



European policies support for a smarter approach in the Carpathians

Władysław Ortyl

26th October 2022

Carpathians

area: 190,000 km²

inhabited by about 68 million people

exceptional endogenous resources

area of geopolitical importance

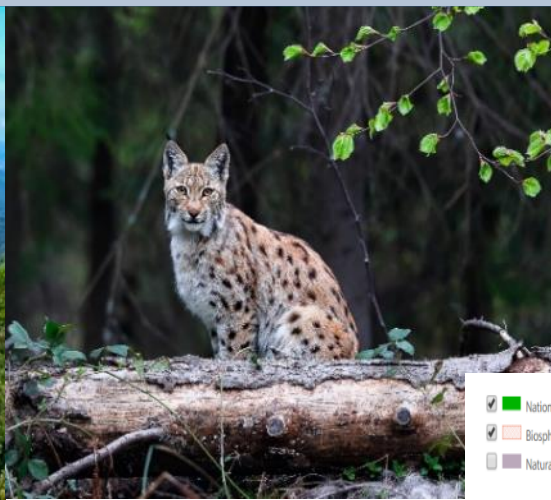
homogeneous mountain range with unique geographical conditions

a large area with similar environmental and landscape features with certain characteristics



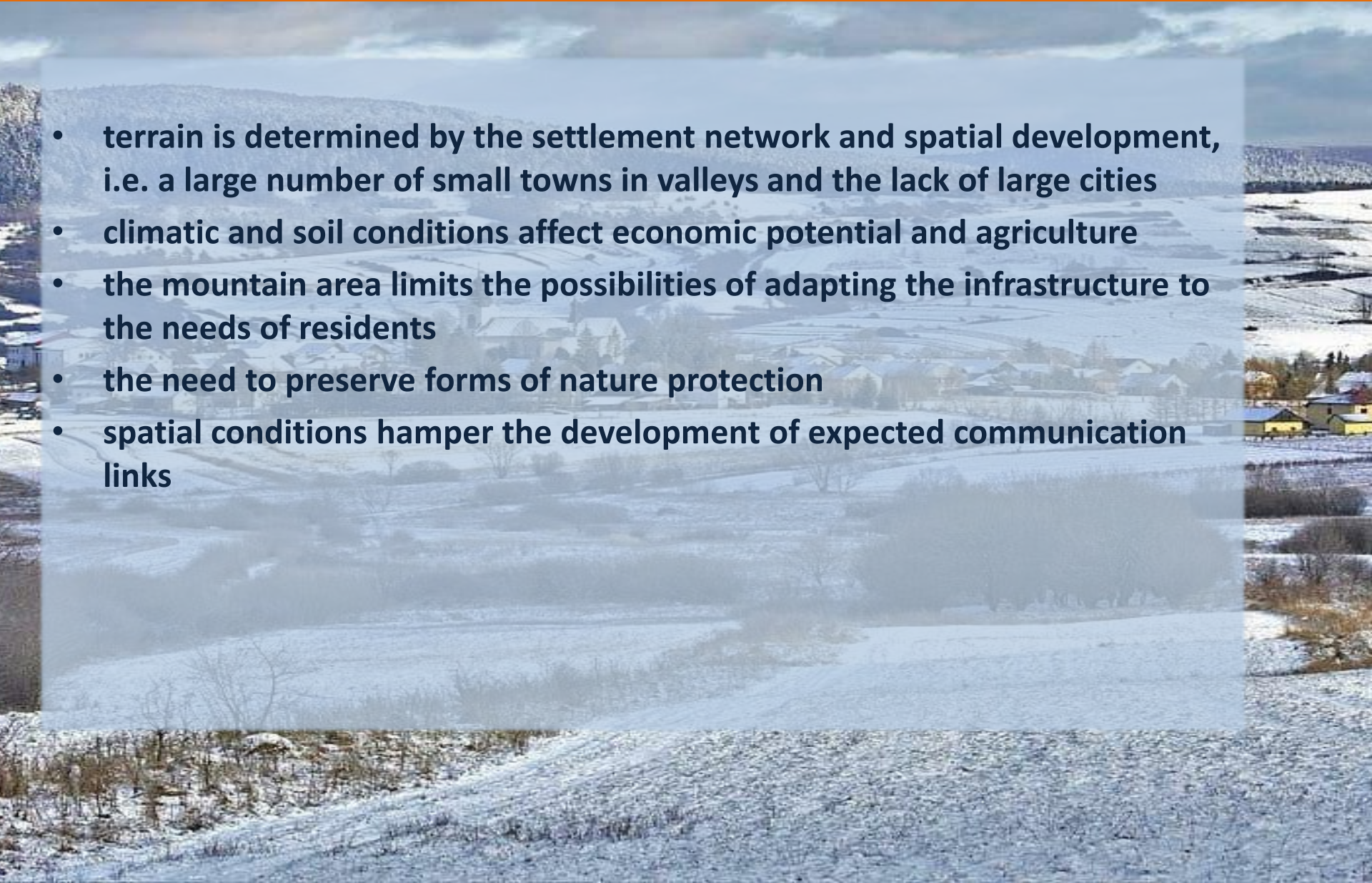
Biodiversity

- "Eastern Carpathians" International Biosphere Reserve
- 36 national parks - area 11,000 km²
- 51 landscape parks - 19,000 km²
- 200 other forms of protection
- one of the most important predator refuges
- an important center of endemism
- pan-European ecological corridor
- **only** 16% of the area outside forms of protection



Mountain specificity of the Carpathian area

- **terrain is determined by the settlement network and spatial development, i.e. a large number of small towns in valleys and the lack of large cities**
- **climatic and soil conditions affect economic potential and agriculture**
- **the mountain area limits the possibilities of adapting the infrastructure to the needs of residents**
- **the need to preserve forms of nature protection**
- **spatial conditions hamper the development of expected communication links**



Cooperation within the Carpathian community

- Bilateral meetings
- Multilateral meetings
- Exchange of experiences and good practices
- Neighborly meetings

- Agreements
- Letters of intent
- Declarations
- Implementation of joint projects
– Via Carpathia

- Debates
Conferences
Economic and cultural initiatives

- Civil society and NGOs
- Associations and local organizations
- Regional and local authorities
- Government authorities
- Member States

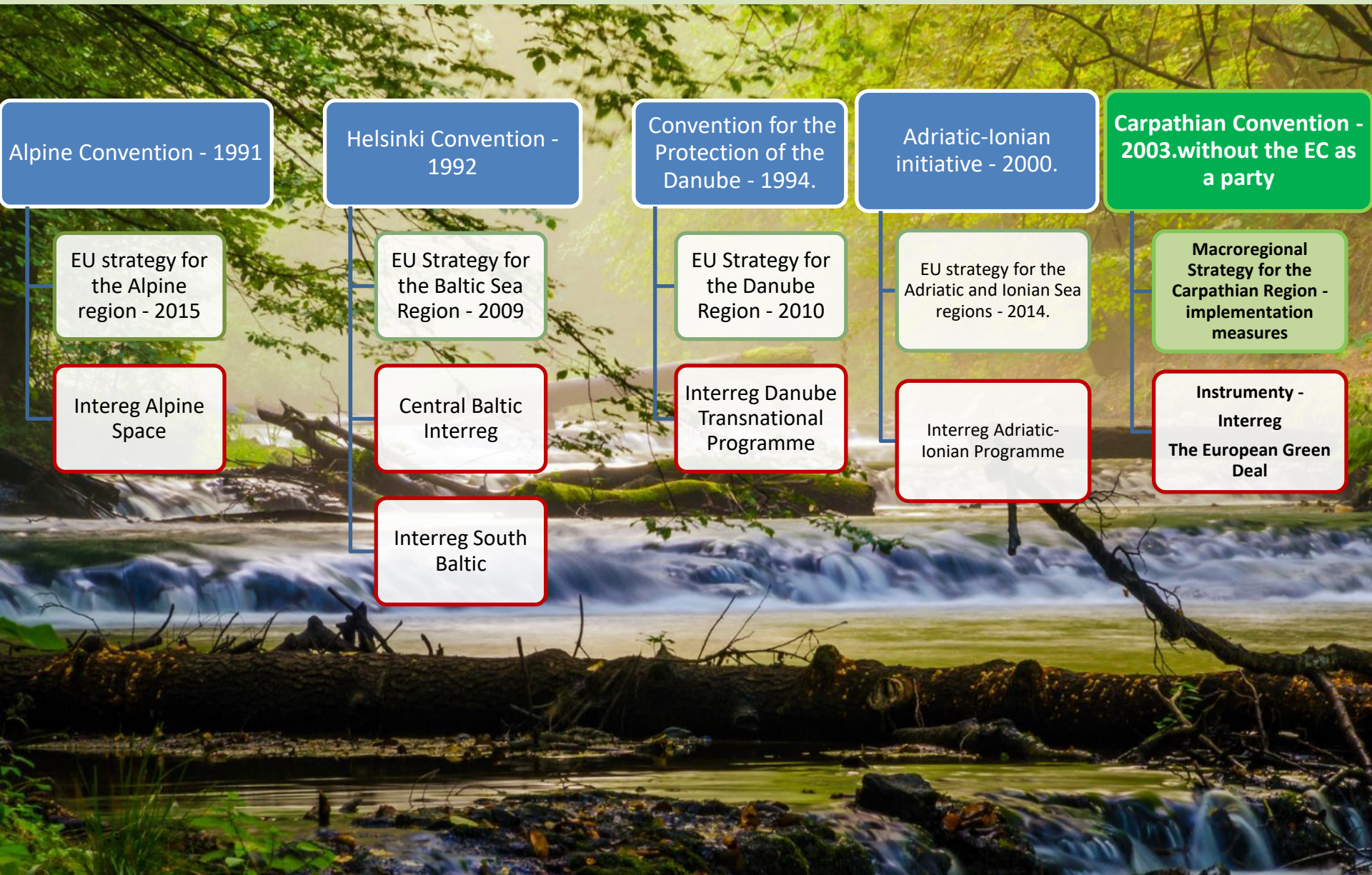
20 years of cooperation and strengthening the awareness of the Carpathian community

