

# BOOKLET OF GOOD PRACTICES

2021

INITIATIVES FOR A SUSTAINABLE RECOVERY  
IN EUROPEAN MOUNTAINS



# Table of contents

<b>Agriculture &amp; rural development</b> .....	<b>1</b>
Results-based agri-environment payment schemes to protect mountain grasslands.....	1
MapLoup: a predation monitoring and analysis portal for breeders and local stakeholders .....	3
<b>Education &amp; training</b> .....	<b>5</b>
Piccole Scuole: distance learning to maintain schools in remote villages.....	5
ODISSEU Rural internships to boost youth employment .....	7
<b>Energy</b> .....	<b>9</b>
Cozzano: a sustainably Smart Village .....	9
<b>Environment &amp; climate</b> .....	<b>12</b>
Hiking routes to explore the impacts of climate change on mountains.....	12
Giving life to Slovenian grasslands .....	14
<b>Forests &amp; wood chain</b> .....	<b>16</b>
Revitalising the Piccole Dolomiti wood value-chain with local charcoal production .....	16
<b>Mobility &amp; infrastructures</b> .....	<b>18</b>
Sarantaporo community network: a social innovation to connect people .....	18
Flugs: shared electric cars for cheap and sustainable transport .....	20
<b>Mountain products</b> .....	<b>22</b>
Rørosrein: a taste of tradition and diversification .....	22
Mon Lait: quality, sustainability and fair income in the same glass of milk .....	24
<b>Services of general interest</b> .....	<b>26</b>
A village delivery service for the rural ageing population .....	26
A cross-border hospital to make up for the lack of medical care in the Pyrenees.....	28
Alpine Maternity: social innovation improves healthcare in mountain areas .....	30
<b>Sustainable tourism</b> .....	<b>32</b>
Ecotourism trainings for handicraft entrepreneurs: a driver of sustainable tourism in the Carpathians .....	32
<b>Youth</b> .....	<b>34</b>
A toolbox to better involve the youth in mountain governance.....	34

*This booklet is the result of the exchange of good practices carried out by Euromontana in 2020 with the aim of showcasing innovative initiatives for the sustainable development of mountain areas in Europe.*

*January 2021.*





## Results-based agri-environment payment schemes to protect mountain grasslands

*In the Târnava Mare and Pogányhavas regions, Romania, mountain grasslands' species are endangered due to the deterioration of habitats. To protect the biodiversity of these mountain areas, the Fundatia ADEPT worked with the Romanian government to test the efficiency of results-based agri-environment payment schemes.*

### Farming and habitats' restoration

In the Târnava Mare and Pogányhavas regions, Romania, species-rich grasslands habitats constitute part of Romania's extensive High Nature Value (HNV) farmland. These grassland habitats have some of the highest floristic diversity recorded in the world and support substantial populations of rare vertebrate and invertebrate fauna. However, 5,000 ha of this area is threatened by overgrazing in most accessible sites and the abandonment of less accessible grasslands (causing spreading of thorny scrub). The effects of the deterioration of Romanian dry grasslands are obvious but still easily reversible by the re-establishment of traditional management.

[Fundatia ADEPT](#) - a biodiversity conservation and rural development NGO based in Saschiz, Romania-worked alongside with the Romanian government to preserve and improve the status of dry permanent grasslands (mainly hay meadow and pasture) in these two regions, by testing the suitability and practicality of results-based agri-environment payment schemes (RBAPS). The RBAPS have been used to finance management regimes which produce good quality hay and protect wild species in the long-term.

### Activities carried out

Project experts conducted studies to test the eligibility of the grasslands proposed by farmers for RBASP. To this end, experts selected and tested 30 species or species groups as indicators of HNV meadows, as they only grow in hay meadows managed at low intensity and are associated with high plant and animal species richness as well as good quality hay.

Fundatia ADEPT signed three-year contracts with 73 eligible farmers and issued the payments (one in 2016, one in 2018).

During a three-year period (2016-2019), farmers were asked to record yearly the presence (or not) of species belonging to the list and mow the meadows at least once a year, with a first cut after the 10<sup>th</sup> of June in order to allow controls to take place. In return, farmers received payments € 213 – 259 per ha according to the number recorded of species.



Credits Fundatia ADEPT

MORE INFO

FUNDATIA  
ADEPT



## Resources and uptake


The [project](#) was developed between 2015 and 2019 and financed by DG Environment and Deutsche Bundesstiftung Umwelt, with a budget of € 145 000.

At the local level, the project has proven to be very popular among farmers, who appreciate the flexibility it offers and have sent many applications to take part into it. Through RBAPS, farmers have the freedom to manage their grasslands according to the local conditions and weather, and they are directly rewarded for the service they provide for nature.

The European Commission financed [other pilot projects](#) for the adoption of RBASP in Ireland, United Kingdom and Spain. Similar schemes are also carried out in France, Germany, and Switzerland.



### Innovative aspect



Instead of typical agri-environment schemes - which pays for the implementation of management specific practices- result-based agri-environment schemes pays for the “results”: the presence of certain species as indicators of good quality meadows. In such a way, the role of farmers is less constrained by EU/national prescriptions in how to set appropriate management practices and it rather valorises their expertise, knowledge of the territory and capability to adapt their practices over time.



## MapLoup: a predation monitoring and analysis portal for breeders and local stakeholders

MapLoup is a predation data portal with an online visualisation interface. Created in 2019 in the Auvergne-Rhône-Alpes region by the Auvergne-Rhône-Alpes Pastoral Network and the Union for the Protection of Pastoral and Rural Activities (USAPR), it allows breeders, shepherds, and decision-makers to access to real-time data on wolves in a clear, centralised and quick way.

### An overview of predation for breeders and decision-makers

The [MapLoup](#) portal provides a real-time and long-term inventory of predation at various administrative levels, from regional to municipal. The portal includes data during the season, related to the declaration of attacks and requests for compensation, in order to be able to follow the current state of predation, and also provides consolidated results in graphs and tables in order to analyse predation at various scales. First tested in the Belledonne Massif in 2017, the system has been extended over the years to currently cover a large part of the Alpine massif and the Auvergne-Rhône-Alpes region.

This tool helps on the one hand to provide farmers with real-time and reliable data on requests for compensation, which suggest the presence of wolves in their areas. On the other hand, the system provides regional decision makers, administrations, and partners with mapped and quantified information on the current year and analysis on previous years. The whole system facilitates a common analysis of predation and will feed into initiatives and support processes targeting farmers and shepherds. Farmers, officials and decision-makers, after registering on the MapLoup portal, are directly informed of any new declaration by a text message notification, when a new alert is received by pastoral services, operators of the system.

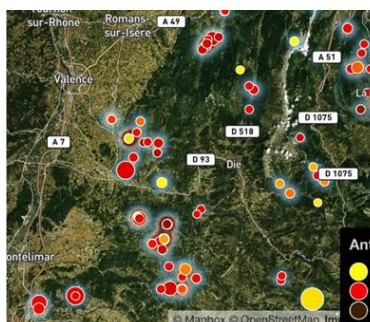
### A map and an atlas

Access to MapLoup data is free for all Internet users. The MapLoup portal offers two data visualisation tools, in order to capture both the immediate situation and long-lasting trends. In both cases, chronological timelines are offered to visualise changes over time.

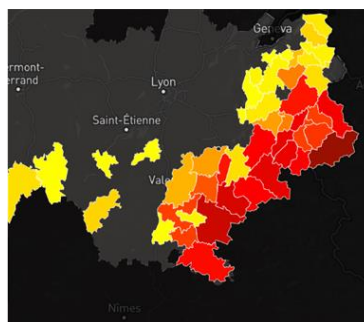
**MAP:** the dynamic map of the points corresponding to suspected wolf attacks provided by the pastoral services of Savoie, Isère and Drôme. This tool has been improved over time and now offers a more fluid interface and also generates, for those actors who have requested it, notification (by text message or e-mail) of any attack within a distance of approximately 10 km from the point of attack.

**ATLAS:** the map that provides an interactive and long-term overview of predation at different administrative scales, from the municipal to regional level.

ATLAS



MAP



MORE INFO



## Reliable and real-time data

The consolidated data are based on:

- For the atlas, State services (Géoloup, which lists the attacks that have led to compensation. These data are provided anonymously by the Regional Directorate for the Environment, Development and Housing (DREAL) of the Auvergne-Rhône-Alpes region).
- For the MAP section, data collected during the process of attack reporting.

The system therefore allows monitoring both the wolf's permanent presence in the so-called permanent presence zones and its occasional occurrence.

## Stakeholders involved in the project

The development and evolution of this portal are discussed within a steering committee composed of the AuRA Pastoral Network and its technical and financial partners, the Departmental Directorates of Territories, the Regional Directorate of Food, Agriculture and Forestry of the Auvergne-Rhône-Alpes region (DRAAF), the French Office for Biodiversity (OFB) and the Research Institute for Agriculture, Food and the Environment (INRAe).


Given the positive feedback from farmers, shepherds, local decision makers and public authorities, it is considered, in collaboration with the service providers INRAe and USAPR, to consolidate the system and extend it in the short term to the counties of Haute-Savoie and Ardèche as well as to part of the Provence-Alpes-Côte-d'Azur region. The aim is to propose a common set of data for all these scales.

This project was developed in partnership with the Union pour la Sauvegarde des Activités Pastorales et Rurales (USAPR) and with the support of data from the Regional Directorate for the Environment, Development and Housing (DREAL) Auvergne-Rhône-Alpes.

This project received financial support from the Auvergne-Rhône-Alpes Region. INRAe Grenoble is in charge of the project's software development.



### Innovative aspect



MapLoup puts regional predation data at the service not only of policy makers but also of farmers and shepherds. Its real-time notification system makes it an efficient tool for preventing livestock attacks.



