rotation forest), as local energy companies (TCVV, Holcim, FEN ENERGY, SECAM, FUSINE ENERGY) and authorities by phone and technical meetings, during which operational strategies and the dissemination of results are going to



be defined; established a profitable dialogue with Confartigianato Sondrio and Milan Polytechnic for pilot RACEM by phone interviews to which personal meetings followed; - continued the acquisition and final processing of data, images and data sheets for setting each pilot action (RACEM and BIOENERGIE); organized a dissemination event in July 2013; planned ALPSTAR events (conferences and seminars) for dissemination of results.

Following the evaluation on existing heating and cogeneration plants on biomass and/or biogas and so the more technical phase of this pilot action, FLA shared the evaluation on existing heating and cogeneration plants on biomass and/or biogas and scenarios for new plant in two main public dissemination events (Sondrio, July 9th; Bolzano, September 19th), attended by several local (province of Sondrio) public authorities; identified synergies with other two European projects (PROFORBIOMED, BIOMAXEFFE) dealing with the implementation and promotion of bio-energies renewable sources; stabilized a profitable dialogue with the public and private bodies committed in the management of bio-energies (wood, agriculture, biogas, organic waste, rotation forest) as essential first step in order to sketch out future ALPSTAR strategy; planned meetings/workshops to be organized with local and regional public actors in order to develop an as much as possible integrated strategy towards climate neutrality.

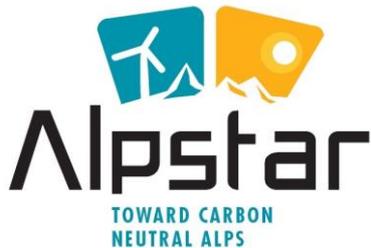
Presentation of pilot actions' results has been carried out on the occasion of meetings with stakeholders in the process of strategy preparation (20/01/2014; 31/01/2014; 13/02/2014; 25/03/2014); the dissemination of pilot action's results in occasion of capacity building seminar (26/06/2014); the insertion of pilot action's results in the final version of ALPSTAR strategy.

1.3.3 Zero energy office building (NZEB), zero energy quarters within the industrial zone in City of Bolzano, Italy (Contributing to the evaluation and to the knowledge transfer)

Specific objectives

- to contribute to the evaluation and to the transfer process of the knowledge acquired in the design phase and realisation of a net zero energy office building (NZEB).

The experience gather will be capitalized in a report that through the analysis, organization and description of the experiences and lessons learned will favour the transfer process of this good practice. The report is published on internet and available for download.



Results:

- collecting data and information from the different actors involved in the project
- analysing difficulties and barriers emerged and individuate the solutions adopted
- assessing the eventual presence of innovative approaches to the managing of the entire process
- elaborating a document which summarises the knowledge acquired and describes the methodology and approach used in the development of the process

Constructing a net zero energy office building (NZEB) is a complex task which involves the contribution of different actors. The experience is capitalized in a report that through the analysis, organization and description of the experiences and lessons learned favours the transfer process of this good practice.

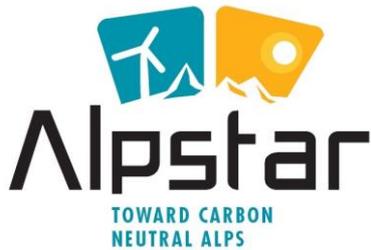
LOCATION OF THE PILOT ACTIVITY

City of Bolzano in South Tyrol (Italy)

DESCRIPTION OF THE PILOT ACTIVITY

In June 2010 the province of Bolzano has adopted a development concept for the realization in the city territory of a new Science and Technology Park. In an area, which over the next 15 years will grow up to 0,12 km², it should concentrate and settle a numbers of actors involved in scientific and technological fields, as well as private companies. In the first new planned building is scheduled the installation of all local institutions dealing with research, development and innovation. The building itself will be built accordingly to the contents of the NZEB European Directive (Net Zero Energy Building). From a technical/design point of view the edifice that host the Technology Park will have a total primary energy index equal to 60 kWh/m² year. The technology park will become a good practice in the field of NZEB and the knowledge transfer to public bodies. The Building research group of Eurac has been actively involved in the design phase (energy concept elaboration) and followed the realisation of the new building.

The design of the building has been concluded, on Eurac side it's worth mentioning that its activity within the design group has allowed for directing the design in order to optimize the overall efficiency of the building while maintaining the architectural idea.



The public tender for the realisation of the building has been presented and concluded. The lessons learnt from this activity will also constitute part of the final report. This aspect will be characterized by the description of the difficulties related to the inclusion and detailing of the specific energy requirement in the tender.

The final report with has been completed. The document describes the process which has led to the start of realisation of the Technology park of Bolzano/Bozen illustrating the solutions which have been adopted in order to optimise the process. The document contains also three interviews to the client, the designer and one Eurac researcher which has supported the designer in the simulation of the energy efficiency of the building.

TRANSNATIONAL RELEVANCE OF THE PILOT ACTIVITY

Due to the limited number of such large scale office building already existing (paragraph below) the information summarised in the document could be of relevance for partners or other parties interested in the construction of such buildings.