Existing forms of cooperation

- Carpathian Euroregion
- Carpathian Convention
- Carpathians Interregional Group in the Committee of Regions
- Economic Forum with a thematic panel
- Forum of Carpathian Communes
- Local Development Forum
- Carpathian Days of Neighborhood
- Interreg and European Neighborhood Instrument Programs



Initiatives and tools for European macro-regions working for the Carpathian Convention



Coordination of development

- 
- ➔ The European Regional Development Fund (ERDF) should support regions and territories that are facing handicaps
 - ➔ The European Parliament stresses the need to use ERDF support to develop projects such as smart villages, creating new opportunities such as decentralized services, energy solutions as well as technologies and digital innovations
 - ➔ Cohesion policy must better recognize the need for investments aimed at integrating mountain areas into policies
 - ➔ European territorial cooperation programs such as cross-border and trans-European projects as well as macro-regional strategies play an important role here as tools to strengthen the cohesion of the European Union

EU macroregional strategies

Macro-Regions:
Adriatic and Ionian, Alpine, Baltic, Danube



There are currently four EU macroregional strategies:

- EU Strategy for the Baltic Sea Region (EUSBSR; 2009),
- EU Strategy for the Danube Region (EUSDR; 2010),
- EU Strategy for the Adriatic and Ionian Region (EUSAIR; 2014)
- EU Strategy for the Alpine Region (EUSALP; 2016).

Such initiatives are taken to create new strategies for the area of the Carpathians, the Atlantic, the Iberian Peninsula and the Mediterranean Sea.

Most EU Member States are included in the macroregional strategy agenda and some EU countries are involved in several strategies.



Macro-regional strategies



EUSALP EU STRATEGY FOR THE ALPINE REGION



Participating States

Germany, Austria, France, Italy, Liechtenstein, Slovenia, Switzerland

Czech Republic, Hungary, Poland, Slovakia
Romania, Moldova, Serbia
Ukraine

Priority Areas

1. Economic growth and innovation.
2. Mobility and connectivity.
3. Environment and energy.
4. Management, including institutional potential

1. Competitive Carpathians.
2. Green Carpathians.
3. Coherent Carpathians.
4. Strengthening cooperation and spatial development.



Postulates of the Carpathian Strategy

Strategic Objectives:

- ✓ *Competitive Carpathians – Development of clean industries, Sustainable development of tourism, Increasing the competitiveness of the agri-food sector, Development of the macro-regional innovation ecosystem.*
- ✓ *Green Carpathians – Protection and rational management of natural resources, Diversification of energy sources, Water reservoir, Management of environmental risk and natural hazards*
- ✓ *Coherent Karpaty – Increasing the transport accessibility of the Carpathians, Increasing the digital accessibility of the Carpathians, Development of the e-service system*

Opinion of the COTER Committee

- adopted at the plenary session of the European Committee of the Regions in December 2019,
- Own-initiative opinion of the COTER commission (Committee for Territorial Cohesion Policy and EU Budget) Macro-regional strategy for the Carpathian region, the rapporteur of which was Władysław Ortyl, Marshal of the Podkarpackie Region.
- It is the first official EU document that mentions the Carpathian Strategy by name.
- macro-regional strategies improve the complementarity of various policies and programs, set and implemented at various levels of management,
- combining jointly defined potentials and coordinating activities is an important added value at European level,
- the unique resources of the Carpathians create a great opportunity for joint activities for more dynamic, sustainable and balanced socio-economic development



European Committee
of the Regions

COTER-VI/057

137th plenary session, 4-5 December 2019

OPINION

Macro-regional strategy for the Carpathian region

THE EUROPEAN COMMITTEE OF THE REGIONS

- underlines that macro-regional Strategies improve the complementarity of various political strategies and programmes that are designated and implemented at different levels of governance. This pooling of jointly defined potential and coordination of actions is a significant added value at the European level;
- highlights the unique resources of the Carpathians, such as the natural wealth, unique multicultural heritage, human resources and common identity of mountain communities, all of which provide a great opportunity to work together towards more dynamic, sustainable and balanced socio-economic development in the area;
- considers that placing the Carpathian issue at the centre of a strategic document would highlight the problems of this area and make it possible to exploit the currently dormant and unique potential of the whole macro-region by focusing actions on the most important horizontal problems and challenges;
- reiterates and confirms the approval expressed many times of the initiative to develop a macro-regional strategy for the Carpathian region and sees it as a well-developed initiative undertaken at all levels of government;
- calls on the European Commission to support the initiative to create a macro-regional strategy for the Carpathian region as a further macro-regional strategy and the second one to address a European region with mountainous characteristics;
- considers that the macro-regional strategy instrument enables more effective use to be made of available financial resources as part of the European Territorial Cooperation (ETC) objective, by creating a viable system for co-financing and implementing actions supporting the regions of Carpathian countries.

Summing Up

- The EU Strategy for the Alpine Region (EUSALP) is the inspiration for the creation of another macro-regional strategy for Europe's second mountain range.
- The Alpine Strategy is a reference for the Carpathian Strategy, as one of the challenges is the protection of natural resources and protected areas, and the axis is the mountain range.
- In our activities, we want to use the good practices and experiences of the Alpine Strategy.
- The macro-regional strategy for the Carpathian region will be complementary to existing initiatives, such as the Carpathian Convention or the Carpathian Euroregion.
- The Carpathian strategy will enable the preservation of the macroregion's valuable natural resources.
- The unique natural heritage will make it possible to strengthen the competitiveness and attractiveness of the Carpathian macroregion, including increasing the level and quality of life of the inhabitants of the Carpathian region.



Thank you for your attention

SMART MOUNTAINS

XII European
Mountain
Convention

25 – 26 – 27
October 2022

How to make our territories attractive and
future-oriented?

Giulia Paoletti

EURAC research

New European Bauhaus of the Mountains

Project by the Autonomous Province of Bozen / Bolzano,
EURAC Research, CasaClima Agency, Free University of Bozen /
Bolzano, Lungomare, Living Future Europe, Irecoop Alto Adige-Südtirol

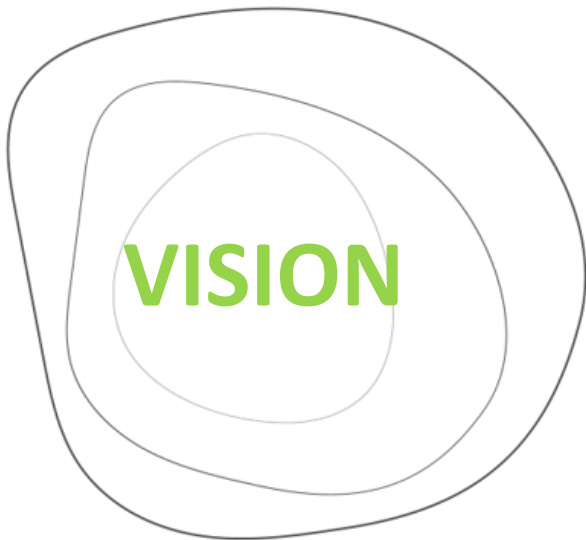
eurac
research

giulia.paoletti@eurac.edu

The New European Bauhaus concept has been launched officially in September 2020 by President Ursula von der Leyen.

South Tyrol has decided to take this opportunity to further develop the network of stakeholders that work on rural areas.

The NEB of the Mountains is a way of thinking, living, exploring—bringing together physically, but also virtually, different stakeholders dealing with mountain topics.



To promote the EU Green Deal goals in mountain areas.

Empower urban and rural mountain communities to mitigate and adapt to climate change in an inclusive way, by promoting the diversity of the specific sites in terms of the culture, and valorizing design, architecture, arts and the creative industries together with energy efficiency as well as technology in a trans-disciplinary perspective.



The initiative aims to reach out to everybody **who feels the mountains in its heart and soul** and wants to live in a harmonious way within this exciting setting.