## Piccole Scuole: distance learning to maintain schools in remote villages

The Piccole Scuole Movement is a network of small schools created by INDIRE, the Italian National Institute for Documentation, Innovation and Educational Research. The movement aims at offering equal education opportunities in remote villages, in particular in mountain areas and islands. ICT technologies are used to connect small schools so that they can share classes for certain subjects but also to make students work on common projects. The overall objective is to support the survival of villages' schools and fight depopulation.

### ICT tools to share classes and projects

The [Small School Movement](#) was created in 2017 by 60 small schools and currently gathers 390 educational institutions, 2.284 school complexes, 986 multi-classes, 193.762 pupils, and 27.074 teachers. Many of these schools are in the 72 [inner areas](#) of the Italian territory. The Small Schools' [Manifesto](#) proposes three pillars for the sustainability of small or isolated schools which capitalize on their strengths as: being communities of memory and quality learning, having the technologies to support social inclusion, and using the experience of multiage classes, as a resource, not a constraint.

By using ICT technologies and distance learning practices, the initiative connects schools from the network to share common classes and projects. The project is in particular targeting the small schools where the limited number of pupils obliges to create multi-ages classrooms. Videoconference tools are used for:

- Shared lessons: two or more classes from different schools are connected to each other, follow the same course and can exchange. Shared teaching is particularly interesting for schools with multi-ages classes as it helps the teacher to focus on a certain age-group at a point while another age group is remotely following a more adapted course. This is a "hybrid setting" combining at the same time digital interactions and physical ones.
- Extended learning environment: one or more classes from different schools work online on a common project and organise meetings between teachers and students. In this case, distance learning is not intended to replace physical teaching, but rather to complement traditional teaching practices and encourage interaction between teachers and students from different schools. It helps students to acquire digital skills pedagogically.

Both methods were formalized in "[Handbooks of small schools](#)", where tools guidelines and operational guidance are available, and generally arise from joint research work between classes and INDIRE.

During the COVID-19 crisis, the Piccole Scuole Movement also supported the emergence of a solidarity network launched by INDIRE with the creation of training workshops that allowed teachers to [maintain the link between small schools and the territory](#), to promote the [home environment as an active educational laboratory](#) and to encourage a change in the vision of the school towards a [pedagogical alliance with the territories](#) by including local communities in the life of the school.

Credits Piccole Scuole



MORE INFO



## Support from the research side

**INDIRE** is the National Institute for Documentation, Innovation and Educational Research and is part of the Italian Ministry of Education. It aims at encouraging the permanence of schools in geographically disadvantaged territories, maintaining an educational and cultural presence, and fighting the phenomenon of depopulation. This objective is pursued by the research group "[Methodological and organisational innovation in small schools](#)", made up of researchers and collaborators committed to support the most isolated schools: Giuseppina Rita Jose Mangione, Giuseppina Cannella, Laura Parigi, Maeca Garzia, Stefania Chipa, Michelle Pieri, Alessandra Anichini, Rudi Bartolini, Lorenza Orlandini, Francesca De Santis. Tania Iommi and Anna Tancredi.

Through case studies and experimentations that connect teachers from small schools and researchers, INDIRE explores innovative pedagogy for small schools with multi-ages classes, which are struggling to perform effectively. INDIRE also supports teachers in the transition towards digital education and the use of ICT tools. Researchers first analysed the educational and technological context of these schools through case studies to optimize the use of distance learning practices. The network also proposes since 2018, summer schools, toolkits and webinars to help teachers and to give food for thought on the interaction between education and territory.



Credits Piccole Scuole

## Resources

INDIRE intervenes on the training of teachers and school managers, including through teaching and experimentation in the classroom, study visits and experiences across small schools in different territories, as well as techniques to be used immediately which are presented in territorial workshops during INDIRE itinerant and annual summer schools. More than 120 teachers were trained on specific methodologies over the years thanks to the support of the National Multi-Fund Operational Programme (2014IT05M2OP001) "For schools - skills and learning environments 2014-2020", under Axis I "Investing in skills, education and lifelong learning".

To better understand the needs in isolated mountainous areas or islands and propose quality education, INDIRE also collaborates with various networks and institutions such as the National Association of Italian Municipalities (ANCI), Ecoles Eloignées en Réseau (the Small Schools Network of Québec), but also OECD and ENRD on the rural development side, as well as with research organisations such as the European Educational Research Association and the Association for Teacher Education in Europe.



## Innovative aspect

Piccole Scuole helps to address the issues faced by multi-ages classes in small schools by using distance learning to maintain quality education in mountain villages. In the same way that sharing resources and staff in the tourism or health care sector can help to maintain offer in mountain areas, sharing teaching slots can be a solution to preserve small schools and villages' population. It also encourages interactions between teachers and researchers to find solutions to a problem that is not really being addressed so far.



## ODISSEU Rural internships to boost youth employment

*ODISSEU is a Spanish programme which aims at facilitating the return of young people to rural areas through employment. This programme of the Catalan region runs awareness raising, training and networking activities with rural companies in order to counterbalance the depopulation and masculinization of the region's rural territories.*

### Internships to support youth employment in rural areas

ODISSEU wants to contribute to promote the offer of attractive and quality living conditions for young people in rural areas by addressing the major challenge of skilled employment in these territories.

MORE INFO

In 2016 was launched the “Odisseu Practicum” programme, which offers an internship grant to university students from the Catalan region. Grants aim both at encouraging their return to rural areas and at promoting rural competitiveness. Internships carried out under this programme must include at least 300 training hours in the company. Interns’ retribution amounts to 6 euros per hour. 50% of interns’ remuneration is financed by the host company itself and the other 50% are financed by ODISSEU.

For its first year in 2016, 13 grants were allocated to 11 companies located in rural municipalities to host paid interns from the region. The interest for the programme, both from companies and students, increased over the years. For the latest edition, in 2019, 136 placement offers were published by 51 local enterprises and 57 grants were allocated.

Results from the first editions show good rates of integration in employment. Around 21% of internship contracts were extended and, after one year, 17% of students were still working in their host enterprise. These figures need to be nuanced, as a large proportion of the students participating in the programme wish to continue their studies after the placement has ended and would therefore not be able to continue working in their company in any case. Yet more than 60% of the students surveyed said they would like to apply to work in the company after completing their studies.

### Profile of beneficiaries

Most of the enterprises interested in the programme are SMEs. These small companies, counting between 2 and 10 employees, represent 52% of the programme’s beneficiaries. If the majority of participants were private companies, yet 40% of host entities were public organisations.

Statistics collected by ODISSEU are interesting for the reflection on youth employment in rural areas. Indeed, among the participating companies, 64% had never hosted a trainee and 62% stated that they would not have done so without the support of the programme. Apart from the financial dimension, the decisive factor of their involvement is the support provided by ODISSEU to contact students with a high level of education.

The most requested profiles over the past years were in law, economics, tourism, marketing and communication as well as agronomy, forestry and natural sciences. Through the programme, these students tested their skills and knowledge in a wide range of organisations: from the Mountain Forest



Foundation to Cerdanya Tourism Office, libraries, municipalities, Local Actions Groups, processors of regional products and social association working for social insertion or for persons with a disability.

However, students in social and human sciences encountered more difficulties in finding a relevant internship offer through the programme. For the years to come, ODISSEU wants to improve its communication through university administrations, to increase the programme's visibility in metropolitan areas and wants to further promote the high quality of life in rural areas, including in terms of housing.



## Resources

The programme is a joint initiative of the Rural World Foundation and the Association of Rural Initiatives of Catalonia, with the collaboration of the Local Leader Action Groups of Catalonia and the network of youth professionals.

It is promoted by the Directorate General for Rural Development of the Department of Agriculture, Livestock, Fisheries and Food (DARP) and the Directorate General of Youth of the Department of Social Affairs and Families.

ODISSEU is a LEADER/CLLD initiative addressing Priority 6 "social inclusion and local development" of the regional Rural Development Plan. It is financed by the RDP (€100.214), the European agricultural fund for rural development (€43.092) and national and regional funds (€57.122).



## Innovative aspect

Rural internship programmes are multiplying in Spain. The good results of ODISSEU in terms of awareness raising on rural life and employment rate can inspire other countries seeking at maintaining the attractiveness of mountainous rural areas among the youth. Such programme can be used as a prevention tool in areas at risk of depopulation in the future, instead of being reactive only. It can also help to create skilled jobs in rural regions and attract young talents who will contribute to build smarter mountains.





## Cozzano: a sustainably Smart Village

Cozzano is a municipality of 270 inhabitants, located in the high valley of Taravo in South Corsica. The village began its energy transition 20 years ago by investing in sustainable production. Through the Smart Village concept, local authorities wish to put digital technologies at the service of energy sustainability to accelerate the village's transition.

### Cozzano's energy mix in transition

#### The use of biomass

##### MORE INFO

The village of [Cozzano](#) was the first Corsican municipality to be equipped with a biomass heating plant, inaugurated in 2015. With a power of 100kW, the heating plant produces hot water that is used to heat 1200m<sup>2</sup> of buildings in the village, including the town hall, the kindergarten, the school and the post office. The heating plant is powered by wood pellets that the municipality obtains from Corse Bois Energie (Corsica Wood Energy), while awaiting the possibility of using its own biomass resources.

For one year of heating, the village uses an average of 55 tonnes of wood pellets. This allows Cozzano to avoid the consumption of 13 tons of fuel oil and the emission of 168 tons of CO<sub>2</sub> each year and allows the municipality to save 15.000€ on its heating bill annually. The installation of the biomass heating plant is also of considerable socio-economic interest since it facilitates the structuring of the wood industry in the region by encouraging the valorisation of wood waste in a logic of circular economy. According to local authorities, the wood energy sector creates 4 times more economic activity in the region than other energy sectors. In a region where heating needs coexist with forest resources, this initiative is a concrete example of sustainable development in its three dimensions - environmental, social and economic. On the other hand, another objective is to participate in the sustainable management of forests in the region and to reduce the risk of forest fires.