INNOVATIVENESS OF THE PILOT ACTIVITY

At the time of the choice of the pilot action net zero energy large scale office buildings existing on national level were probably less than 10 (Source: Data collection within the IEA SHC Task 44). The description of the innovative approach of IDP (Integrated energy Design Process) represents the core of the document. The further experiences acquired in the tendering and initial implementation phase of the building, due to the limited numbers of such buildings, which will be reported in the final document, will be of high interest and might contain innovative elements.



1.3.4 Promoting building retrofit through concept events, Ökomodell Achantal, Germany

Specific objective:

- promotion of retrofit and renovation work in order to improve energy efficiency in the region

Results:

- Preparation of a concrete event bringing together architects, craftsmen and house owners.
- Elaboration of a concept how to push energy retrofit and elaboration of information material.
- Special documentation of best practice examples.
- Presswork to inform about the action.

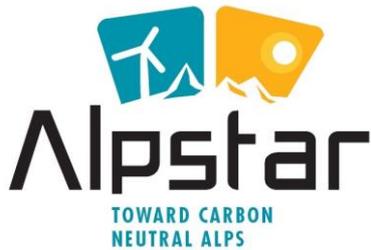
LOCATION OF THE PILOT ACTIVITY

Oekomodell Achantal

DESCRIPTION OF THE PILOT ACTIVITY

Energy fair was held at the Biomassehof Achantal in May 2012. Several craftsmen displayed energy saving technologies. The fair was advertised in local and regional press. Ökomodell Achantal offers free consultation hours for house owners held by independent experts. Furthermore, in cooperation with the project Althouse (Achantal valley is pilot region) energy saving measures in house building are developed. Ökomodell takes part in the energy and climate conference of the administrative district of Traunstein. Traunstein organizes a so called "climate week". Free consultation hours increased because there was a higher demand.

Participation at the energy and construction fair in Raubling to promote the services of Okomodell in the region. Three Workshops were held in Grassau, Übersee and Schleching. Preparation for energy and trading fair "TRUNA" has been done. Preparation of "Energy Fair" in Grassau; tight collaboration with EU-project AlpBC: two workshops for stakeholders were



organized. Preparation of a big information event in Bergen (took place two days after the project end on July 2) in close collaboration with AlpBC.

Addressing the house owners in the region through publishing information about energy retrofit and consulting on the Oekomodell homepage. The consulting services for house owners on energy saving and refurbishment was further promoted by printing business cards and by reporting several times in local newspapers.

Cooperation with other partners: Information exchange was stimulated with other partners having experiences in the specific sector.

Synergies with other projects/programmes: AlpHouse (Alpine Space)

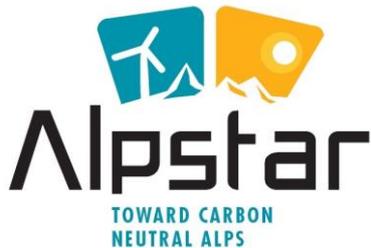
1.3.5 Energy vulnerability (housing and transport) in social housing, OPAC 38 region, France

Specific objectives:

- to combine reduction of GHG emissions and reduction of energy vulnerability of inhabitants.

Results:

- developing methodology to determine the level of vulnerability of a building. It can be used for other social housing companies for which the data used are available.
- testing of this methodology to determine the effects of building refurbishments - energy vulnerability by type of buildings, heating system, size, heating energy, year of construction gathering available data, to validate results, to make the connection with the company and other stakeholders
- gathering data on transport to determine the vulnerability of inhabitants,
- crossing vulnerability (transport + building), with results for each kind of building, heating energy and location, and specific analysis for each socio-professional category
- PR work: participation in a public workshop on energy vulnerability, organisation of a conference on GHG reduction and fight against energy vulnerability with the district



(in charge of social welfare), presentation of the results to the energy and environment committee of OPAC 38, participation of tenants planned in the field of Agenda 21

LOCATION OF THE PILOT ACTIVITY

Departement of Isère, Rhône-Alpes Region, France

22000 flats

DESCRIPTION OF THE PILOT ACTIVITY

OPAC 38, a public social housing company, has promoted and implemented an environmental and energy policy since 1995, on the ground to achieve a “rent and services’ costs” under control. The concept of energy vulnerability appeared some years ago in France.

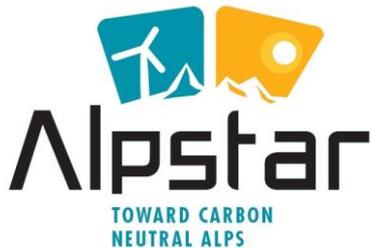
The activities include determining the main factors of energy vulnerability of inhabitants (both for building and transport), what are the most efficient actions to reduce it and then implement refurbishment. The targets are to reduce CO2 emissions, and to reduce economic vulnerability of inhabitants.

An analysis of the energy consumption in the OPAC 38 buildings and an inventory of actions in the field of energy vulnerability (building refurbishment and other actions) have been carried out.

Results concerning energy vulnerability by type of buildings, heating system, size, heating energy, year of construction... have been set up (concerning about 20 000 flats). For each flat the vulnerability level can now be defined so that we can know how many people could be in a situation of vulnerability.