Some of the stakeholders:

- Artists
- Activists
- Designers
- Architects
- Students
- Scientists
- Engineers
- Creative minds from all disciplines
- Policy makers
- Interested citizens

7 Thematic Clusters

7 thematic clusters:

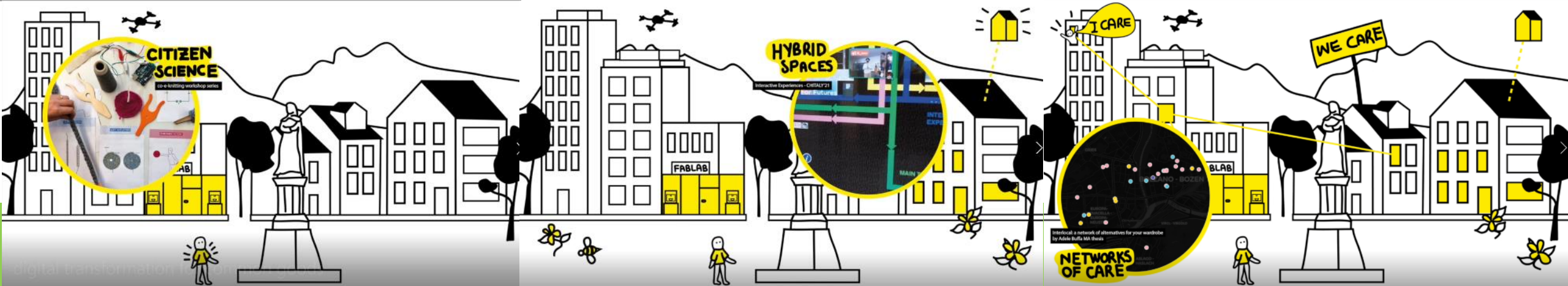
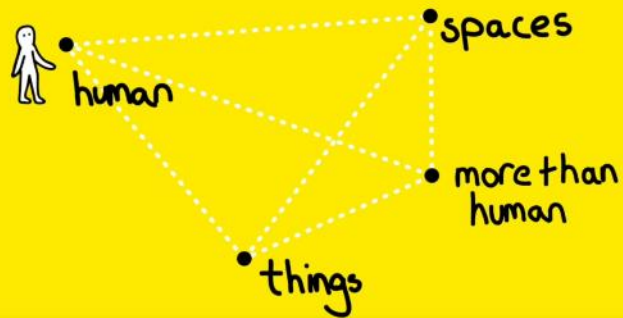
- Circular Design and Bio-Economy
- Digital transformations for the common good
- Education through Art and Design
- Design and Art of Democracy
- Creative Industries and Inclusive Society
- Valorization of sustainable and beautiful built environment
- Sustainability and affordable housing.

DIGITAL TRANSFORMATION

TRANSFORMATION



digital transformation for common goods



TRANSFORMATION

D U R C H

PARTIZIPATION



The project is driving the following transformations on the ground:

Improve the local capacities and the **mindset** via:

- awareness rising activity (at local level)
- training/education new generations on innovative themes as circular design, bioeconomy, socio-ecological transition, new educational tools for sustainable futures.

Regeneration of public spaces and buildings in mountain areas, via:

- implementation of projects and socially acceptable solutions related to energy efficiency, use of RES, local-natural materials and know-how capacities
- green, digital and resilient solutions
- citizen participation, co-planning and community development.

Project milestones:

- Participation to the NEB Festival with side events in Bolzano (June 2022)
- Organization of the NEB of the Mountains Public Conference and workshops during the Klimahouse Fair (May 2022)
- Launching of the Project Website → <http://mountainbauhaus.eu/>
- Organization of cross-thematic workshops during the year
- Future collaborations on projects at EU level

NEW EUROPEAN BAUHAUS OF THE MOUNTAINS BEAUTIFUL, SUSTAINABLE, TOGETHER



NEB KLIMAHOUSE

A WINDOW ON THE NEW EUROPEAN BAUHAUS OF THE MOUNTAINS FESTIVAL 11 JUNE BOLZANO



mountainbauhaus.eu



unibz

eurac research



lungomare/



<https://www.cultural-e.eu/>



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N. 870072.

The Gardens Elderly Center / Örebro, Sweden / Designed by: Marge Architects / Photo by: Johan Fowelin

Climate and cultural-based solutions for Plus Energy Buildings



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N. 870072.

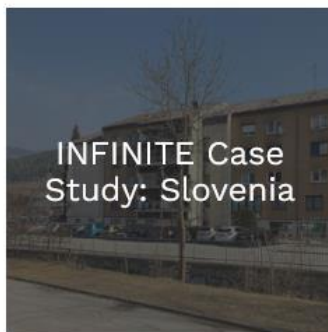
The content of this website reflects only the author's view only and the European Commission is not responsible for any use that may be made of the information it contains.



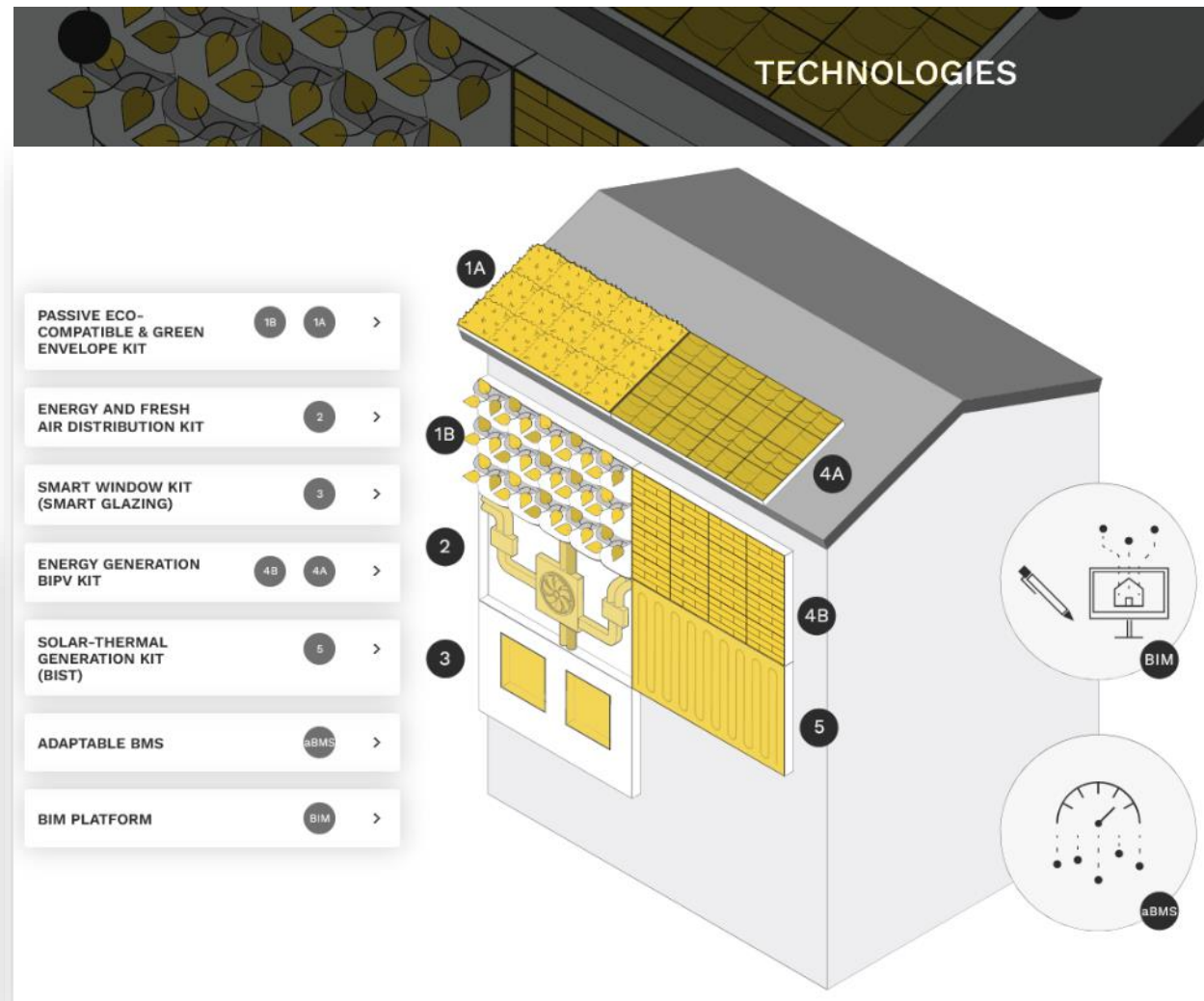
Industrialised durable building envelope retrofitting by all-in-one interconnected technology solutions

CASE STUDIES

INFINITE solutions for building renovation will be tested in both real and virtual environments