This biomass heating plant is the result of the 2012 call for projects "25 wood boilers", launched by the Ecological Transition Agency (ADEME) and the Corsican Regional Authority. Its total cost amounts to €124,330, 80% of which has been financed by European funds (ERDF), the Corsican Regional Authority and ADEME. 50,000€ have been invested by the municipality of Cozzano in this project. For more examples of the same type, see our good practices on the [village of Alzen](#) and on the [wood chip production chain in the Piccole Dolomiti](#).

Network of the biomass heating plant



Credits Anne Sophie Tassart

Turbine of the micro-hydro power plant



Credits Anne Sophie Tassart

### *The use of hydropower and photovoltaics*

Jean-Jacques Ciccolini, Mayor of Cozzano, later had solar panels being installed on the roofs of the village's social housing stock. A micro-hydroelectric power plant was installed on the drinking water network in order to produce electricity by turbining the water as it is conveyed to residents. Another hydroelectric power plant project, on a river, is also in progress.

Cozzano's goal is to become a positive-energy village, producing twice the amount of (sustainable) energy it consumes. According to its calculations, the municipality should eventually be able to resell its surplus energy to EDF (Electricity of France) for a value of 150.000€ per year.

### **Smart Paesi, digital technology promoting sustainable development**

Wishing to continue its efforts in sustainable development, the municipality of Cozzano got involved in the [Smart Paesi](#) project - literally Smart Village in Corsican. Thanks to the sustainable energy production already in place, this local project intends to accelerate the transition of Cozzano using digital tools. By using connected devices and collecting environmental data, Smart Paesi's partners want to increase the climate and energy resilience of the village.

The project, designed to be "inclusive but not intrusive", was developed with the inhabitants and the municipal team. Several actions are carried out in parallel to collect data, visualise and model them in order to optimise the management of the different natural resources. The new LoRa technology has been deployed in the municipality: the low-energy long-range wireless technology, often used for the Internet of Things and the study of natural phenomena.

### *Awareness-raising and support to decision-making*

Wireless sensors for fine particles and ozone were installed on the balcony of the town hall to measure the air quality in the village and to assist local authorities in taking environmental decisions.

An (anonymous) energy consumption data collection system was set up. Digital technology, and in particular Open Data, is increasingly being used to support the energy transition, as it enables to analyse the consumption of resources. To make the data accessible to all, project's researchers developed a simple data visualization tool, making possible to raise awareness on energy savings by informing citizens in real time whether their consumption is up to standards or whether they are over-consuming, with a simple green or red colour code. A simulation tool was also designed; on the basis of current data, it enables to anticipate the future evolution of the village's energy consumption and helps local authorities to adapt its energy policy.

Awareness-raising activities are also carried out in the school in Cozzano. Their aim is to engage children's thinking on sustainable development and resources consumption, to introduce them to digital technology and its possible uses (Artificial Intelligence, Open data) but also to include them in the project and communication through the school's newspaper.

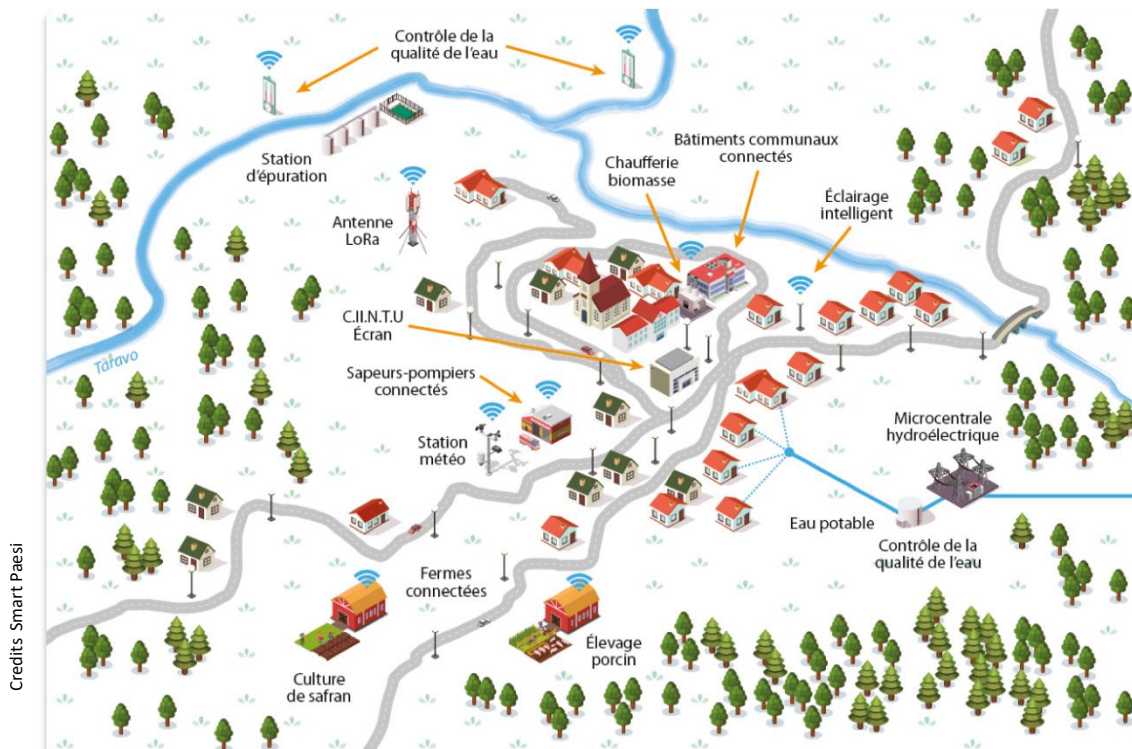
### *Resilience to natural hazards and optimisation of agricultural resources*

Two weather stations were installed to collect meteorological data useful to the local fire brigade, such as the strength and direction of winds and rainfall accumulation. These data help to prevent natural risks, particularly floods and forest fires. This has, for example, led to a discussion on the strategic positioning of fire trucks, depending on the winds, to combat fires more efficiently.

Geo localisation collars were also distributed to the local black pig breeder so that each animal can be tracked. This technique, which is being developed in several countries, helps farmers to save time in

regrouping their herd, but also to avoid unnecessary 4x4 journeys in search of lost animals, not to mention the benefits for animal welfare in the event of an injured animal. On this topic, see also [our good practice on Terra Thessalia and FindMy](#).

Finally, sensors were also placed in organic saffron crops. The data collected enables to measure the soil quality, which is crucial for this plant, and to reduce water consumption by optimising irrigation. These data, coupled with those provided by weather stations, also make it easier for the farmer to anticipate the harvest - because saffron flowering occurs when the day/night gradient is significant.



### Resources

The Smart Paesi project (2017-2020) brings together various regional actors: an IT research team from the University of Corsica, EDF, the Corsican IT company SITEC and the village of Cozzano, a real living lab. The project initiators wish to prove the relevance of the Smart Village concept in rural areas as well as the usefulness of digital technology to tackle today's challenges, particularly environmental ones.

The project is the result of a call for projects on digital technology from the Corsican Regional Authority and is financed through the ERDF. Smart Paesi has a budget of €1.6 million.



### Innovative Aspect

The village of Cozzano is an example of an integrated policy for sustainable development and resource management at the local level. The municipality has succeeded in developing green energy using the natural resources of the village and in involving the inhabitants and various local stakeholders in a sustainable approach. Some of the digital tools developed by Smart Paesi are particularly relevant for the resilience of forests and agriculture in the mountains.



## Hiking routes to explore the impacts of climate change on mountains

Climate change's effects are more and more visible in the Alps, with the retreat of glaciers and the shortage of certain species. In the framework of the Green Deal, the European Union will launch a European Climate Pact to raise awareness on the consequences of climate change and involve citizens in climate actions. In Germany and Austria, the Interreg project KlimaAlps wants to raise public awareness on climate change in mountain areas by mapping out hiking routes to discover the traces of climate change's impacts.



### Climate change is already affecting the Alps

MORE INFO

Climate change severely affects the Alps and their glaciers. In 2019, a [study](#) demonstrated that the Alps would be mostly ice free by 2100 due to global warming. From now on until 2050, 50% of the glacier volume will disappear, independently from the world's greenhouse gas emissions management, according to scientists. As for glaciers after 2050, their future remains closely linked to climate policies implemented to reduce emissions.

But effects are already visible today and climate action is nowadays urged both for governments and citizens. In the cross-border region between Germany and Austria, the [KlimaAlps](#) project wants to encourage individual climate action and nature protection. To awake the potential for climate protection in everyone and make it effective, KlimaAlps aims at using research results and scientific evidence as food for thoughts and actions by transferring research to education.

Making knowledge on climate change visible and available to everyone in the region follows two processes. Firstly, training "climate educators" on the consequences of climate change on different mountain resources, such as water and forests. Secondly, mapping sites in mountain regions where the impacts of climate change are visible and linking these throughout thematic hiking routes.