Then it has been worked on transport issues to determine the vulnerability of inhabitants due to the needs of mobility. More than 7000 tenants were involved and have received a questionnaire on transport. Main results were known at the end of 2013 and the results were published in February 2014.

Finally, it has been worked on the crossed vulnerability (transport + building), with results for each king of building, heating energy and location, and specific analysis for each socio-professional category. It has been, has a main result, be pointed out that it was for employed people that the place where they leave have the most important impacts on their energy vulnerability.



The main results are:

- A methodology to determine the level of vulnerability of a building. It can be used for other social housing companies for which the data used are available. This methodology have been formalised in a report
- The tests of this methodology to determine the effects of building refurbishments including the economic issues
- An full analysis of all buildings of OPAC 38, showing the ones that have the highest risks of energy vulnerability of the tenants. This analysis is a new tool to help to decide the refurbishments to implement within the strategic refurbishment plan of OPAC 38.

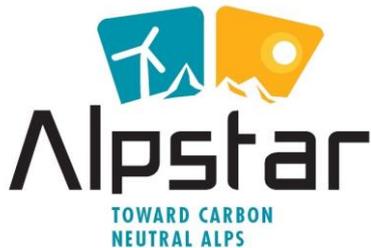
These results have been discussed in an internal steering committee in OPAC 38. The steering committee was so interested that it has been concluded that a workshop has been organised during autumn 2012. A new outside conference was held in June 2014 in OPAC69, one of the greatest social housing companies in France to present the results and discussed about the question of vulnerability with approximately 80 participants.

TRANSNATIONAL RELEVANCE OF THE PILOT ACTIVITY

The question of vulnerability of inhabitants is of high importance everywhere in Europe and the methodology developed with OPAC 38 could be used elsewhere in Europe.

INNOVATIVENESS OF THE PILOT ACTIVITY

Both building and transport vulnerability are taken into account



1.3.6 Establishment of value added chain of wood, North Primorska Region, Slovenia

Specific objectives:

- optimisation of wood value added chain
- rising the energetic sufficiency of the region

Results:

- 2 Preinvestment studies for wood biomass district heating systems (Tolmin and Kobarid)
- Public participation process to support the location of both district heating systems
- Support to the development of local wood value added chain (through meetings with important stakeholders)

Contribution from Project Partners:

- best practice transfer (Vorarlberg, Achantal, ...)

Cooperation with other actors:

- Municipalities of Bovec, Kobarid, Tolmin, Idrija, Slovenian forest service, private companies dealing with wood

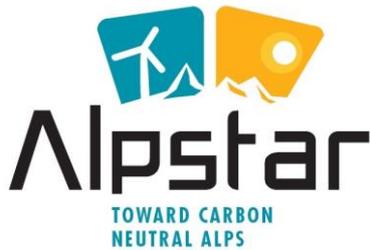
Synergies with other projects/programmes:

NENA (Alpine space), Enerbuild (Alpine space)

LOCATION OF THE PILOT ACTIVITY

Four municipalities in the north-west of Slovenia: Bovec, Idrija, Kobarid and Tolmin.

DESCRIPTION OF THE PILOT ACTIVITY



An implementation plan has been prepared together with the involved municipalities of the area: Bovec, Kobarid, Tolmin and Idrija. An energy agency was subcontracted to prepare preinvestment study as a legal basis for long distance district heating systems in Kobarid. In Tolmin this study is still in progress, but there were energy performance checks prepared for two public buildings (school, health center). Tender for the concession for the implementation of long distance district heating was launched in Bovec. Energy performance checks will be prepared also for two public buildings in Idrija. A public invitation to design and produce promotional product, made of massive wood, has been initiated. More than 20 designers participated with their unique products.

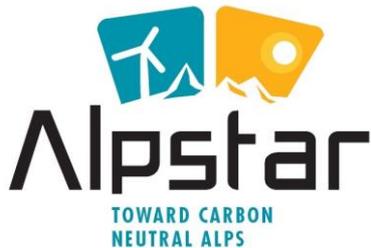
Additionally, a meeting was organised with regional relevant stakeholders on the subject of wood value added chain and potential interventions to support its development in the coming funding period till 2020 discussed. Additional output was signing and joining the Covenant of Mayor documents from Idrija and Tolmin municipalities. Analysis of forest roads as a potential for other purposes (mountain biking etc.) and as a potential added value in wood value added chain was prepared.

Working with forest owners showed the problem/potential of insufficient cooperation between them and the tourism sector. One of the examples are forest roads that are built and financed by owners but later used also for other purposes (mountain biking as an example). This leads to many problems but it could be seen as an opportunity for all – tourism could contribute to maintenance costs and would therefore make it possible to reinvest the money for new investments in forest roads. This estimation was tested and evaluated by the National forest service that runs the GIS. A cross-sectoral cooperation is a good example and a win-win situation within the wood value added chain.

The plan is long-term monitoring of consumer behaviour, raising value-added chain of wood and development of this sector in the pilot region. Evaluation of the described implementation plan with concrete outputs in the pilot region will be reflected in the next years.