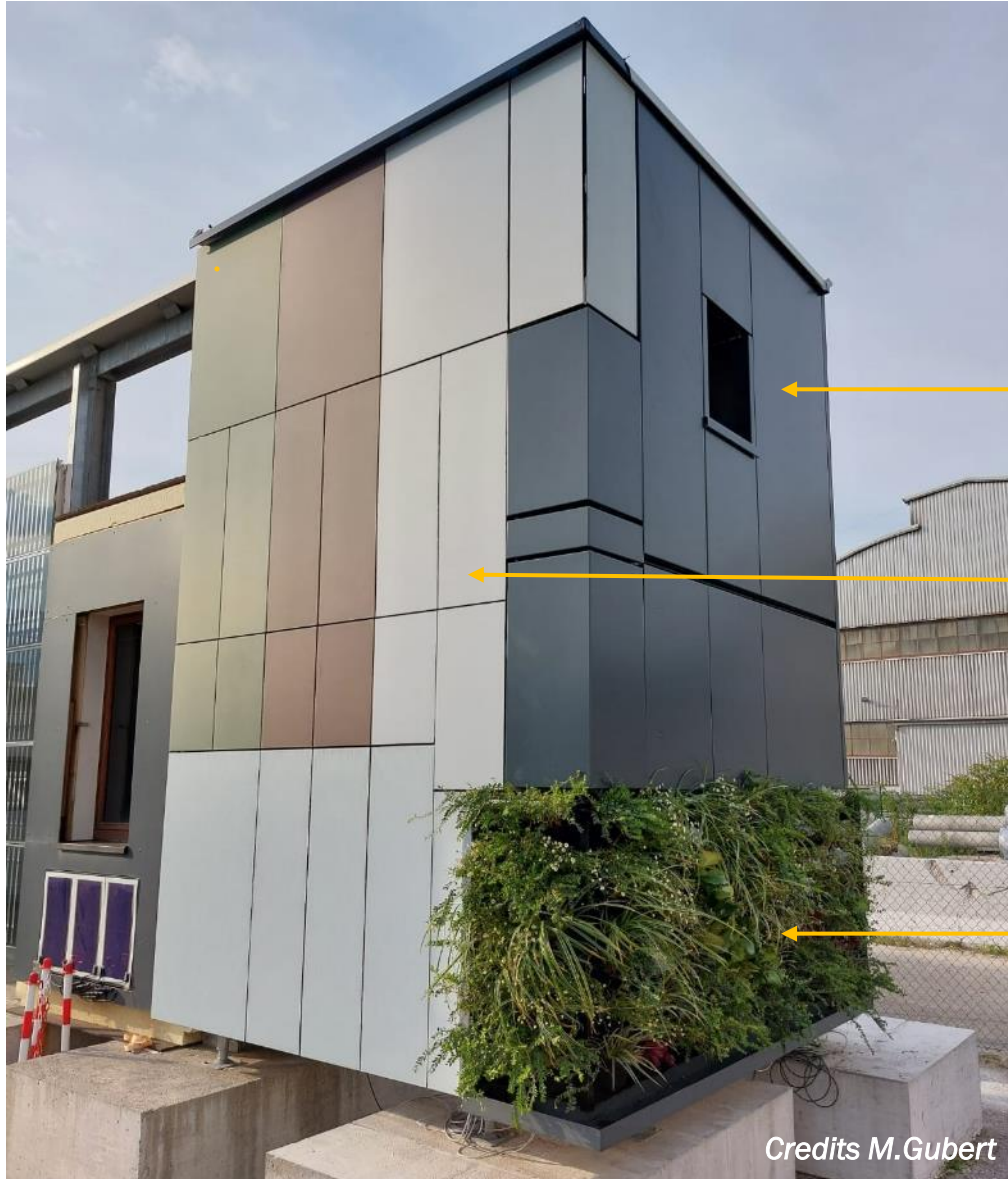


<https://infinitebuildingrenovation.eu/>



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N. 870072.

The content of this website reflects only the author's view only and the European Commission is not responsible for any use that may be made of the information it contains.



Credits M.Gubert



**Building Integrated Solar Thermal panels
BIST**

Building Integrated Photovoltaic Panels

**Building integrated
Living Wall GREEN facade**

<https://infinitebuildingrenovation.eu/>

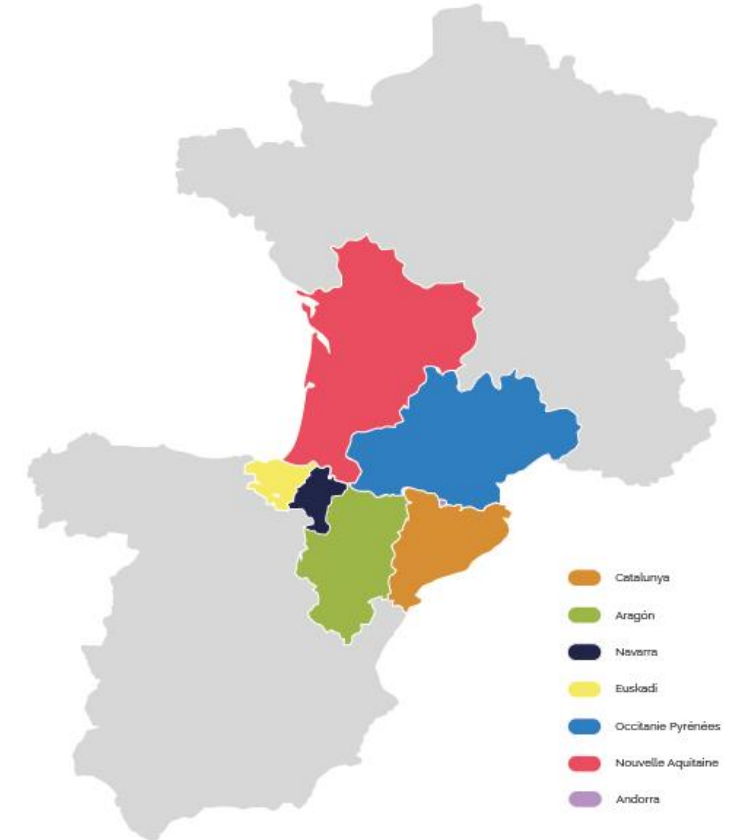


INFINITE project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 958397

THANK YOU / MERCI / GRAZIE!



The Working Community of the Pyrenees



Presentation of the EUSALP YOUTH COUNCIL



EUSALP EU STRATEGY FOR THE ALPINE REGION

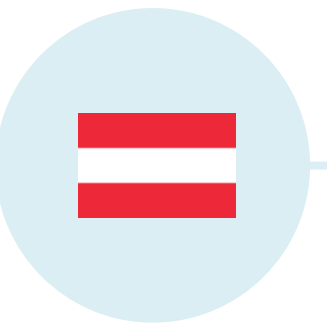
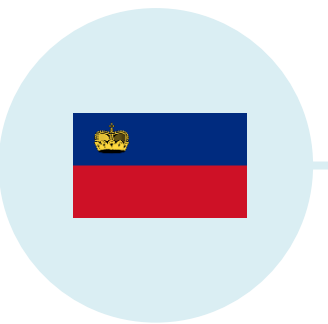
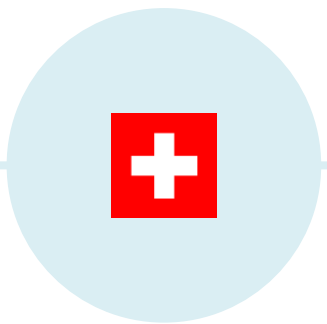
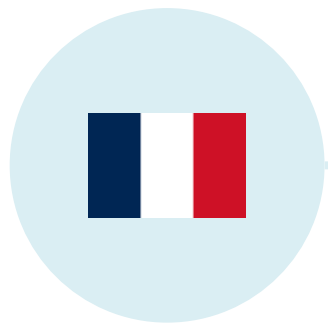
27 members



EUSALP
EU STRATEGY FOR
THE ALPINE REGION

EUSALP Youth Council

18 – 29 years



EUSALP EU STRATEGY FOR THE ALPINE REGION

General information about the functioning of the EUSALP youth council.

Each member is officially a member of the council for a period of 1 year, renewable for 1 year after the first mandate.

Each year a maximum of 50% of the members per country can be renewed.

The travel and accommodation of the councillors are covered by their home region.

There are between 3 and 5 physical meetings per term.

Young people meet online every 2 weeks for a Jour- fixe of 30min

The youth council is represented during the executive board and at the general assembly of EUSALP

Each member is free to join a working group and contribute according to their availability.

The Youth Council is invited to many events and meetings related to the activities of EUSALP