### Training educators to explain climate change effects on mountains

The Climate Educator Training consists of seven modules, designed by regional experts, that deal with the regional visualisation of climate change in the landscape. Targeted persons, such as hiking guides, teachers, environmental protection agents, are trained on climate change consequences in the region, such as the impacts on glaciers and biodiversity. The objective is to transfer knowledge from researchers to educators and provide them with the keys to understanding the complex interconnections of climate change and its global impacts in mountain territories. The seven modules are:

- Climate change, taught by the Climate Alliance Tyrol
- High mountains, by the Zillertal Alps Natural Park
- Forests, led by the Tyrol State Forestry Service and the Karwendel Natural Park
- Water in mountains, designed by the Natopia association, the Königsdorf Environmental Station and the Benediktbeuern Centre for Environment and Culture
- Peatlands, created by the above mentioned three organisations
- Man settlement, designed by KlimaAlps' team
- Alpine pastures, also by KlimaAlps

## Making climate change visible with hiking routes

The objective of these training modules is to enable climate educators to transfer knowledge to the general public in an educational and concrete way thanks to thematic hiking routes. KlimaAlps is also using research, in collaboration with environmental and climate research centres in the consortia, to map the different sites affected by climate change in the region, with the aim of obtaining an interactive map of visible impacts of climate change in mountains. Beyond climate educators, the map is designed to be used by other actors such as teachers during school trips and excursions and by tourist offices to promote a sustainable activity triggering climate understanding and action.



A pilot hiking route is being created in high mountains in the Zillertal Alps, near the [Berliner Hütte](#) – first refuge built in the region in 1879 – where traces of glacier retreat can be seen in the immediate vicinity.

## Human and financial resources

The project relies on the involvement of a wide range of regional actors, from education and tourism sectors, research, and policy, to strengthen the holistic approach of climate change in the area. Any individual can join KlimaAlps and contribute to raising awareness on climate change in mountain territories: if you are doing research on the topic and would like to pass on the results to children or adults or if you work in the tourism sector and would like to expand your offer of outdoor activities in the region, then [register to join](#) the KlimaAlps network.

KlimaAlps' total budget amounts 821.880 euros, out of which 75% is funded by the 2014-2020 Interreg Austria-Bavaria programme (about 616,000 euros). The Province of Tyrol is also supporting the project with a 47.000 euros grant.

Although the project is still running (it started only in 2019 and will end in 2022), the initiative gives examples of concrete actions which can be replicated in other mountain areas to raise awareness on climate change in our regions and even beyond, considering the number of ecosystem services provided to the entire society by mountains such as water supply.



## Innovative aspect

Using hiking routes to discover mountains' ecosystems or as a tool for social integration already exist in Europe. Creating itineraries to find out more on climate change effects on mountain areas is however quite new. It can help the general public to understand the nature and extent of climate damages and empower people to take action. Furthermore, the initiative promotes a new type of sustainable outdoor tourism which can also be performed during low seasons and encourage tourists to protect mountains.



## Giving life to Slovenian grasslands

*Biodiversity decline in agricultural landscapes has been problematic for decades in Slovenia, and extensive grasslands are one of the most threatened habitats in the country. The LIFE project “Conservation and Management of Dry Grasslands in Eastern Slovenia” addresses biodiversity conservation in agricultural environments.*

### Restoring mountain grasslands

The project’s main aim is to improve the unfavourable status of dry grasslands and ensure the long-term conservation of these habitats, as well as plant and animal species connected to them in the following areas: Haloze, Pohorje, Kum and Gorjanci-Radoha. All four areas face problems of overgrowth and abandonment of agricultural use on one hand and the problem of unsuitable (intensive) agricultural use of land on the other.

MORE INFO



This LIFE project, also called “[life to grasslands](#)” contributed to the implementation of a Natura 2000 Management programme (2015–2020) to improve the unfavourable conservation status of some of the most endangered grasslands habitat types in Slovenia (Semi-natural dry grasslands and scrubland facies on calcareous substrates). One of the challenges was to find opportunities for the cultivation of once-abandoned agricultural land, and thus show that the production of quality agricultural products and protection of nature can be compatible.



### Activities & results

Some of the actions included in the Natura 2000 programme included:

- rental and purchase of abandoned grasslands to ensure sustainable management.
- communication and networking of landowners and farmers, thereby ensuring the management of abandoned lands.
- mapping of overgrown areas and removal of the overgrowth.
- assurance of sustainable management of grasslands by providing grazing equipment and free rental of lawnmowers, on the basis of concluded agreements with owners and tenants.
- restoration and establishment of traditional orchards; and promotional and educational activities.

The project is still ongoing but so far 81 agreements with farmers and landowners have already been signed, and currently 181 landowners/tenants are involved in project activities. Through a) the involvement of farmers in the project’s activities and b) signed agreements with farmers and landowners on their inclusion in the project activities, they have so far managed to ensure sustainable management of dry grasslands on 518 ha of land.

### Resources & governance

“Conservation and management of dry grasslands in Eastern Slovenia” also known as “Life to grasslands” is a Slovenian project funded by the LIFE programme. LIFE finances the project with a 2,923,936.00€ grant (75% of the total budget amounting 3,898,582€). Started in November 2015,



under the coordination of the Institute of the Republic of Slovenia for Nature Conservation, the project will end in October 2020.

Although the project is still running, it already came out with inspiring results to restore and protect mountain grasslands. More information on the pilot areas but also didactic material to raise awareness on the importance of mountain grasslands can be found on [Life to grasslands' website](#).



#### Innovative aspect

An important information campaign has been running throughout the LIFE to Grasslands project targeting a wide variety of stakeholders (farmers, NGOs, land managers, schools and universities, local inhabitants) which is a key factor of success of this project.





## Revitalising the Piccole Dolomiti wood value-chain with local charcoal production

*In the prealpine area of Piccole Dolomiti, chestnut trees are part of the local heritage but have lost their traditional role for the local economy over the past 50 years. Foresters want to restore the regional wood value-chain by using wood waste to produce locally made wood charcoal.*

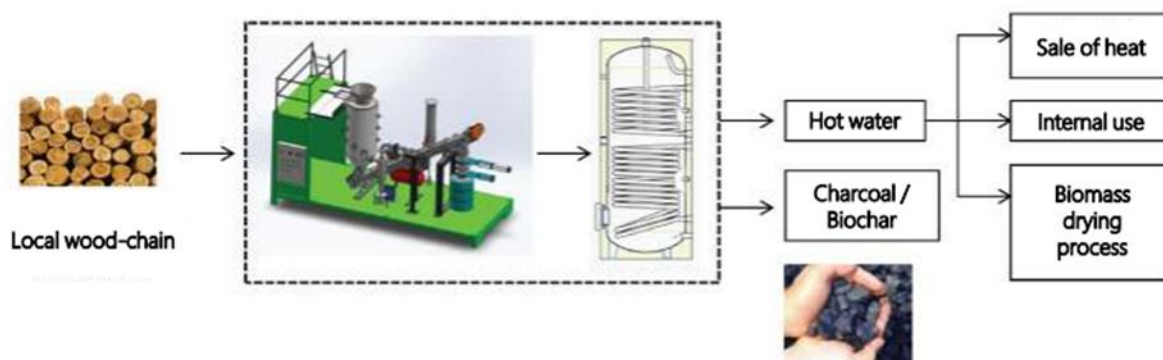
### A circular use of timber resources

Chestnut trees' wood has been largely used in the past in the Veneto region to produce poles, furniture, fixtures and handcrafts but global competition decreased its importance in the wood market. Foresters gathered in the [CAREGA project](#) (Certified charcoal for the active recovery of the economy and the environmental management of "Piccole Dolomiti Vicentine") want to revitalise marginalised territories through the creation of new business opportunities based on the sustainable exploitation of local wood.

MORE INFO



To improve wood mobilisation and foster the use of timber residues, foresters are developing a prototype plant to produce locally made charcoal. From large wood chips, the plant can produce 50kg of charcoal per hour through a process of biomass heating. The excess of hot water produced during the process will be an internal and external source of heating. Moreover, as many parcels are PEFC certified (Programme for the Endorsement of Forest Certification) in the region, the objective is to use as much as possible timber residues from these forests. This would allow to sell PEFC certified charcoal and to put a new sustainable product on the regional market, while also promoting the sustainable management of woods.



Credits CAREGA project

### A "kilometre zero" product to place on the market

Produced charcoal will be first provided to local stakeholders for an experimentation phase in order to get feedbacks on the product's quality. Retailers will communicate on the existence on this local product and propose customers to fill in an anonymous survey to assess to the product's appeal. A tour will also be organised with local operators to raise awareness on the local charcoal value chain and on the historic-natural context of Piccole Dolomiti. CAREGA partners will also identify potential purchasers and analyse the market opportunities and challenges, in particular the willingness from operators to pay for a locally produced charcoal.

Moreover, foresters want to reach out to a wider audience on the importance of forest management. 12 hours of forestry lessons will be scheduled in primary schools of the region to inform pupils about forests in their territory, raise awareness on natural heritage and environmental protection as well as to spread the idea of innovation among the younger generation.

The promotion approach chosen is an integrated strategy aiming at stressing the importance of the regional heritage, of sustainable forest management and of local consumption.

### Resources

The CAREGA project is led by the Associazione Forestale Vicentina and brings together forestry companies, researchers and non-profit organisations. The project is an EIP AGRI Local Operational Group fully funded under the Venetian Rural Development Programme 2014-2020 since 2018.

The overall budget of € 367,527.75 is mainly dedicated to the development of the prototype plant (€ 242,006.00), the market analysis (€ 29,917.95) and the dissemination and awareness-raising activities (€ 25,314.60).



### Innovative aspect

A yellow lightbulb icon with a hand holding it, symbolizing an idea or innovation.

Using timber waste to produce charcoal at local level meets with the objectives of the circular economy. Not only the initiative will put a “kilometre zero” product on the regional market but will also create job opportunities in the forestry sector in the Piccole Dolomiti. The innovative plant prototype can also help other industries on the way towards sustainability.



Credits Sarantaporo.gr

## Sarantaporo community network: a social innovation to connect people

Back in 2010, a young group of people in Sarantaporo (central Greece, near the Olympus mountain) decided to take action to develop connectivity in their village, where telecom operators had found no interest and viability to invest in connectivity in this rural area. In this area, located 1-hour drive from the nearest city of Larisa, Sarantaporo.gr emerged as a social innovation which built on collective knowledge to provide a resilient Internet network.