TRANSNATIONAL RELEVANCE OF THE PILOT ACTIVITY

There are regions in Alpine Space with highly developed wood processing industry importing timber. On the other hand there are regions that only export timber, CO₂ footprint is therefore higher and also added value from wood processing is not balanced between regions. The idea is to shorten the chain to support regional closed loop economies.



INNOVATIVENESS OF THE PILOT ACTIVITY

Innovativeness of the approach of the wood value added chain in inclusion of all the parts of the chain from forest to the final consumer while at the same time relevance is given to each step in the chain.

1.3.7 Sustainable Energy Action Plan, City of Bressanone, Italy

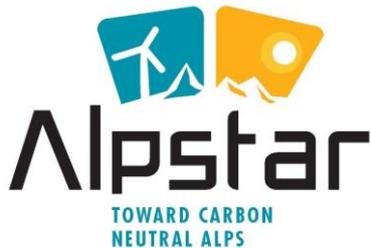
The city of Bressanone/Brixen is a small town with about 20.000 inhabitants situated in the Province of South Tyrol in the north of Italy. Eurac has collaborated in the past with the municipalities towards the elaboration of some projects in the energy sector. Recently the Town council has decided the elaboration a new energy concept and, given the occasion presented by Alpstar, they commissioned EURAC to produce an energy concept for the city. The study might serve as a basis for developing a Sustainable Energy Action Plan for joining the Covenant of the Majors. In south Tyrol, already several municipalities (of smaller dimension than Brixen) managed to cover all their energy demands through renewables. Through this study the possibility to make Brixen energy sustainable has been evaluated.

Specific objectives:

The objectives of this study were to analyse the existing energy consumption patterns, confront them with the potential for renewable and elaborating a renewable energy concept which should consider the possibility to cover most of the energy demand of the city with renewables. The document provided indications on the steps required to reach such aims and evaluated the feasibility of the energy concept in the medium long term.

Results:

- collecting energy consumption data, information on the energy parameters and variables of the different consumption's items and analysis of these two elements which should allow to individuated the sectors on which to set focus in order to reduce the energy consumption



- gathering information on the different source of energy production in the municipality, both renewable and not and evaluation of the potential for renewable, both thermic and electric.
- elaboration of a concept which, through the combined effect of energy consumption's reductions and increase employment of renewables, aims at covering great part of the energy demand through renewable energy production.

Output:

Sustainable Energy Action Plan (In Italian and German Language) integrated by a Report containing evaluations and indications towards the extension of the contents of the SEAP beyond the target set for the year 2020 evaluating the feasibility of a renewable energy concept for the entire city of Bressanone.

LOCATION OF THE PILOT ACTIVITY

City of Bressanone in South Tyrol (Italy)

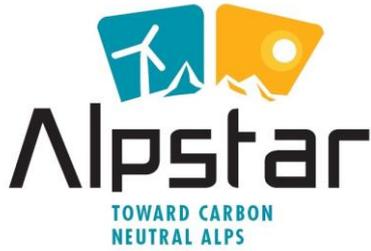
DESCRIPTION OF THE PILOT ACTIVITY

Collection and elaboration of energy consumption data completed. Final data on district heating expansions have to be collected and analysed. The analysis of the carbon stock potential related to the forests which insist on the territory of the municipality has been carried out. The evaluation of the exploitation of the aqueducts for the installation of electric turbine has been started.

Elaboration of an energy concept within the framework of the Covenant of Mayor completed. The Sustainable Energy Action Plan (SEAP) presented and approved by the city council. The study has allowed demonstrating that the renewable energies, which are directly available on the territory of the municipality of Bressanone/Brixen, could cover up to 85% of the total electricity and 30% of the total thermal energy demand.

On the base of the content of the SEAP, which represents already the main output of the pilot action, a synthesis document has been produced to look at some aspects not considered in the SEAP and report the results in English language (the original documents have been prepared both in Italian and German).

The analysis of the carbon stock potential related to the forests which insist on the territory of the municipality has been carried out. An evaluation of the potential for biomass exploitation will follow.



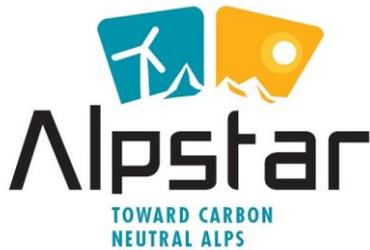
TRANSNATIONAL RELEVANCE OF THE PILOT ACTIVITY

The transnational relevance of the pilot activity lies in the transferability of the experiences done and lessons learned on local level that can be of support for other Alpine regions.

INNOVATIVENESS OF THE PILOT ACTIVITY

In the Province of Bolzano alone 19 Municipalities out of 116 cover their energy demand (both electric and thermal, traffic not considered) using renewables energies. In Italy the municipalities with these characteristics are 27 altogether and they are all located in the Alpine region.

The elaboration of renewable energy concepts (or the verification of their entire feasibility) therefore does not entail innovative elements although the applicability at the scale of a city of 20.000 inhabitants may imply innovative approaches.