Economic
Development

Mobility and
Connectivity

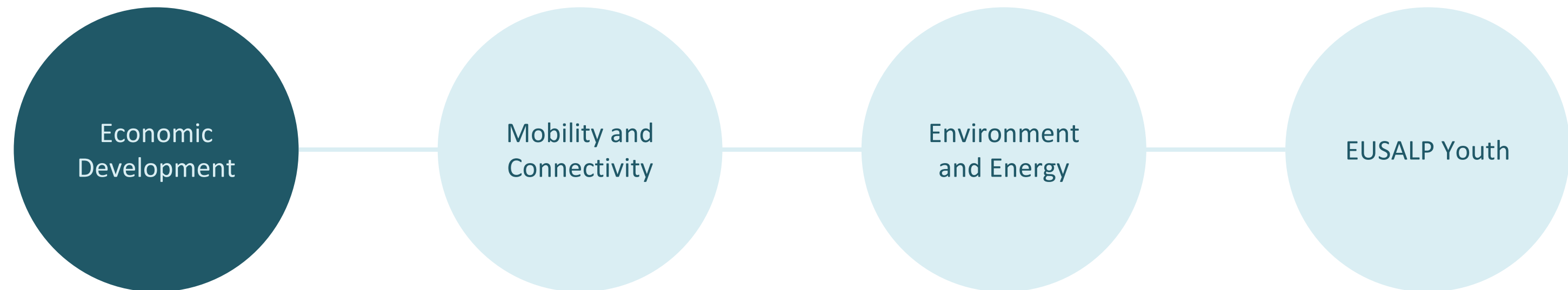
Environment
and Energy

EUSALP Youth

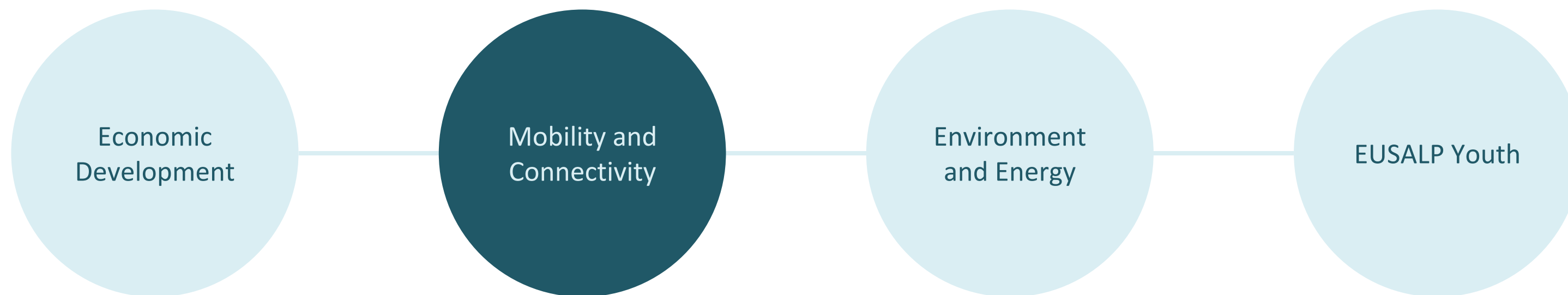


EUSALP EU STRATEGY FOR THE ALPINE REGION

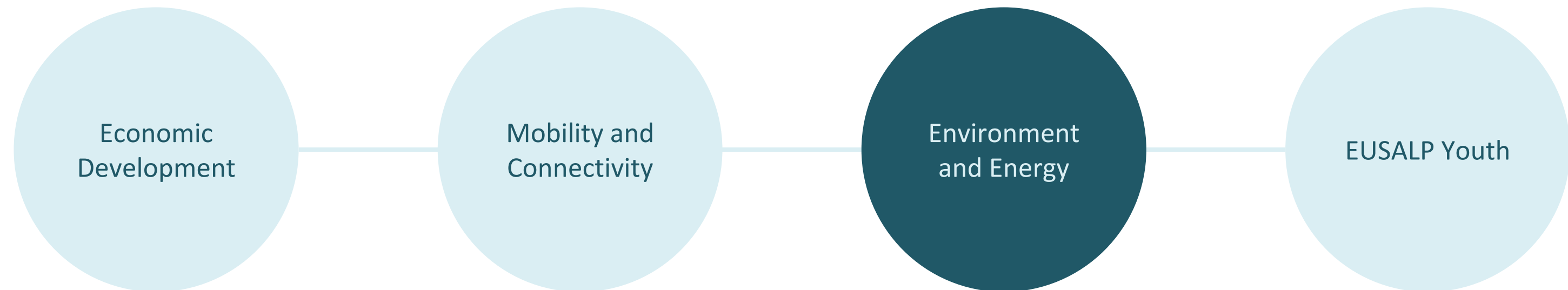
- Improving cooperation between Alpine countries in order to give a clear voice to the problem of depopulation.
- Collaboration with AG2 members to lobby in order to expose the problem of depopulation in rural, Alpine areas
- Search for positive examples of mountain countries that are fighting depopulation and promote the actions implemented.
- Creation of a network between small municipalities suffering depopulation
- Identification and quantification of relevant depopulation data
- Collect information on jobs/education,... opportunities from different sources - Apprenticeships and internships



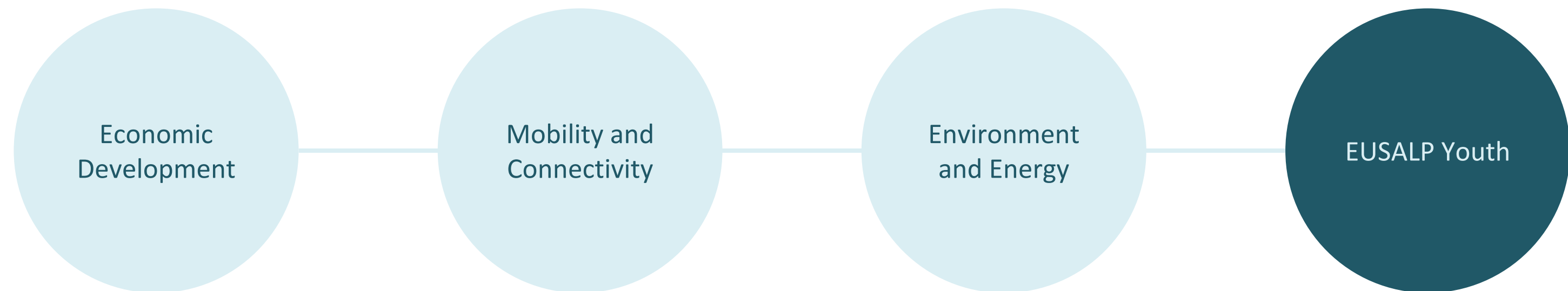
- Improving the cooperation of all the European stakeholders of mobility with the objective of an integrated network and to avoid waste of money and to make public transportation attractive and efficient
- Discuss with the mobility stakeholders about their policies to make public transportation more attractive for the youngs
- Collect data about mobility in the EUSALP region to inform policy makers and the population about this topic
- Work on a survey to learn about the carbon footprint of the trip of the participants of the Annual Forum in Nice. We want to use these results to propose improvements of the efficiency of EUSALP events.
- Work and discuss with the mobility stakeholders of the Alpine region in order to identify the main problems and explore the solution with a global vision



- Greater identification amongst the youth with their cultural and natural heritage
- Promoting sustainable practices and behaviors in harmony with the environment
- Connecting the youth with environmental issues in the Alpine region
- Celebrating cultural diversity and heritage in our region
- Acting as a bridge between young people and experts on the themes of energy and the environment
- Cooperating with the EUSALP's Action Groups on the thematic area of Energy and Environment



- Improve cooperation and organisation of youth initiatives in the alpine area by creating a network between local and interregional youth initiatives in the Alpine area and act as the interregional connection and point of contact for local youth initiatives (i.e. in terms of structure and topics).
- Creation and Organisation of a workshop on youth involvement at EUSALP Annual Forum in December 2021.
- Information acquisition on existing youth initiatives in the Alpine area through a survey that is spread across the whole Alpine region. Providing this information and offering to review proposals of (EUSALP) politicians.
- Raise awareness and educate young people about participation possibilities, current political issues – meet as equals, with humor and in-person. Restructuring of the educational activities of youth.shaping.EUSALP and proposal of summer camp activities, workshops.





EUSALP Youth Council



Executive
Board

Action
Groups

General
Assembly



EUSALP EU STRATEGY FOR THE ALPINE REGION

YOUTH ★ SHAPING EUSALP

youth.shaping.EUSALP is a youth initiative that incorporates several formats of **youth participation within EUSALP**. It includes 3 formats of participation and one online platform.

- "Pitch Your Project" is a competition open to all young people living in the alpine region between 16 and 25 years old.
- 3 summer camps that will take place this summer and open to young people living in the Alps from 18 to 25 years old.
- EUSALP Youth Council which offer a longer and more official involvement for young people aged from 18 to 29 years old.

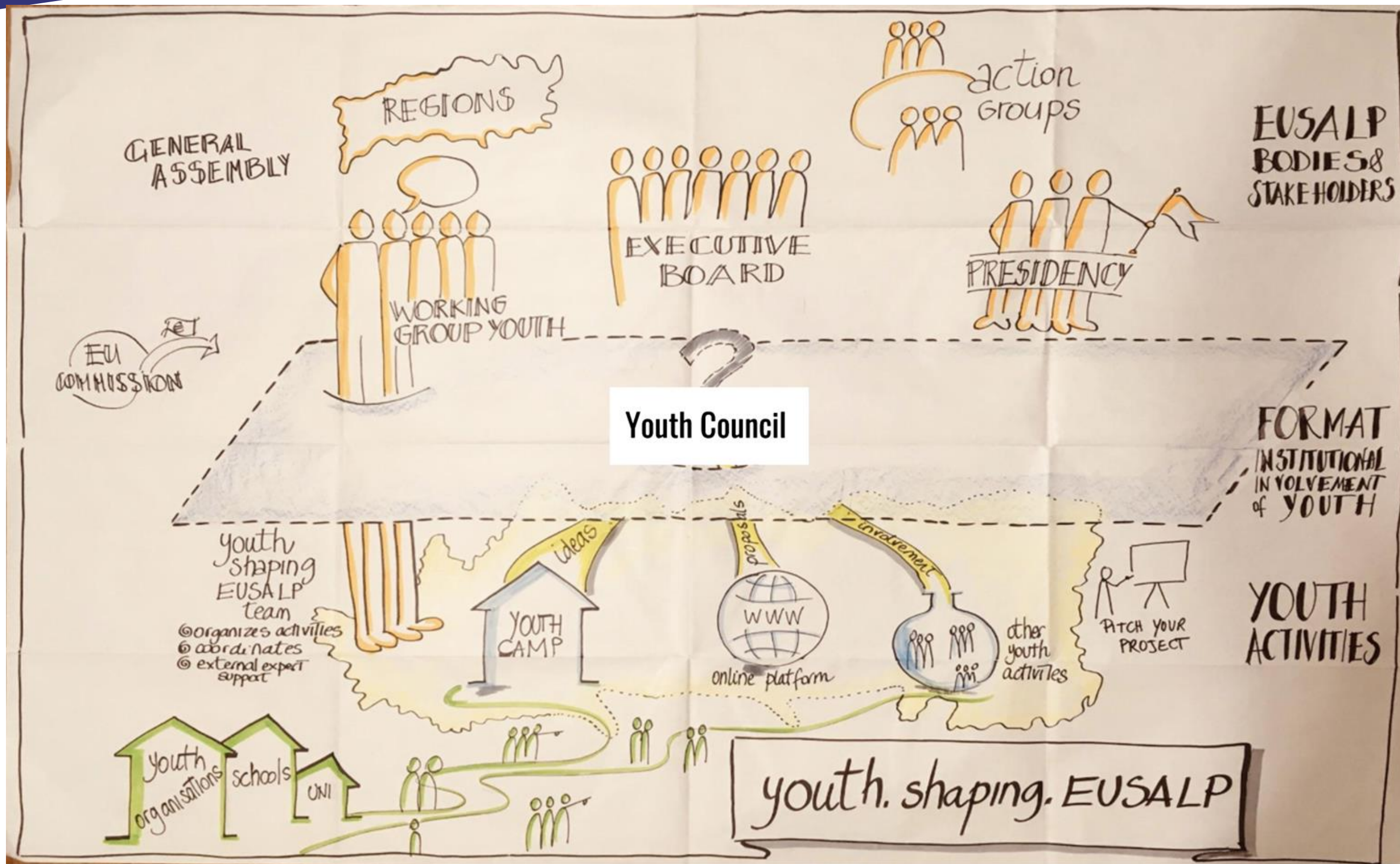
Our website allow us to:

- Register and apply to our activities
- Inform about opportunities for young people in the Alpine Region
- Follow the latest news of youth.shaping.EUSALP

These formats are **always designed for young people and by young people**. Our activities take place in different places and with different temporalities, they adapt to the needs of young people and are always evolving. Some of you have already contributed to their construction, others will join this process tomorrow or later and so a community of young active citizens participate in the evolution of youth participation in the EUSALP.