### Providing high-speed Internet to remote mountain villages

With one objective, bringing Internet access in Sarantaporo, but without any specific skills in connectivity, leaders of the initiative started to look for solutions from other regions and heard about community networks (Internet access settled and managed by and for local communities) Thanks to information found online and guidance provided by experts, the community managed to build a wireless community network for the village. A 1 Gbt wireless line was transferred from Thessaly University to Sarantaporo. The [backbone network](#) therefore relies on the nodes installed through the mountains, connecting Sarantaporo with the University network, and on the nodes installed in the village, providing Internet access to inhabitants within 1km around each node.

The University of Applied Sciences of Thessaly provides a free connectivity to the community network. The University committed to support unconnected local communities in a Memorandum of Understanding signed with Sarantaporo.gr. The internet feed average reaches 100 Mbps and maxes out at 150 Mbps – which is a very good connectivity level (in 2018, 57.2% of the total EU population had an Internet access of at least 100 Mbps but only 0.4% of households in Greece, according to the [European Commission Study on Broadband Coverage in Europe 2018](#)).

Neighbouring communities witnessed the success of the initiative in Sarantaporo and got interested in community networks too. From 2010 to 2013, Sarantaporo.gr Wireless Community Network helped 15 villages in the Ellassona Province to develop Internet access on their territory. Internet is now provided to 3.500 inhabitants – a figure which can go up to 10.000 in Summer. In 2013, the group of volunteers decided to institutionalise their social innovation and created the non-profit organisation [Sarantaporo.gr](#).

### Empowering local communities with digital skills

But what would be digital access without digital skills? Members of Sarantaporo.gr quickly realised that providing Internet access to remote villages was not enough if local communities did not have sufficient digital skills. Thus, the association decided to start organising training workshops. These sessions aimed at improving digital literacy among local communities, to learn how to use online public services in a secure way or to teach people about the protection of personal data.

The individual use of Internet is however only one dimension of the action led by Sarantaporo.gr. The initiative is not only about bringing Internet access and main skills to inhabitants of remote villages but building an operational Internet network for and by local communities by relying on their ability to learn and collectively innovate. The association therefore also organised trainings to understand deeper how the community network works, far beyond the average level of understanding of a mere



Credits Sarantaporo.gr

MORE INFO



consumer. Each new access-layer node is installed on a local resident's house. This person thus becomes "guardian" for this piece of equipment and needs to learn how to maintain it. To do so, Sarantaporo.gr organises training sessions but also created an instant messaging tool for people to exchange their problems and knowledge. This approach not only empowers end users in using and expanding connectivity but also considerably reduces maintenance costs and ensures the resilience of the community.

### Improving daily life and attractivity

Expanding connectivity in remote mountain areas improves local communities' quality of life in many dimensions: it enables new health innovations to work and allows older people to use wireless health devices, opens up new market opportunities for farmers to promote and sell their products online, makes teleworking possible and encourages the settlement of new companies and supports students in their work.

Connectivity benefits therefore take on different dimensions, all of which contribute to bridging the digital divide, increasing equality and cohesion between territories, and maintaining mountain villages' attractivity.

### Resources

The total project costs amount 156.000 euros (not estimating the volunteering work). The initiative was supported by EU funds, with 92.000 euros from the EU FP7 [CONFINE project](#) (Community Networks Testbed for the Future Internet) to which Sarantaporo.gr Wireless Community Network was part of. The [2007-2013 EU FP7](#) was the 7<sup>th</sup> Framework Programme for Research and Technological Development and aimed at developing technology to improve competitiveness.

Sarantaporo.gr also received support from the Greek Free / Open Source Society, a Greek organisation promoting open technologies which donated equipment and helped in the dissemination of the initiative's results. The international organisation Internet Society also provided funding through its "Beyond the Net" programme, which helped Sarantaporo.gr to renew the equipment.

[Sarantaporo.gr](#) also won the 2019 European Broadband Award. For more examples of social innovation in marginalised rural areas, please visit [SIMRA](#).



### Innovative aspect

Sarantaporo.gr initiative combines a tri-fold approach. It deploys and ensures the maintenance of Internet network in remote mountain villages. It trains local communities on the use of technology and the whole structure of the community network. It connects people and builds strong relationships in communities sharing the need for Internet connectivity. Sarantaporo.gr brought together people with the same problem and managed to collectively bring a solution for the well-being of 15 villages thanks to the engagement of civil society.



## Flugs: shared electric cars for cheap and sustainable transport

*Flugs e-carsharing is a flexible mobility offer in East Tyrol, Austria. Maintained and expanded after a pilot phase in 2015, Flugs enables local communities and tourists to rent an electric car to travel in throughout the Alps.*

### Offering a shared, electric and cheap mobility solution

The Flugs e-charsharing system was first developed in the small city of Lienz, Austria, in 2015 to offer a flexible and affordable sustainable mobility solution in the region, in addition to municipal and regional public transport. The development of Flugs reflects different objectives:

MORE INFO

- Encouraging shared mobility among local residents by putting the focus on “sharing instead of owning”. The aim is for instance to show that replacing the second car is possible in some households if a cheap and flexible shared mobility system is made available. The German Stiftung Warentest for instance calculated that, for 5.000 km per year, car sharing monthly costs € 138 compared to € 206 for a private car.
- Strengthening rural-urban linkages by improving mobility schemes while also reducing the dependency on private cars.
- Offering sustainable, cheap and flexible transport to the last mile for tourists.

### A flexible and affordable system for all users

There are 11 stations in East Tyrol where customers can pick-up and return cars. Stations are located both in more urban areas, like in the city of Lienz, and in rural ones, such as in the village of Innervillgraten (900 inhabitants) and Obertilliach (600 inhabitants).

Users can easily rent a car online and 2 booking tariffs exist, to better match with the needs of local communities and tourists. Regular users can pay a € 4.90 monthly membership fee and rent a car from € 2 per hour whereas occasional ones can rent a car from € 4 per hour. Cheaper prices are also proposed for night renting hours. There is no kilometre limit for users and drivers can also cross borders to travel through the Alps, even though they must return the car in one of the 11 stations in East Tyrol. Flugs also provides users with a map of charging points available for electric cars.

In 2019, 11 cars were available for rental and Flugs counted around 60 regular users in the region.

### Resources

Establishment costs for the implementation of the car sharing system amounted € 6.300, which included electric terminals, cars’ branding and the creation of the online prepayment system. Monthly operational costs, to maintain the fleet, amount around € 530 per car.



Credits Flugs

The initiative was launched by the local association “Energy Impulse East Tyrol”, which works to improve the quality of life in East Tyrol. The Regional Management East Tyrol as well as the regional Government of Tyrol then also supported the project. Flugs was financially supported by a State programme supporting the implementation of electric terminals. Tyrol’s regional government also supported the project by granting a subsidy of € 3.000 to each municipality being a carsharing partner.



Credits Flugs



### Innovative aspect

If electric cars rental systems are multiplying in European cities, Flugs covers the entire region, including rural mountainous areas. It offers services adapted to the needs of different users’ profile and is an accessible sustainable transport option in the Alpine area. Such a model is easily replicable in other mountainous regions.



## Rørosrein: a taste of tradition and diversification

Around 30.000 wild reindeers can be counted in Norway. The natural surroundings of Røros are the historical area for reindeer breeding. In the middle North part of Norway, between Trondheim and Elga, 26 families are breeding more than 13.000 domestic reindeers. In the area of Røros, a small town of 5.600 inhabitants located in the Trøndelag County, in the middle of Norway, Rørosrein producers belong to the Sami population and intend to preserve their customs while also diversifying their activities to secure their income.

### Breeding techniques between tradition and innovation

#### MORE INFO

The indigenous Sami population settled in Scandinavia 11.000 years ago. Sami people were nomads living from hunting. Progressively, they started taming reindeers to eat their meat and milk but also to use their furs and horns to make handcraft items.

Rørosrein producers preserve the tradition. Reindeers continuously move in this mountainous area and mix with other herds. To identify their animals, producers use traditional methods of the Sami population: instead of tagging them with mainstream ear tags, they mark them with a cut in the ear of a specific shape. Each family owns its proper mark, which can be inherited from ascendants, and more than 200 different cuts exist in the region.

Yet, Rørosrein producers are also using GPS tracking devices to monitor part of their animals to prevent attacks on livestock since they lost 70 calves in 2016. In this vast area, reindeers live together with lynx, wolves, wolverines, royal eagles, and bears.

### Direct sales and short circuits

Rørosrein producers works with a local slaughterhouse of the region and is engaged in direct selling. They own a small shop in Røros, where customers can buy a wide range of fresh and cured reindeer meats every Saturday.

Their products can also be found at Rørosmat, a local cooperative located in the centre of Røros. The shop proposes high quality products from 26 producers of the area. Rørosrein directly fixes a price with the cooperative for its reindeer products.

Moreover, Rørosrein producers run a small traditional restaurant in Røros, next to the shop where they sell products. In this traditional gættie (Sami dwelling), customers are invited to taste products from Rørosrein and Rørosmat. With plates from 14 to 35 euros, producers guide you discovering reindeer cured meat, smoked tongue, sausage, mushrooms, soups, and local berries.

Lastly, producers intend to preserve Sami traditions by making handcraft. Each year, the family slaughters about 10 reindeers on the farm to be able to keep furs and horns. Sales of reindeer meat indeed does not produce enough revenues for the breeders to live on. Selling these traditional products therefore helps them to diversify their income.



Credits Rørosrein





Credits Rørosrein



Credits Rørosrein

### Unusual tourist experiences

The family also took advantage of the tourism opportunities in the region. From mid-February, they propose 2 hours long sleigh tours with 13 domesticated male reindeers, trained for 2 years and sent them back into the mountains at the end of wintertime.