1.4 Tourism

1.4.1 Energy efficiency in ski resorts, Pays SUD region, France

Specific objectives:

- characterisation of energy operations of the artificial snow production, ski lifts, maintenance of ski slopes and the ski resort buildings
- definition of an protocol for the energetic analysis in a ski resort and to test it
- identification of optimal prices in regard to power and consumption
- identification of the optimal technology
- establishing prospective in regard to the Energy Efficiency Credit (EEC) and energy storage

General goal is to identify existing sources for energy and GHG saving in ski resorts. Pays SUD wants to save 15% of the electrical consumption in the ski resorts which has as a result a reduction of 25% of GhG emissions.

Results:

- installation and animation of working groups
- Technical and energy inventory of the equipments of 6 winter sports resorts in the Pays S.U.D
- Instrumentation and measure of the technical equipments in one or two experimental resorts during one season
- Identification of the technical potentials of energy savings, disappearance of energy and water peak demand
- Identification of the potentials to optimize the exploitation of equipments (energy savings), disappearance of energy and water peak demand
- Publication of a technical handbook for the management and the eco-energy technical exploitation winter ski resorts equipments

The pilot region Pays SUD realized an energetic and technical inventory, undertake a monitoring of the electrical consumption during one whole winter season and to develop the discussions and experience exchange between experts as managers, subcontractors and providers.

DESCRIPTION OF THE PILOT ACTIVITY



Ski resort equipments (ski lifts, artificial snow system and devices, slope shaping and maintenance materials) consume a lot of energy. Electric equipments are conceived and built on the basis of a local peak energy demand between 4' and 5' in the morning at winter time (between 6' and 7' in the evening generally in France). These equipments already benefit from an appropriate maintenance, but their energy functioning has to be optimized. Such an optimization is not done because of a lack of information regarding the technical performance of these equipments. It is then necessary to monitor these equipments during a whole season of exploitation in order to understand how they consume energy and produce GEG. It will allow the definition of new using procedures which would be more environmentally friendly and energy efficient.

The pilot region Pays SUD was monitoring the exploitation of winter sport resort's equipment as ski lifts, artificial snow systems and devices, slope shaping and maintenance materials during the winter season 2012/2013 in the ski resort 'Les Orres' (France). The measurement protocol, which shall be, as a result of the pilot action, a standard, has been tested and will be improved.

Pays SUD worked on the technical preparation of a permanent energy management system for the ski resort 'Les Orres', after looking for financial resources and finalizing the analysis of experimentation results. The work in the ski resort 'Les Orres' continued in the following month with accompanying the team to realize the permanent energy management system and monitoring of it.

Pays SUD organized an intermediate congress concerning their pilot action in mid-november at the ski resort 'Les Orres'. Results of the monitoring, done during the winter season 2012-2013, were presented during this congress. The workshop was a real success – it was never seen in the work of CIPRA France, that an organization was able to reach so many ski resort directors for a presentation of a sustainable them (around 35 participants, mostly ski resort directors from the department les Haute-Alpes=.

In the end of the winter season 2013/2014 Pays SUD worked on a document about the opportunities to establish an energy audit in the ski resort 'Pra Loup' with the following content: field survey, interview with stakeholders, inventory of existing urban heritage (buildings) and energy data, developing an instrumentation plan and the planned outputs / results of this project.

Pays SUD was working on a summary of the ski resorts 'Les Orres' monitoring. A follow-up project is already planned – the monitoring of the ski resorts 'Les Orres' will continue as well in the next winter seasons in cooperation with the ski resorts management SEMLORE and EDF.



1.4.2 Creating climate neutral and climate conscious holiday services, Ökomodell Achenal, Germany

Specific objectives:

- To install in the region different offers for climate neutral and climate conscious holiday services. The offers include the issues of energy, transport, food, education and awareness rising.

Moreover, in various activities the region will underline the sensitivity for CO₂-issues. The region`s profile on alternative tourism can be enhanced.

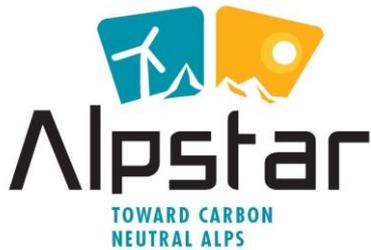
Results:

- Various holiday services from the sectors of accommodation, leisure activities and restaurants have been selected and supported for designing offers with minimized CO₂-emissions.
- Compensation for the remaining emissions will be offered to the actors through CO₂ saving activities in our region.
- Promotion of the regional purchase of food, services and goods by creating a brochure for tourist.
- Increasing support in local farmers` market through promotion of special events in holiday time.
- Presswork through to inform about the action
- The CO₂ services and the offers will be carefully included in the PR work of our holiday region.
- Moreover, in various activities the region will underline the sensitivity for CO₂-issues.
- The region`s profile on alternative tourism enhanced.
- A target group analysis regarding the tourists made.
- Dissemination of information about alternative holiday offers on our and Alpstar platform

LOCATION OF THE PILOT ACTIVITY

Oekomodell Achenal

DESCRIPTION OF THE PILOT ACTIVITY



For the local farmer's market in Grassau several events (every few weeks) were created to increase the customers' perception. For example to support the local direct marketing a leaflet was printed and some events with the local media visited.