EUSALP EU STRATEGY FOR THE ALPINE REGION



EUSALP EU STRATEGY FOR THE ALPINE REGION



EUSALP Youth Council

THANK YOU FOR YOUR ATTENTION

Download here:
[EUSALP Youth Website](#)

Contact:
contact@eusalp-youth.eu



EUSALP EU STRATEGY FOR THE ALPINE REGION

SMART MOUNTAINS

XII European
Mountain
Convention

25 – 26 – 27
October 2022

How to make our territories attractive and
future-oriented?

Stefano Sala

Project Officer, UNIMONT – University of Milan

**Governance in mountain areas:
what has changed in the last years?**



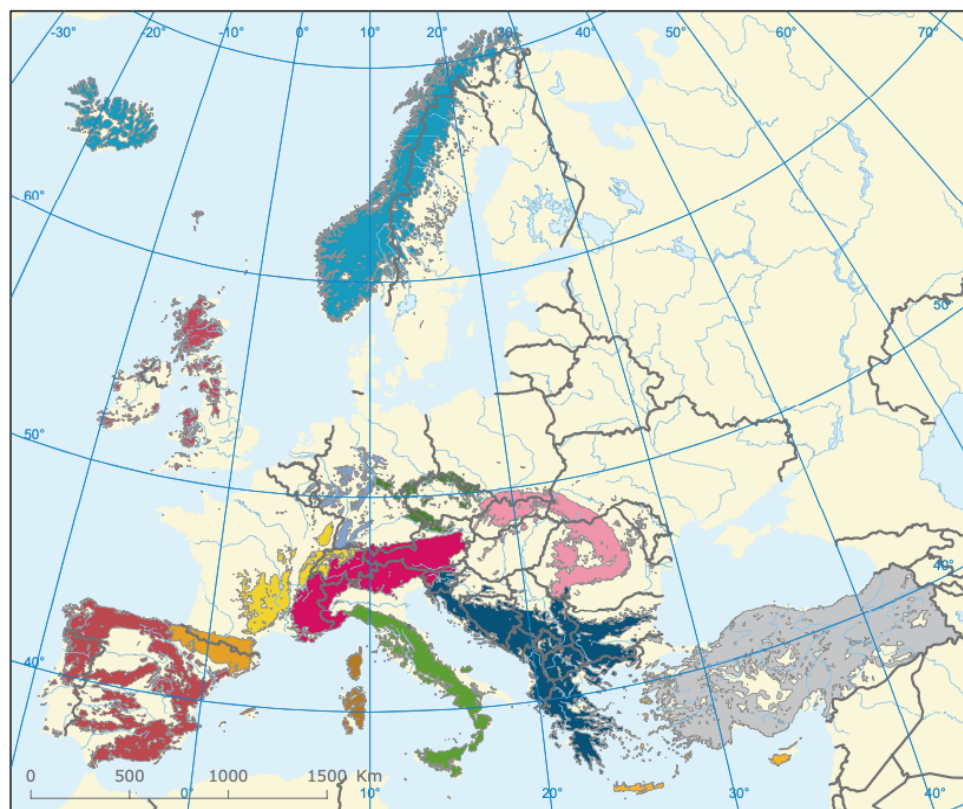
UNIVERSITÀ
DEGLI STUDI
DI MILANO

Email: stefano.sala1@unimi.it

Mountain Areas in Europe



UNIVERSITÀ
DEGLI STUDI
DI MILANO



According to a study conducted by the European Environment Agency, mountain areas cover **almost 29% of the EU Member States** and are home to **13% of its population**.

These areas, often located in border areas, are Europe's water reservoir as well as the ecological backbone of the continent and provide an enormous reserve of natural resources.

The main challenge for Europe's mountain territories is to **find the right balance between the needs for socio-economic development and the protection of fragile environments rich in biodiversity and natural resources**.

Note: * = Belgium and Germany; ** = the Czech Republic, Austria and Germany.

Figure 1. Mountain Ranges in Europe (EEA 2010)

Mountain Areas in Europe

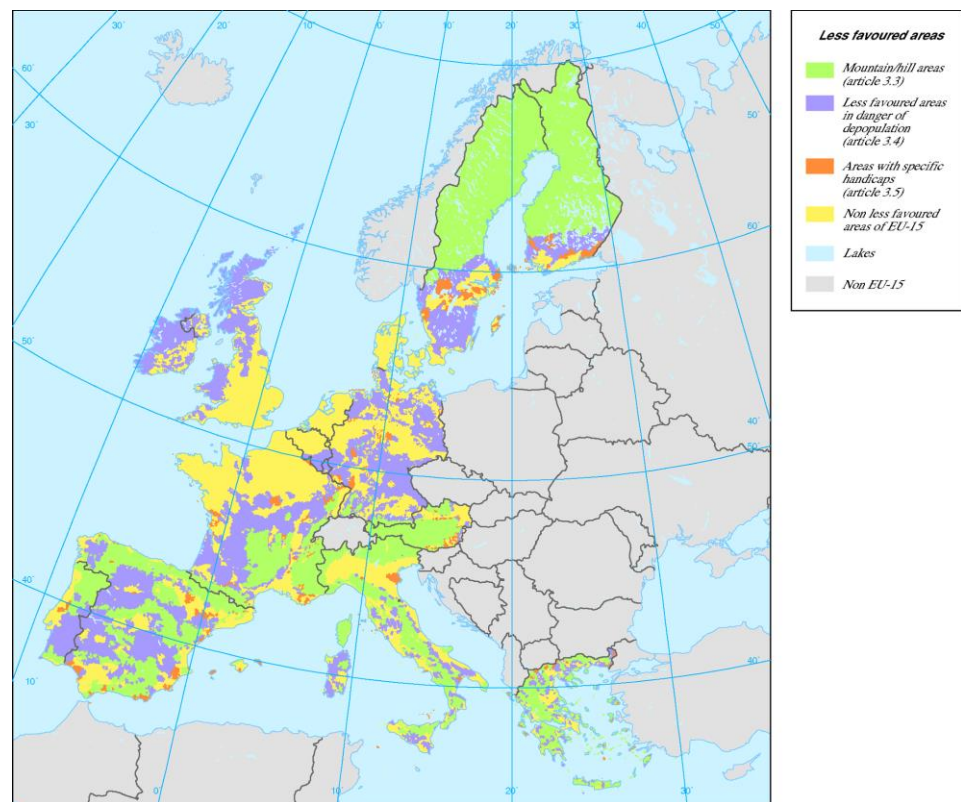


Figure 2. Map of Less Favoured Areas (EEA 2020)

The European Commission has been focusing on these areas since the 1970s, highlighting **the role of agriculture** in protecting the land and as the main economic activity in mountain areas (Council Directive 75/268/EEC).

Subsequently, at European level, the so-called "**Disadvantaged Areas**" were defined within the framework of the **Common Agricultural Policy (CAP)**.

The "**Green Paper on Territorial Cohesion**" drawn up following a consultation by the European Commission in 2008 highlighted the fact that, to date, **there are no integrated measures capable of improving the attractiveness and competitiveness of mountain regions.**

Mountain Areas in Europe



THE VALORISATION OF MOUNTAIN TERRITORIES
ANALYSIS OF POLICIES, STRATEGIES AND GOOD PRACTICES AT REGIONAL, NATIONAL, EUROPEAN AND INTERNATIONAL LEVEL: CHALLENGES AND OPPORTUNITIES

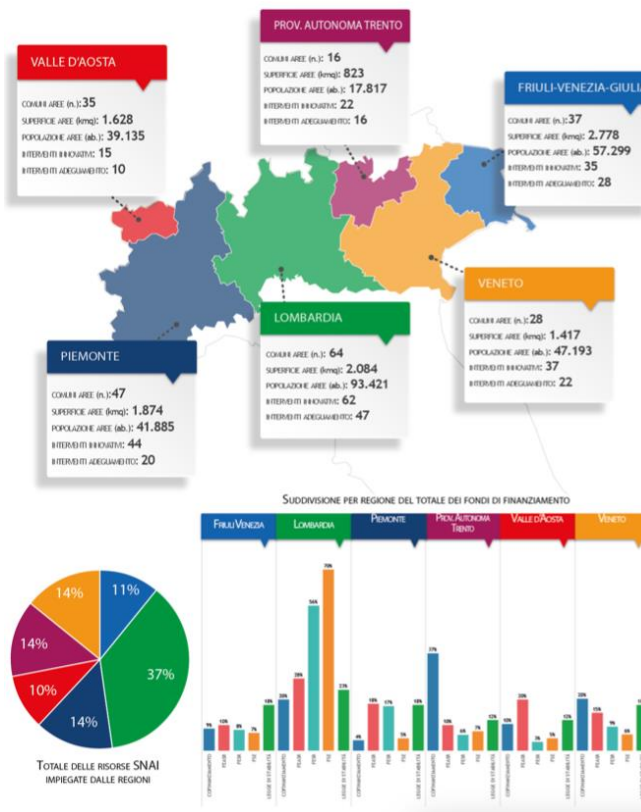
June 2021



Implementation agreement between C'G Ge.S. Di.Mont. - Research Centre for the Development of Mountain Areas - Unimont Edolo Centre of the University of Milan and the Lombardy Region "Valorisation of Mountain"