If you want to know more on reindeer breeding, producers can also take you on a tour, explain you Sami techniques and even teach you how to throw a lasso on antlers.

In their dwelling in Røros, they can also make you discover the Sami traditions in pictures during a cosy lecture while you taste their products.



Credits Rørosrein



### Innovative aspect

Rørosrein producers preserve long standing traditions and Sami techniques with their reindeers' herd. They built a local value chain enabling local populations and tourists to buy their food products. Yet, they developed a sustainable diversification strategy based at the same time of food products, handicraft, and traditional experiences and took advantage of tourism opportunities while preserving their ancient knowledge.



## Mon Lait: quality, sustainability and fair income in the same glass of milk

Mont Lait is a French dairy producer brand benefiting from the EU Optional Quality Term “mountain product”. Mont Lait managed to take profit of the term to keep the added value in mountain areas and redistribute it to producers while also raising awareness on the importance of maintaining mountain agriculture.

### Quality and sustainable dairy products

In the Massif Central, agriculture is dominated by livestock farming. Cow's milk accounts for 20% of the farm production in the region and 94% of this comes from mountains. Therefore, being the largest dairy production area of the French mountains, it is all the more important that the Massif Central valorises the origin of its production.

MORE INFO



Mont Lait is a producer brand benefiting from the Optional Quality Term “mountain product”. This means that dairy products exclusively come from holdings located in mountain areas and from cows fed with at least 60% of grass from the mountains. Processing companies involved in the value chain of Mont Lait products are also located in the Massif Central. From the raw material to the finished products, consumers are therefore ensured to eat locally made dairy products.



Quality is part of the communication of Mont Lait, which raises awareness among the general public on the benefits, but also challenges, of maintaining this sector alive in mountains, both for farmers and consumers. Mont Lait for instance promotes the higher quality of mountain milk, richer in omega 3 and omega 6 as demonstrated the 2018 [study](#) on mountain milk of the National Institute of Agronomic Research.

Mon Lait even wants to go further. By January 2021, producers want to clarify the specifications to ensure that at least 70% of the dairy herds' feed is grass, that 80% of the fodder area of the farm is covered with grass, and to make compulsory outdoor grazing for dairy cows (with a minimum of 20 acres of pasture per cow during the season going from 1 March to 31 October).

### A fair income for mountain farmers and processors

In 2010, a group of farmers from the Massif Central created the Association of Mountain Milk Producers (APLM), owner of the Mont Lait brand, a 100% producer brand. The association managed to develop a balanced partnership between producers and processors to propose products made in mountain areas, throughout the entire value chain.



Credits: Mon Lait

Thanks to the added value created by the Optional Quality Term “mountain products”, the APLM manages the financial redistribution to the different actors in the chain:

- 0.10 € per litre of milk sold are collected. Out of this added value, APLM returns 0.03 € per litre to the companies that manufacture Mont Lait products, as compensation for the additional costs of collection in mountain areas
- Each tray (400 grams) of Mont Lait raclette cheese sold generates 0.36 € for the benefit of the Mountain Milk Producers Association
- Each block (250 grams) of Mont Lait butter sold generates 0.55 € for the benefit of the Mountain Milk Producers Association

The Mont Lait approach therefore supports the whole mountain dairy sector and provides fair incomes to mountain farmers and processors.



Credits Mon Lait

### Various benefits for mountain areas

Socio-economic benefits: the agri-food sector accounts for a large share of jobs in the Massif Central, well above the national average. It is estimated that a 100-hectare farm provides a living for an average of 2.5 active people (farmers or agricultural employees) and generates the equivalent of 2.7 indirect full-time jobs, such as employees in processing, transport, marketing and agri-supply companies. Maintaining local production therefore helps to keep the region economically dynamic. Indirectly, maintaining a local active population has also positive effects on rural development and cohesion, with more services being provided.

Environmental benefits: livestock farming plays an essential role in providing a number of ecosystem services, such as providing high quality food, preserving landscapes, protection biodiversity etc. Through grazing, herds maintain open environments that favour a remarkable biodiversity of plant and animal species and make possible sustainable outdoor activities.

### More information

If you want to discover more inspirational examples of mountain producers and operators using the OQT “mountain product” and learn more on the uptake of the term in the EU, you can read Euromontana 2020 study [“Implementation of the EU Optional Quality Term “mountain product”: where do we stand in the different Member States?”](#).



### Innovative aspect

Mon Lait does not only base its communication on the proximity of producers but also further explain why mountain farming matters for the socio-ecological system and why is important to maintain it. Through the association, Mon Lait developed a fair relation with processors and producers.





Credits La Exclusiva

## A village delivery service for the rural ageing population

Spain is among the European countries with the highest share of people aged 80 and more, with 6% of their population belonging to this age group (Eurostat, 2016, [data on life expectancy](#)). In addition, most of the older adults in Spain live in rural mountainous areas, with 17% of the rural population being over 65 (Eurostat, 2015, « [People in the EU: who are we and how do we live?](#) »). The lack of services and transport offers in these regions is a major difficulty for older adults to access goods and services in their daily lives. The social economy SME La Exclusiva aims at reversing this trend by offering a better provision of services to the ageing population in the Provinces of Soria and Burgos, members of Euromontana.

### MORE INFO

## Home delivery services to increase the quality of life of the ageing population

Back in May 2013, Victoria Tortosa - founder of [La Exclusiva](#) - had the idea of developing an enterprise which would improve the quality of life of older adults by delivering first necessity products at home. Three months later, “La Exclusiva” was born and a network of 5 routes in the Province was designed, serving 24 villages where a high demand for home delivery services was identified.

In these areas, La Exclusiva proposes home delivery of a wide range of products. It all started with foods, but the success of the initiative led Victoria and her associate Hugo to expand their services. Now, not only do they deliver first necessity foods and items but also newspapers, electronics and medicines but they also help older adults to read their electricity invoices.

### What are the key success factors?

**A good geographical coverage:** there is one itinerary for each weekday in the Province of Soria. Starting from the collection of products in the capital city, some routes then cover more than 40 villages in a day. In 2017, after having extended its routes and services in its pilot area of the Province of Soria, La Exclusiva expanded its activities to the Province of Burgos – a Province covered at 27% by rural areas and welcoming more than 82.000 adults above 65.

**No added costs:** La Exclusiva negotiated prices of products with 5 suppliers, among which Leclerc supermarkets for instance. Therefore, there is no added costs for end users. Each village gets a dedicated mailbox for the service, where each week the deliverer drops leaflets promoting available products.

**Free delivery:** In addition to the negotiated prices of products, partner supermarkets and providers cover the costs of the service. Each week, older adults receive deliveries at home for free.

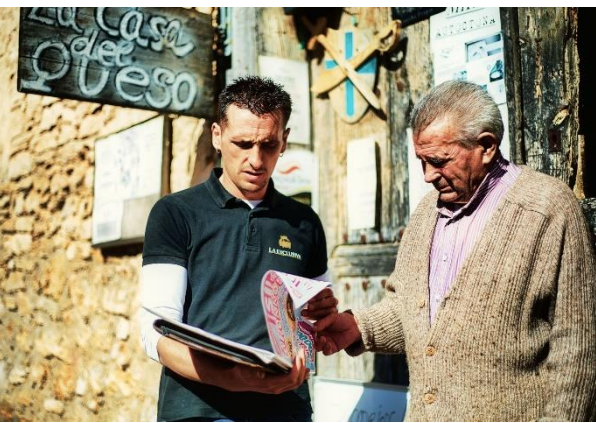
**A user-friendly service:** in order to facilitate the process and respect older adults’ habits, there are 5 ways to place an order:

- By listing desired products on a paper for the deliverer,
- By listing desired products on a paper and dropping it in the dedicated mailbox of the village,
- By ordering on La Exclusiva’s website
- By phone call
- By sending an email

**Reliable assistance:** a specific software has been designed to centralise all the orders and to rationalise the delivery route. It can register orders up to 48 hours before the delivery day. It is also reliable for suppliers, who always receive orders 24 hours before the delivery days, via the same software.

### Social benefits of La Exclusiva's services for the ageing population in mountainous areas

More than 400 older adults are already benefiting from the delivery service proposed by La Exclusiva. In these rural Provinces, where some habitations are remote, La Exclusiva managed to reintroduce social interaction between people and to improve the quality of life of the ageing population.



Credits La Exclusiva


Benefits of the delivery service are even going beyond the supply of basic products. Indeed, 60% of beneficiaries declared that they modified their eating habits, thanks to the wide panel of available products. The initiative can also help to fight depopulation, by encouraging older people to stay at home in rural areas where they can be autonomous. 1 older adult even moved back in his village, after one year in a retirement house, and 2 other clients decided to stay at home too. La Exclusiva seems to also help fighting depopulation in these territories. Furthermore, the SME generated a virtuous circle by creating 5 jobs in the Province of Soria only, in the promising Silver Economy sector.

### More information

For more information on La Exclusiva and on other initiatives from the Silver Economy sector in rural and mountainous areas, you can check the [SILVER SMEs](#) Interreg Europe project and watch the [interview with Victoria Tortosa](#), founder of La Exclusiva.



### Innovative aspect



La Exclusiva built an important network of routes covering the rural villages of this mountainous territory. The quality, gratuitous and easiness of the delivery is key to build a good relationship with the ageing population.



## A cross-border hospital to make up for the lack of medical care in the Pyrenees

The [EGTC Hospital of Cerdanya](#) is the first cross-border hospital in Europe. Located in the municipality of Puigcerdà, in Spain, a few meters from the French border, it aims at providing healthcare services on both sides of the French-Spanish border in a mountainous area where people had to drive 1h30 to reach the closest hospital in Perpignan, in France.