Recording different types of renewable energy power plants and designating them in an energy road map for additional tourism attraction. To support the local direct marketing a new leaflet for 2013 was printed and some events with the local media visited. Concept was written for a forest and energy path. A working group for planning and installation of the forest and energy path (for tourists and inhabitants) was founded and two meetings organized. Research on electric vehicles and power stations was done to develop the zero emission mobility offers.

A Logo with a special recognition factor on electro mobility was developed and spread as label, banner or beach flag among public and private businesses. Together with reggae festival organisers promotion of sustainable tourism in the region.

For 2014 special activities on the local farmer's market were planned. Information about these days was disseminated via posters and leaflets in all touristic offices of the communities. Regional cookbook was prepared, printed (500 copies) and spread in the tourist offices as well. A bigger report was printed in a nationwide newspaper (Süddeutsche Zeitung) concerning Achenal valley as alternative for winter tourism.

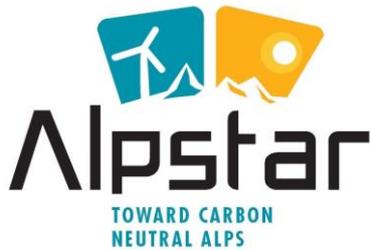
Installation of CO² calculation tool on homepage of Ökomodell Achenal (www.oekomodell.de) for guests. Preparation of cooperation with Chiemsee Summer festival in Übersee.

Cooperation with other partners:

Information exchange was stimulated with other partners having experiences in the specific sector.

Synergies with other projects/programmes:

Bioenergie-Regionen



1.5 Industries and services

1.5.1 Foster eco-innovation processes in the SMEs, Veneto region, Italy

Specific objectives:

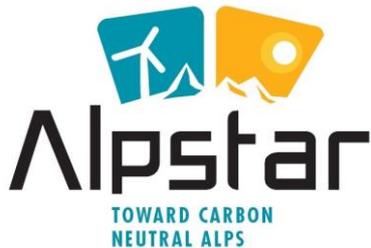
- to foster eco-innovation processes in SMEs in order to reduce carbon emissions in areas with a higher concentration of industries
- to mitigate the global environmental impact of complex production cycles

Results:

- 1) analysis of the Veneto region emission inventory to identify the main sources of greenhouse gases emissions in industrial areas and analysis of the barriers (both technological and non-technological) that prevent districts to invest in greening the supply chain;
- 2) together with the main regional industrial players and business associations, identification of the industrial clusters and of representative meta-products on which implement an eco-innovation process based upon a Life Cycle Analysis (LCA), an internationally recognized method, based on ISO 14040-44 standards, to quantify the potential environmental impacts of a product/system "from the cradle to the grave", i.e. including the extraction and processing of raw materials, manufacturing, transportation and distribution, use, re-use, maintenance, recycling and final disposal;
- 3) following the results of the LCA, introduction of a roadmap for eco-innovation approach into the regional industrial clusters through awareness raising actions both with the industrial players and the policy-makers, also in the perspective of shaping eco-innovation supporting measures into the Regional Operational Programme 2014-2020

LOCATION OF THE PILOT ACTIVITY

Almost the whole Veneto territory was considered for the pilot activity, but focused especially on those areas where SMEs are highly concentrated and integrated in a relevant productive system. Despite the economic crisis that is affecting the Veneto productive system, these areas were able to maintain their traditional manufacturing as well as their competitiveness recreating new interconnected networks (local and global). The local administration has



planned to develop local strategies in order to reduce carbon emissions related to economic activities of their territory.

DESCRIPTION OF THE PILOT ACTIVITY

The analysis of GHG emissions was based on available data provided by Regional Inventory of emissions to air – INEMAR and it has allowed to identify the contribution of GHG at province and macro-sector (i.e. aggregation of activities/processes) level. Considering the emission data of the macro-sectors related to industrial activities, the analysis was focused on those provinces with the greater contribution of GHG emissions (Venezia, Treviso, Padova, Vicenza, Verona). The main aspects emerging from the analysis are that “Combustion – industry”, “Production processes” and “Agriculture” represent the most relevant sectors in terms of GHG emissions. However the macro-sectors are highly aggregated and the analysis of the activities does not always allow identifying the sector the activity belongs to. Consequently, the identification of the sector/cluster in which the pilot action will be undertaken, is based on four main criteria:

- Relevance in terms of GHG emissions (outputs from the GHG emission analysis);
- Economic relevance of the sector/cluster at regional and national level (outputs from the analysis of the economic situation in the pilot region);
- Capability of implementing measures toward carbon neutrality;
- Capability of involving key stakeholders along the whole supply chain;

After the analysis of the Veneto region emission inventory and following the above-mentioned criteria, in September and October 2013 the selection of the target sectors of the Pilot Action started.