Regione Lombardia Accordo attuativo tra C'G Ge.S. Di.Mont. - Centro di Ricerca per lo Sviluppo delle Montagne - Unimont polo di Edolo dell'Università degli Studi di Milano e Regione Lombardia "La Valorizzazione dei Territori Montani"

ANALISI STRATEGIA NAZIONALE AREE INTERNE



UNIMONT - University of Milan carried out a study with the supervision of Prof. Anna Giorgi in collaboration with Lombardy Region completed in June 2021:

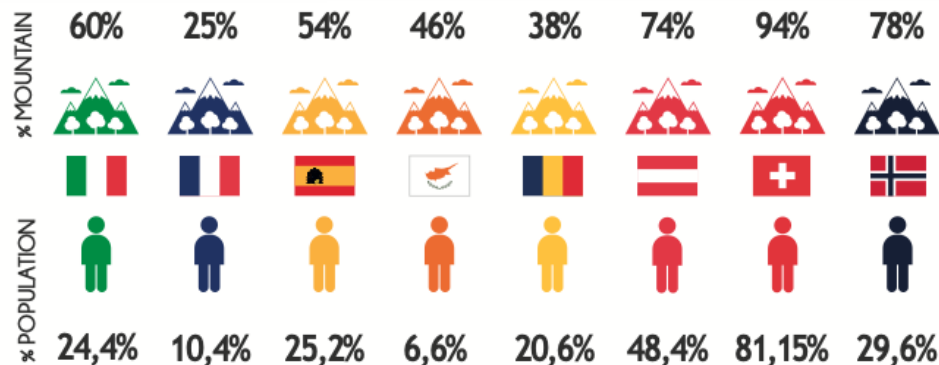
“The valorisation of mountain territories: Analysis of policies, strategies and good practices at regional, national, European and international levels: challenges and opportunities”

This analysis was carried out in order to make a useful contribution to encourage efficient and effective discussion on issues of territorial development, with particular reference to mountain areas.

Definition of Mountain Territory... National level



UNIVERSITÀ
DEGLI STUDI
DI MILANO



* This definition is in addition to the one that implements Article 174 TFEU for the distribution of EAFRD funds (Regulation 1305/2013).

SPAIN **1** DEFINITION
MINISTRY OF AGRICULTURE

a) altitude > 1,000 meters above sea level;
b) slope > 20% or difference in altitude 400m for lower altitudes.

CYPRUS **0** DEFINITIONS

No official definition. Definition being developed in the integrated strategy for mountain areas (University of Thessaly, 2019).

SWITZERLAND **1** DEFINITION
FEDERAL STATISTICS OFFICE

a) average altitude > 800 meters a.s.l.;
b) differential per hectare > 225 m for lower altitudes.

FRANCE **1** DEFINITION
LOI MONTAGNE L. 85-30/1985

a) limited usability of the soil;
b) altitude > 700 meters a.s.l. (general), 600 meters a.s.l. (Volsig chain) 800 meters a.s.l. (Mediterranean), slope > 20% on 80% of the surface area;
c) a + b.

ROMANIA **1** DEFINITION
L. 197/2018

a) altitude > 600 meters a.s.l.;
b) slope > 20% for lower altitudes;
c) a + b.

NORWAY **0** DEFINITION

No official definition. Rural development policies include actions in favor of mountain areas.

ITALY **3** DEFINITIONS
L. 991/1952 (FINANCIAL SUPPORT ACTIONS)
L. 1102/1971 (MOUNTAIN COMMUNITIES)
L.R. 19/2008 (MOUNTAIN COMMUNITIES OF THE LOMBARDY REGION)

AUSTRIA **0** DEFINITIONS

No official definition. Actions in favor of mountain areas adopt the definition adapted from EU Regulation 1305/2013.

BHUTAN **0** DEFINITIONS

No official definition. 95% of the territory is located at an altitude of > 600 meters a.s.l..

Consolidated definition L. 991/1952:
a) 880% surface > 600 meters a.s.l.
b) differential > 600m and cadastral income < 2.400 lire

LOMBARDY
An exemplary case

Source: Carret, M., Zilio, E., Giorgi, A. (2019). Il problema della definizione delle zone montane nel diritto. *Journal AmbienteDiritto.it*, 4/2019, 11-12.

MOUNTAIN CLASSIFICATION

	Population	Area (km ²)
By degree of mountaininess	1.539.362	10.449
By altitude range	1.041.890	9.650
Based on the Municipalities included in the Mountain Communities	1.254.276	10.163

Mountains in Italy have variable borders.

The table shows the data (n. Municipalities, resident population and area) related to mountain areas in the Lombardy region according to the classification of municipalities by "degree of mountaininess", "altitude range" and belonging to the "Mountain Communities".

National Strategies for the Development of Mountain Territories



STRATEGIES FOR THE DEVELOPMENT OF MOUNTAIN TERRITORIES

The comparative analysis shows that only **few countries have integrated strategies dedicated to the development of mountain territories.**

At EU Level two studies produced a comprehensive map of European Mountain territories:

- **Nordregio – 2004:** study commissioned by the DG Regio to evaluate the impact of European Policies on the mountains.
- **European Environment Agency – 2010:** the study aims to understand and measure the ecological importance of mountain areas in Europe.



 <p>No specific strategy. The only national program involving the mountains: National Strategy for Inner Areas (2015).</p>	 <p>National Strategy for the Development of the Mountain Community (2019).</p>	 <p>Strategy for the Development of Rural and Mountain Areas (P-LPRB) (2015).</p>
 <p>Mountain Law II (2016).</p>	 <p>Law 197/2018 for the development of mountain areas.</p>	 <p>Mountain policies at the level of the Autonomous Communities. Strategy for business development in mountain areas to be defined (2021).</p>
 <p>No specific strategy. The mountains are part of various strategies of policies for the development of rural areas.</p>	 <p>No specific strategy. Coordination of European funds to promote development initiatives at a regional level.</p>	 <p>All the country's strategies and policies necessarily include mountain areas, but no policy specifically mentions the mountains.</p>

National Strategies for the Development of Mountain Territories

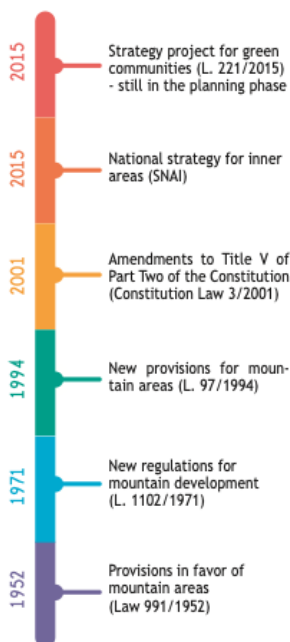


THEMES	ITALY	FRANCE	SPAIN	CYPRUS	ROMANIA	AUSTRIA	SWITZERLAND	NORVEGIA	BHUTAN
Environment	✓	✓	✓	✓	✓	✓	✓	✓	✓
Agriculture	✓	✓	✓	✓	✓	✓	✓	✓	✓
Services	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tourism	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tax exemption		✓			✓		✓	✓	✓
Economic progress	✓	✓	✓		✓	✓	✓	✓	✓
Training		✓		✓	✓			✓	✓
Digitization		✓	✓				✓	✓	✓
R&I		✓			✓		✓	✓	
Community led projects	✓	✓	✓	✓		✓	✓		
APPROACH									
Top Down ↓	↕	↓	↕	↕	↕	↑	↕	↓	↓
Bottom Up ↑									

National Strategies for the Development of Mountain Territories



LAWS AND STRATEGIES RELEVANT TO THE DEVELOPMENT OF THE MOUNTAIN TERRITORY



Art. 44, co. 2 ° of the Constitution of the Italian Republic states: "the law provides for provisions in favour of mountain areas". These measures first materialized with Law 991/1952 which identifies mountain areas with municipalities that had certain combined characteristics of altitude (greater than 600 meters above sea level for 80% of the territory) or height difference (differential of 600 m between minimum and maximum altitude of the Municipality) and low catastral income.

Law 1102/1971 established Mountain Communities - bodies governed by public law specifically aimed at the government of mountain areas, placed at an intermediate level between Municipalities and Provinces. These bodies were then devolved to the legislative competence of the Regions, which abolished them or transformed them into unions of Municipalities.

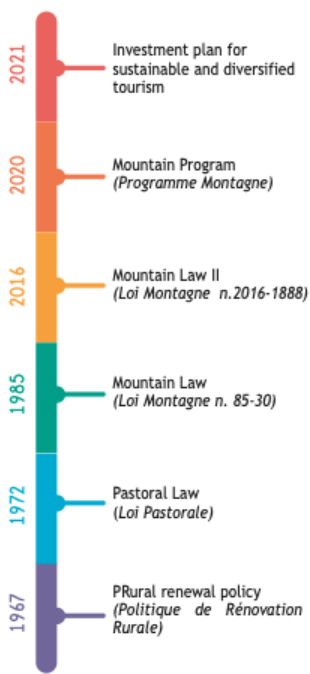
National intervention was established with Law 56/2014, which, in reorganizing the local authorities of a large area, established the mountain border provinces (Verbano-Cusio-Ossola, Sondrio, Belluno), with a law on small municipalities (Law 158/2017) and through the **National Strategy for Inner Areas (SNAI)**.

Italian mountains also play a role in the National Recovery and Resilience Plan with the **Green Communities Strategy** (L. 221/2015). A project that from North to South involves 30 mountain communities, coordinated by the Department for Regional Affairs.