### A common hospital for a cross-border medical wasteland

About 33.000 people live permanently in the Cerdanya valley, in the Pyrenees – a figure that can be quadrupled in winter with the arrival of tourists during the ski season. The lack of access to healthcare in this mountainous area led in 2003 the Catalanian and French Ministries of Health to discuss the creation of a cross-border hospital and to formalise the creation of the European Grouping of Territorial Cooperation – Hospital of Cerdanya in 2010.

MORE INFO



The Spanish Cerdanya valley and the French Capcir region, are real medical wastelands with very poor health services offered to local population except from rural family doctors. Nowadays, the competence area of Cerdanya Hospital covers 1340 km<sup>2</sup> and includes 53 municipalities in total, of which 17 in Cerdanya valley and 36 in the Capcir region. The objective of this cross-border hospital is to optimise the management of Catalan and French resources in order to improve the care offered to local communities with an innovative model: the Cerdanya Hospital offers medical assistance to its entire population, based not on administrative borders but on the criteria of geographical proximity. A French resident therefore does not need to reach Perpignan Hospital anymore and can access medical care on the Spanish side in Cerdanya.

The cross-border hospital provides in particular emergency and obstetric care, which are usually the most urgent needs but could previously only be treated more than 100 km away. 68 beds are available for short stay patients and is also equipped with important facilities such as an MRI and a scanner, especially useful during the ski season.



Credits EGTC Hospital of Cerdanya

### Different languages, cultures and medical practices

At the reception desk multilingualism is mandatory to be able to communicate with patients and staff in French, Spanish and Catalan. The proportion of Spanish in the staff is around 60%, and 40% are French. Nurses are therefore assigned to the different services in these proportions to ensure a balanced availability of languages and, a particularly of Cerdanya Hospital, nurses always work in pairs to avoid any language issue.

In the hospital's pharmacy, the international name of the molecules is used. Of course, medical practices may vary from country to country, so more precautions are taken in Cerdanya. "In research, there is some controversy about how many ultrasounds or toxoplasmosis tests should be done. In France, they do an extra toxoplasmosis, in Catalonia they do an extra ultrasound. So, at the hospital in Cerdanya, all women have an ultrasound and an extra toxo," explains Enric Subirats, a Spanish doctor.

### Shared resources and governance


The hospital was built between 2003 and 2013 and officially opened in September 2014. In order to promote cooperation between the countries of the Union, the EU, by [Regulation \(EC\) No 1082/2006](#), created the legal framework for the European Grouping of Territorial Cooperation (EGTC). The EGTC has therefore become the only adequate structure to achieve the success of this project and the EGTC Hospital of Cerdanya was created in 2010 to fix the objectives, governance and funding of the hospital.

The total cost of Cerdanya Hospital's construction amounts to 31 000 000 € and was supported by the [Interreg POCTEFA](#) programme. The construction was financed according to the following distribution scheme:

Since the hospital opened, both equipment costs and the annual operating budget and co-financed by Catalonia (at 60%) and France (at 40%). The governance of the hospital also relies in the hands of its Board of Directors, whose members come from both sides of the border.

Construction funding	
European Regional Development Fund (60%)	18 600 000 €
<b>Self-funding (40%) by governments:</b>	12 400 000 €
<i>Catalonia (60%)</i>	7 440 000 €
<i>France (40%)</i>	4 960 000 €
<b>Total</b>	<b>31 000 000 €</b>

In 2016, Cerdanya Hospital won the « Building a Europe without borders » award during the annual meeting of the European Groupings of Territorial Cooperation (EGTC) held at the European Committee of the Regions. Yet, it faces many obstacles in its daily functioning, for instance on employment contracts or staff health insurances. Complex issues linked to the presence of the border have had to be dealt with, such as those of births (and civil registration) or the repatriation of bodies on the other side in the event of death. Still, Cerdanya Hospital progressively resolved these administrative borders and offers a real universal health service.



**Innovative aspect**

Cerdanya is the first hospital welcoming citizens from both sides of the border as patients and staff. Experience shows that cooperation can overcome administrative issues.





## Alpine Maternity: social innovation improves healthcare in mountain areas

*In 2015, in the Bern Canton, Switzerland, the obstetric department at Zweisimmen hospital was closed. As a response, the local population (counting about 3 000 inhabitants) created in the same year a cooperative to maintain obstetric care services at local level. Just two year later, in 2017, this collective action led to the opening of the Alpine Maternity in Zweisimmen.*

### Accessible healthcare

The [‘Maternity Alpine Simmental – Saanenland’ cooperative](#) was born in July 2015 to cope with the lack of obstetric healthcare services in Zweisimmen : 49 interested parties created the cooperative, which later achieved to open the premises of the Alpine Maternity in January 2017. Today, the cooperative counts around 340 members, including practitioners, midwives but also people outside the healthcare sector willing to support the initiative as well as a dozen of municipalities from the Obersimmental-Saanenland region. The cooperative provides the Alpine Maternity with a legal entity.

MORE INFO



The Alpine Maternity’s objectives are:

- To provide accessible and safe obstetric services at local level, close to patients’ home, from the beginning of the pregnancy until the end of the post-partum period.
- To guarantee a local contact point at any time in case of emergency: the maternity is open 24h/24h and 365 days per year.
- To promote cooperation with local practioners, independent midwives, Spitex services (Swiss at home care services), emergency services, mother and father advice centres etc.



Credits Alpine Maternity

### Funding

The Alpine Maternity is funded through the cooperative’s membership fees and donations. Any individual or legal entity can become a member. Individuals must pay a one-time entry fee of CHF50 (around €45) and must take over a share certificate of minimum CHF 200 (€190). In addition to the entry fee, legal entities must take over a share certificate of minimum CHF 1000 (€930). The cooperative capital corresponds to the sum of share certificates.

In addition, the Alpine Maternity Simmental - Saanenland Association - was created in July 2008. This association aims to raise more funds assigned to maternity services in order to maintain the offer of natural birth accessible in the region. Members of the association organise events throughout the Canton to promote the cooperative model and to find new members and additional funds for the Alpine Maternity. Membership to the association for an individual costs CHF 50/year, for couples/families CHF 80 /year and for legal entities CHF 200/year. Moreover, many municipalities of the region made generous donations to the association.

The cooperative’s membership fees, and the association’s membership fees and donations cover the operating deficit of the Alpine Maternity.



## Governance of the cooperative

The Alpine Maternity's cooperative is run by its members who form the General Assembly. Each member of the cooperative has one vote within the Assembly and can participate in the election of representatives (President and Board of Directors). They can also express their vote on annual reports and accounts, and in decisions regarding the management of the Maternity.

☞ “Social innovation: the reconfiguring of social practices, in response to societal challenges, which seeks to enhance outcomes on societal well-being and necessarily includes the engagement of civil society actors. [SIMRA \(Social Innovation in Marginalised Rural Areas\)](#)”

The Board of Directors must include at least 3 natural persons chosen amongst the members of the cooperative, elected for a (renewable) 2 years mandate. The members of the Board of Directors are responsible for the daily management of the cooperative and legal decisions.

## Results and future projects


During its first year, 61 women gave birth at the Alpine Maternity and up to 80 deliveries are planned each year. Overall, in the Obersimmental-Saanenland region, 51% of natural childbirth happen at the Alpine Maternity and the rest in other regions. Being the only obstetric service of the area, the structure fills an important gap in terms of access to services of general interest. The demand is even going nationwide with patients coming from the Pays-d'Enhaut and the Lake Geneva region.



Credits Alpine Maternity

The Alpine Maternity is also exploring the possibilities to expand its services in the future, by opening a section for planned caesarean in cooperation with Zweisimmen hospital. In this case, the hospital would be responsible for the surgeries while Alpine Maternity would provide post-delivery care. Even if, economically speaking, this proposed project would be costly for the Alpine Maternity, it would provide additional care offers for women in the region, currently forced to go to Frutigen or Thun to access such services.

## Innovative aspect

 The opening of a maternity improves the provision of services in the region. The collective engagement of this local community to address the lack of care in the region and the governance model of the cooperative make it an inspiring social innovation. Yet, the economic viability of this model, mostly relying on individual support and donations, will have to be proven in the coming years.





## Ecotourism trainings for handicraft entrepreneurs: a driver of sustainable tourism in the Carpathians

*At a time when mass tourism is intensifying and concentrating on a few cities and destinations in Europe, with significant impacts on the environment but also on the lives of local people, it is crucial to promote a more responsible tourism. This can be achieved on the one hand by promoting other countries and territories as tourist destinations and on the other hand by encouraging more environmentally friendly tourism practices. In the Carpathians, these two aspects were combined in workshops targeting craftsmen and small businesses to provide them with the key tools for attractive and sustainable tourism in mountain areas.*

### MORE INFO

### How to build ecotourism workshops for mountain entrepreneurs?

#### *Exhaustive trainings: from territorial marketing to ecotourism practices*

In 2017, 4 ecotourism [workshops](#) were organised in the Carpathians, in Hungary, Poland, Slovakia and Czech Republic, to train local handicraft entrepreneurs and other rural tourism professionals on how to implement sustainable tourism practices. The initiative aimed at increasing the visibility of rural and ecotourism in mountain areas.

For 3 days, participants were introduced to different aspects of tourism through various modules. For instance, they learned more about global tourism trends and how to better attract tourists in rural and mountainous destinations, far from the main dreamed cities, thanks to alternative tourism practices such as rural tourism, active tourism, and ecotourism. They were also trained to use social media and other marketing tools in order to increase the visibility of their products and services.

Moreover, participants attended a specific module on ecotourism, where they discovered various good practices and discussed the connections with other tourism practices such as rural tourism. This module was also an opportunity to reflect on the possibilities to promote local products through ecotourism and to focus on the positive impacts these practices can have in terms of tourism development in mountain areas, environmental awareness of tourists and territorial development of the area.