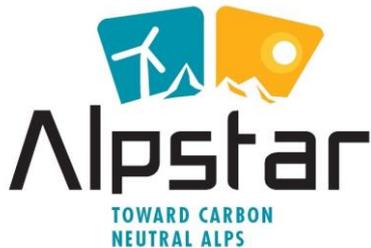
In the end, seven enterprises representative of the Veneto industrial supply chains were identified and so were their flagship products, in order to implement the eco-innovation process based on the a life-cycle approach that that enables the quantification of the cumulative environmental impacts resulting from all stages of the product life cycle. The enterprises involved (by sector) have been:

Food farming sector

- a company that produces ready-to-eat salads (production processes controlled by the firm: salad cultivation, washing and packaging phases)
- a company that produces dry cereals and legumes and it directly controls the phases of processing, packaging and distribution

Wood furniture sector

- a firm that produces wooden doors, windows and furniture



Paint manufacturing sector

- a firm that formulates paints and synthetic resins

Packaging sector

- a firm specialized in design and manufacturing of PET containers

Steel sector

- a company specialised in metal sheet cutting and selling activities

Printing industry

- an editorial group of newspapers

The 3 first sub-phases have been completed by the end of November 2013: the preliminary data collection has been completed by mid-November via email contacts and the filling of specific checklists, so that the necessary information has been gathered about each firm's organisational structure, the directly controlled operations, the reference market and the current business strategies; the definition of firm specific eco-innovation processes followed, based on a LCA tailored for the firm's needs, jointly with the data collection about the firm's meta-product.

Energy and material consumption to manufacture the product;
Transport of the raw material/component to the manufacturing site;
Waste generated during the manufacturing phase;
Release of pollutants to air and water in the manufacturing process.

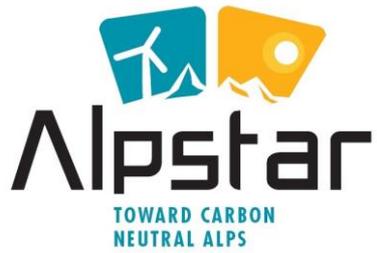
Between December 2013 and January 2014, the fourth sub-phase, the modelling of the product system life cycle with the support of specific software and tools has been completed. In January, finally, the fifth sub-phase, the Analysis and interpretation of the results, has been finalized and has led to the identification of the relevant environmental impacts related to the analysed products, especially in terms of emissions of greenhouse gases, and the indication of the best ways to improve the environmental performance of the selected enterprises.

TRANSNATIONAL RELEVANCE OF THE PILOT ACTIVITY

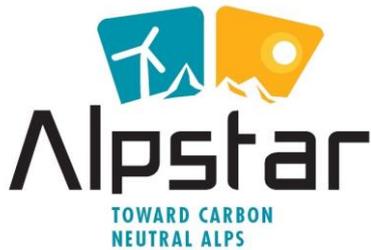
The approach adopted for implementing eco-innovation measures in the selected enterprises had the aim of:

- being re-applied to other production systems in the Veneto Region and possibly in other regions and countries;
- supporting the definition of a framework of economic tools and subsidies (i.e. POR 2014-2020) for the model implementation in other districts / production systems in Veneto;

INNOVATIVENESS OF THE PILOT ACTIVITY



Veneto Pilot Action board has set the definition of a roadmap for the eco-innovation approach for the overall regional industrial sector in a long-term perspective, through awareness raising actions following the results of the LCA Analysis phase, both with the industrial players and the policy-makers, profiling eco-innovation supporting measures which have been included in the official draft of the Veneto ERDF Regional Operational Programme 2014-2020.

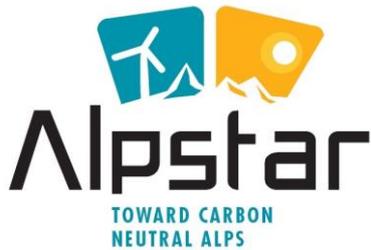


1.6 Conclusion

Factors contributing to success of pilot action implementation are numerous and are influenced by many intertwining dynamics. The list which follows is therefore only partial and contains only the most relevant ones, such as political commitment and support from the local government (ambition to act) or motivation of the key player (OPAC 38 was motivated by the study, because it provides new keys for their policy); citizens and stakeholders awareness, involvement and participation; the organizational culture of the local communities and their representatives, with capacity to engage the interest of individuals and associations; availability of data; favourable natural condition (e.g. for the employment of renewable energy - presence on the territory of biomass and hydroelectric potential); competent project leadership, documentation evaluation and exchange of, experiences, precise goal setting as well as external collaboration; and presence of financing opportunities and bankability of actions (also the question of co-funding coming from the EU on time).

Main factors of success identified were related to cooperation between residents, local enterprises and municipalities. Mobilisation of important players (e.g. involvement of the ski resorts manager, awareness and mobilisation of the ski resort personnel) and their commitment; of important companies (such as Hilti or getting critical mass of companies), local authorities and public companies to work together is key. In Achenal, implementation rely on the well proven cooperation schemes of the region: Cooperation between mayors of Achenal municipalities, public private partnership (particularly bio-energy centre Achenal), joint project development between domestic actors (farming, craftsmen) and scientific institutes, mobilizing of regional funding sources and involvement of so called “green investors”. In Bolzano, the key success factor is represented by the employment of an integrated design process approach. This is understood as an innovative design methodology which, in the initial phase of the planning process, involves the creation of a design team with multidisciplinary competence. The team has to consider the building as a whole object and not as the sum of different parts integrating all elements in an articulated and intertwined design and seeking and valorising potential synergies which would be otherwise overlooked. During the construction phase the supervising and sound coordination of all the activities also plays a key role and affects the overall success of the project. Important feature in Northern Goriška Region was using the material which is dominating in the area as a way to achieve GHG emissions reduction. This is one of the sustainable ways how to use local resources for the benefit of households and companies in Alpine regions. Quality of communication and PR work is another feature contributing to success.