Among the good points of these workshops: the 3 day-training ended up with an individual session for each participant to reflect on his tourism targets and explore development possibilities with experts; an individualised follow-up made possible by the format of the workshops with a maximum capacity of 15 participants only.

Furthermore, participants received a certification at the end of the workshop.

#### **Resources needed**

The 4 workshops were organised in the course of the CARPATHIAN TOURISM project (CooperAtion of touRism for building PATHways through developIng HANdicraft workshops for tourist and rural TOURISM suppliers). The project was funded by the International Visegrad Fund and by the UN Environment Vienna Office Secretariat of the Carpathian Convention (SCC) and included associations and tourism offices engaged in the promotion of cultural heritage, with an additional strategic support



Credits Carpathian tourism

from the Carpathians Convention and the Ecologic Institute for Sustainable Development Foundation for instance.

The project covered accommodation and meals costs for the participants of the 4 workshops, around 60 persons in total. This good practice is therefore easily transferable and adaptable to local issues and assets.

## Benefits of the workshops for the development of sustainable tourism

### Developing the attractivity of the Carpathians

Increasing the visibility of the Carpathians among European tourists is important to rebalance tourism flows and encourage a win-win situation for countries suffering from over tourism and countries barely considered as potential holidays destination. Yet, there is no lack of tourism potential: when it comes to heritage sites, Poland counts 15 sites registered on the UNESCO world heritage list when Austria only counts 9 (see [Culture statistics — 2019 edition](#)); attractivity therefore relies on the marketing of mountains rural heritage, such as castles and wooden churches.

Tourism, if managed sustainably, can participate to the cultural influence of mountain areas and to their sustainable development with the promotion of quality products such as mountain foods and rafts, and specific tourism services such as mountain cycling or wildlife observation.

#### Tricks, Tips and Ideas



Credits Carpathian tourism

### More information

You can find more inspiration on tourism and cultural heritage in mountain areas in the materials from the [XI European Mountain Convention](#), held in 2018 in Vatra Dornei, Romania, especially in the [booklet of good practices](#).

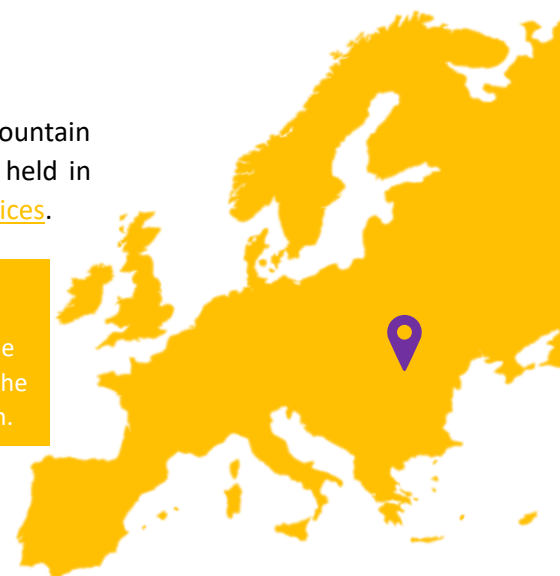
#### Innovative aspect

Training local entrepreneurs to territorial marketing has direct consequences on the attractivity of the territory. These workshops help in involving the private sector in the development of sustainable tourism practices such as active, rural and eco-tourism.

#### A booklet to expand the knowledge on mountain ecotourism

To expand the dissemination of the project's training material, a booklet on "[How to Attract Tourists: Ecotourism handbook for rural handicraft entrepreneurs and actors of tourism](#)" was also published. This tool aims at sharing the content from the workshops and should be used as a practice guide by other rural tourism entrepreneurs in mountain areas to better showcase their territory as a tourism destination as well as the quality products and services it can provide.

With this booklet, readers can learn more on how to phrase their communication on social media, adapt their website but also on how to better value natural assets, such as high mountains and specific fauna and flora. Mountain tourism entrepreneurs can also discover more tips on how to develop active tourism, agri-tourism and ecotourism based on the needs and expectations from customers.





## A toolbox to better involve the youth in mountain governance

Many young people leave mountain regions because they see few opportunities on the labour market and have no prospects for the future. Moreover, most policy makers are not aware of the benefits of a young and active population for society. The EU-funded project [Alpine Space GaYA](#) (Governance and Youth in the Alps) decided to tackle the issue by strengthening the involvement of young people in local governance and developing new approaches for decision-makers. A toolkit was published in 6 languages to support mountain policy makers in better including the youth in public life.

### Inspiring inclusive governance models to replicate

MORE INFO

GaYA's [Youth Participation toolbox](#) showcases different examples of participatory governance implemented in the Alpine Space. From rural models to initiatives in cities like Villeurbanne, France, these examples illustrate possibilities to better consider the needs and ideas of young people. These models were ranked on a participation scale, from listening to youth's desires (level 1) and considering the views of young people (level 3) to sharing power and responsibilities (level 5).

In the Grisons County, Switzerland, most of the equipment dedicated to the youth is in towns whereas remote valleys lack of facilities. JugendMobil is a mobile, fully-equipped youth centre that is parked for a defined period of time in a community which has no specific youth facility and offers young people the opportunity to come together, play games, and get involved in creative activities. JugendMobil (level 1) can be a starting point for the participation process and public expression.

In Slovenia, the municipality of Idrija adopted a youth strategy giving young people a strong say in how they want to see the future development of the town. In the first half of 2015, data gathering, statistical analyses, document reviews, 15 half-structured interviews with representatives of all youth organisations and organisations for young people, and an online survey with almost 300 respondents were concluded in order to obtain an insight into the position of young people of the municipality. After the in-depth analysis of the results, three strategic challenges (employment, housing, participation) were identified and selected for this strategy. Ranked level 4 on GaYA's governance scale, the initiative managed to involve mountain youth in the decision-making process.

LEVEL 1:  
LISTENING  
TO YOUNG  
PEOPLE

LEVEL 2:  
SUPPORTING  
EXPRESSIONS  
OF YOUNG  
PEOPLE'S  
VIEWS

LEVEL 3:  
TAKING INTO  
ACCOUNT  
THE VIEWS  
OF YOUNG  
PEOPLE

LEVEL 4:  
INVOLVEMENT  
IN MAKING  
DECISIONS

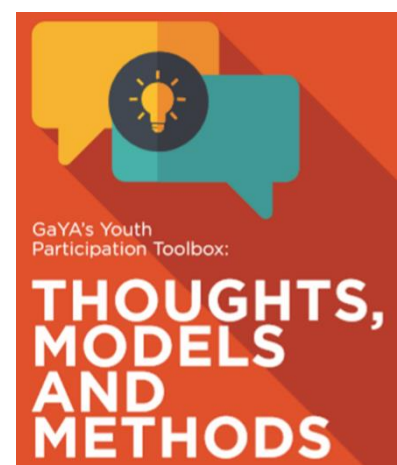
LEVEL 5:  
SHARING  
POWER AND  
RESPONSIBILITIES

### A guide to discover and test participatory governance techniques

Transforming governance, at municipal or regional level, requires breaking with preconceptions about young people and to be prepared to question its own political practices. Attracting younger generations in public life implies using alternative participatory models to avoid the bureaucratisation of decisions.

The toolkit drives you across the different steps and questionings towards a more inclusive governance. Are you ready to support young people in expressing their views? Is there a procedure that enables young people to join in decision-making processes? Are you ready to share some of your adult power with young people? These are primary steps for policymakers to question their decision-making processes.

If open to change, the toolkit also offers a wide range of methods to implement, depending on the objectives in terms of cocreation and on available time and resources. Information Days for instance can be a great tool to get an insight of the aspirations of young people in your County but techniques such as Hackathons and Living Labs would be much more appropriate to co-design policies.



### 14 steps for local policy makers to improve youth participation in mountain areas

**Step 1:** define your desired outcome and overarching goals

**Step 2:** precise in which decision-making process do you want to involve the youth

**Steps 3 & 4:** define what can be influenced and where you allow for changes or not

**Step 5:** determine which categories of younger generations you want to include depending on your objectives

**Steps 6 & 7:** look into the reasons why this determined group would be motivated to participate in public decision

**Step 8:** select a participation model by reflecting on the target group's preferences and your own preferences, think big!

**Step 9:** define the format of inputs (formal submissions, oral exchanges etc.)

**Step 10:** summarise all previous steps in to formulate a clear participatory process. Define it in steps and milestones

**Step 11 & 12:** allocate the necessary human and financial resources to your project, keeping in mind the profile of your target group. Form your team and structure your work depending on the capacities and skills of your own services

**Step 13:** think about the risks and anticipate ways to mediate them. The more risks listed, the more well though through the process is and the more you are prepared for it

**Step 14:** Measure the success and evaluate the possible improvements

### More information

You can find more inspiration on smart governance in mountain areas in the [report](#) from Euromontana's eponymous workshop at the 4<sup>th</sup> European Rural Parliament in November 2019.



### Innovative aspect

GaYA's guide for mountain policies makers can be used both to combat prejudices on youth and public decisions and to get inspired by existing initiatives. The real added value of the toolkit is the step-by-step guidance provided for local and regional authorities. Pedagogical yet very complete, this toolkit provides all the keys to test new participatory models, involve the youth in mountains' public life and make your territory vibrant and attractive.



Euromontana is the European multisectoral association for co-operation and development of mountain territories. It embraces regional and national mountain organisations throughout greater Europe, including regional development agencies, local authorities, agriculture organisations, environmental agencies, forestry organisations and research institutes.

Euromontana's mission is to promote living mountains, integrated and sustainable development and quality of life in mountain areas.

In order to achieve this, Euromontana facilitates the exchange of information and experience among these areas by organising seminars and major conferences, by conducting and collaborating in studies, by developing, managing and participating in European projects and by working with the European institutions on mountain issues.

MORE INFO

[www.euromontana.org](http://www.euromontana.org)

FOLLOW US