The barriers to success are as well numerous and complex and related to different sectors i.e. financial, technical, awareness related, institutional. Challenges can be found in the development of the action according to a long-term strategy, the administrative processes



(e.g. to obtain the necessary permissions lasts too long, the number of municipalities and inhabitants complicates all decisions by elected representatives), insufficient financing (e.g. for campaigns), lack of education for designers and installers. Furthermore already the lack of any of the above reported factors of success might represent a barrier. Sometimes complexity is an issue. Technical barriers may emerge during the planning and during the construction phase (for instance the design of natural ventilation systems in Bolzano was more difficult than expected due to technical/architectural constraints and due to needs expressed by the institutions), bureaucratic barriers and difficulties which have arisen as well and have caused delays in the project. In Pays SUD there were difficulties in analysis: collecting of technical data not clearly structured, impossible to find a technology to do energy analyses of the artificial snow production, technical conditions to implement the monitoring instruments. Also in VRD's case, getting precise information on incomes is difficult, due to confidentiality reasons, the availability of detailed data on transports provoked need of specific enquiries, etc. As most significant obstacle lack of funding or general financial situation and interest from beneficiaries, also difficulties in reaching stakeholders, have been identified. For example in Soča Valley, the most significant problems are caused by the extremely dispersed and fragmented ownership, what makes the work harder in already difficult accessible terrain. Other barriers are related with non-integration of the various actors in the market of biomass and insufficient demand and supply in local area. In Achenal, as problem reported was dispersed population – it is difficult to reach all parties. Other barriers are related with non-integration of the various actors in the climate mitigation. Furthermore the success depends on promoting the topic in local area.

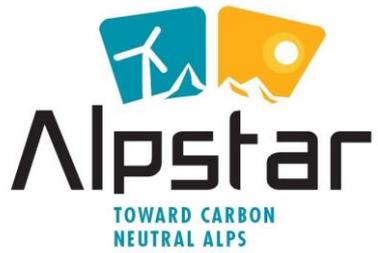
1.7 Annex I: Contact Information per Pilot Regions

More information about the pilot activities can be acquired by contacting the ALPSTAR contact points in each pilot region. Please find the relevant contacts in the table below:

Pilot Regions	Contact Information
ALPSTAR project Lead Partner – general information about the project	Ministry of the Environment and Spatial Planning Dunajska 47, 1000 Ljubljana, Slovenia Contact person: Barbara Simonič: barbara.simonic@gov.si
Northern Primorska Region, Slovenia	Soča Valley Development Centre Trg Svobode 2, 5222 Kobarid, Slovenia Contact person: Miro Kristan: miro.kristan@prc.si
Autonomous Province of Bolzano, cities of Bolzano/Bozen and Bressanone/Brixen, Italy	EURAC – European Academy Bolzano Viale Druso 1, 39100 Bolzano, Italy Contact Person: Roberto Vaccaro: roberto.vaccaro@eurac.edu
Veneto Region, Italy	Veneto Region – Industry and Handicraft Section Fondamenta S Lucia Cannaregio 23, 30121 Venezia, Italy Contact Persons: Nadia Garetti: nadia.giaretta@regione.veneto.it Denise Florean: denise.florean@regione.veneto.it
Aachental, Southern Bavaria, Germany	Ökomodell Aachental e.V. Kirchplatz 1, 83259 Aachental, Schleching, Germany Contact person: Stefan Kattari: info@oekomodell.de



<p>Alpine Rhine Valley, Austria-Switzerland-Liechtenstein</p>	<p>Department for Energy and Climate Protection, Vorarlberg Provincial Government, Austria Römerstraße 15, 6900 Bergenz, Austria Contact Person: Karin Feuerstein: karin.feuerstein@energieinstitut.at</p> <p>Bureau for Spatial Development and Geo-Information of the Canton of St. Gallen, Switzerland Lämmlisbrunnenstrasse 54, 9001 St. Gallen, Switzerland Contact person: Markus Zimmermann: markus.zimmermann@sg.ch</p> <p>Office for Environment, Liechtenstein Dr. Grass-Strasse 10, 9490 Vaduz, Liechtenstein Contact person: Roland Jehle: roland.jehle@llv.li</p>
<p>Valence Romans Déplacements and OPAC 38, France</p>	<p>Rhônealpiénergie-Environnement Le Stratège - Péri 18 rue Gabriel Péri, 69100 Villeurbanne, France Contact person: Laurent Cogérino: laurent.cogerino@raee.org</p>
<p>Pays SUD and Parc Naturel Régional du Queyras</p>	<p>CIPRA France 5 Place Bir Hakeim, 38000 Grenoble, France Contact person: Julika Jarosch: julika.jarosch@cipra.fr</p>



<p>Valtellina Valley, Italy</p>	<p>Lombardy Foundation for the Environment Largo 10 Luglio 1976, 1, 20822 Seveso, Italy Contact person: Mita Lapi: mita.lapi@flanet.org</p>
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