National Strategies for the Development of Mountain Territories



LAWS AND STRATEGIES RELEVANT TO THE DEVELOPMENT OF MOUNTAIN TERRITORY



The 1985 Loi Montagne is the **first legislative act in Europe that recognizes mountain areas as "objectives of national interest" due to their economic, social, environmental, landscape, health and cultural role**, and therefore proposes a holistic and multi-sectoral management.

This law legitimizes the **decentralization of mountain policies based on the fact that mountains constitute separate territorial units**, not only due to their specific needs but also because of their unique geographical and socio-economic characteristics. It introduces some essential rights for the mountains: **expression, solidarity and differentiation**.

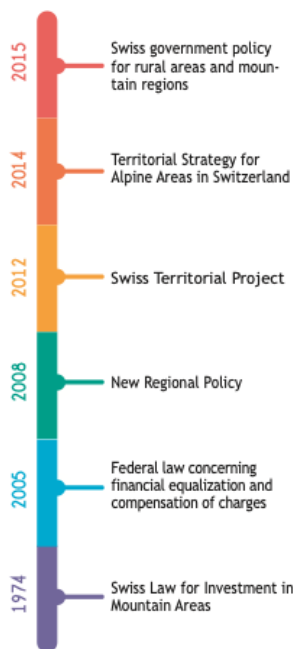
Thirty years later, the need to renew the "Pact between nation and mountains" to keep pace with social, technological and legislative changes, and to set up a development model, led to the formulation of **Loi Montagne II**.

The new law aims to: a) **modernize the mechanisms and institutions underlying mountain governance**, b) **adapt the way in which public policies integrate the mountains** and c) **respond to the needs of mountain inhabitants, enterprises and users**.

National Strategies for the Development of Mountain Territories



LAWS AND STRATEGIES RELEVANT TO THE DEVELOPMENT OF THE MOUNTAIN TERRITORY



Together with Austria, Switzerland was one of the first countries to pay specific attention to mountain areas through the **Swiss Law for Investment in Mountain Areas issued by the Swiss Federal Council in 1974**. It has also coined a general definition of a Mountain Region used for statistical purposes.

The **Swiss Government Policy for Rural Areas and Mountain Regions (P-LRB)** joins the Confederation's Agglomeration Policy 2016+ and therefore integrates the Territorial Strategy for Alpine Areas in Switzerland and the Swiss Territorial Project. The Swiss government's **P-LRB is based on identifying the main challenges that Swiss rural and mountain areas are facing**. The P-LRB is intended to be a **transversal and complementary policy to the agglomeration policy**. These coordination efforts must, to date, still be accompanied by ad-hoc funding. A first effort was made with the establishment of specific funds within the **New Regional Policies (NPR)**. A new motion (No. 19.3731) was adopted by the Federal Parliament in March 2021, asking the Federal Council to develop a realistic and cross-sectoral action plan for the implementation of the P-LRB.

Homogeneous territorial development is also promoted in Switzerland through other measures, not specific to mountain areas, such as: **the Federal Law concerning financial equalization and compensation of charges established in 2020**; and the **universal service** which ensures that basic public services are available throughout the territory with a guaranteed minimum quality level (DETEC, 2016).

It is necessary to promote skills acquisition to manage mountain territories



UNIVERSITÀ
DEGLI STUDI
DI MILANO

Due to this complex framework there is a need to promote education and up-skilling in order to implement coherent and integrated strategies in mountain territories



"Il corso fornirà un'analisi specifica delle aree montane dell'Unione Europea, a partire dalle loro caratteristiche e dai loro marchi di identificazione".

Prof. Massimo Condinanzi



It is necessary to promote skills acquisition to manage mountain territories

The NEW Master's Degree Course **VALORIZATION AND SUSTAINABLE DEVELOPMENT OF MOUNTAIN AREAS** takes place entirely at the UNIMONT Campus of the University of Milan in Edolo (BS).

The Master's Degree is **taught in English** and aims to train professionals capable of promoting the enhancement, development and sustainable management of mountain territories, by applying **innovative approaches**.

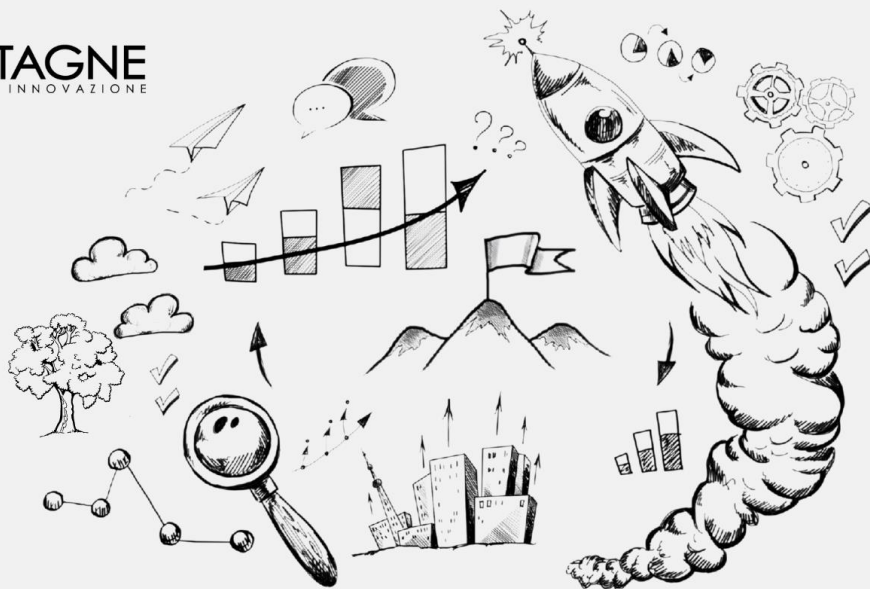
>> Discover more: unimontagna.it/en <<

MULTIDISCIPLINARY

glocal
INTERNATIONAL

unique
innovative

Young Entrepreneurs in Mountain Areas



Hai tra i 18 e i 40 anni e sei un giovane imprenditore in montagna?



Aiutaci a individuare quali sono i fattori socioeconomici, territoriali e culturali che agevolano il successo delle imprese giovanili che operano nei comuni montani.

Sei un giovane imprenditore in montagna?
RACCONTACI LA TUA STORIA!



Inquadra il **QR CODE** e compila il questionario **GIM** - Giovani Imprenditori in Montagna

THANK YOU / MERCI / GRAZIE!



SMART MOUNTAINS

XII European
Mountain
Convention

25 – 26 – 27
October 2022

How to make our territories attractive and
future-oriented?

Thierry Antoine-Santoni

Full Professor, University of Corsica

Governance in the implementation of a Smart Village project.



Email: antoine-santoni_t@univ-corse.fr

Smart Paesi : Emergence of Smart territories (2017-2021)

Background and emergence of the project



LABORATOIRE
SCIENCES POUR
L'ENVIRONNEMENT
UMR 6134 SPE



Smart City:
marketing,
myth or
reality?

73% of the
French territory
by municipalities
with less than
2000 inhabitants

80 billion
connected
objects in
2020

7 COP21
objectives



THE GLOBAL GOALS
For Sustainable Development

Smart Paesi : Emergence of Smart territories (2017-2021)

Background and emergence of the project



LABORATOIRE
SCIENCES POUR
L'ENVIRONNEMENT
UMR 6134 SPE

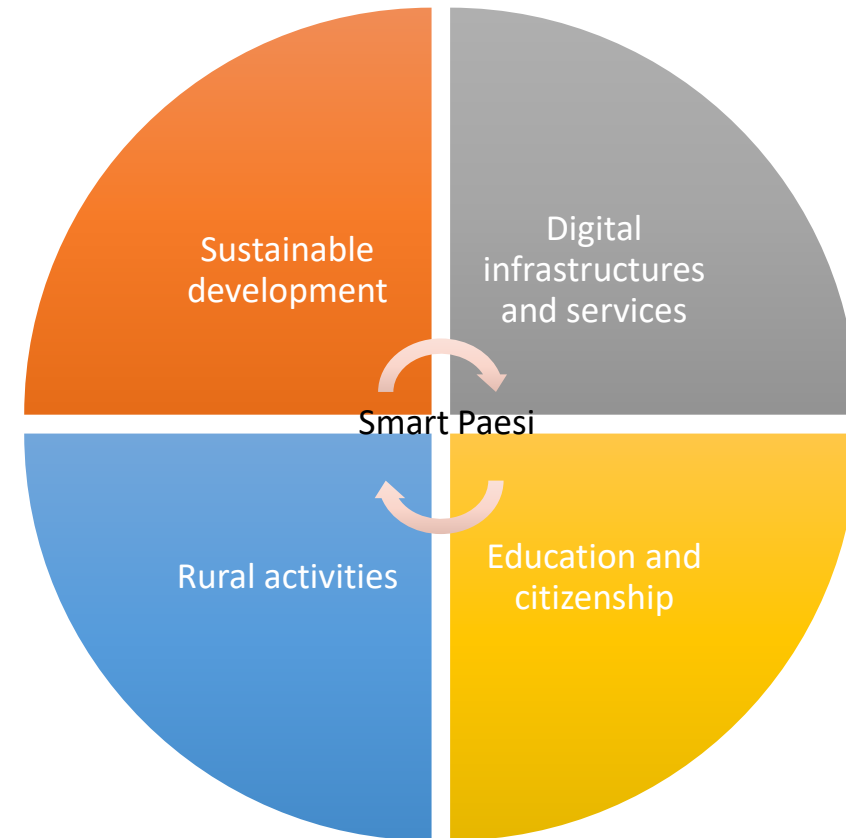


Implementation of a LoRa - LoRAWAN infrastructure and development/deployment/studies of the network and connected objects

Creation of an information system integrating real time monitoring and prediction

System optimisation (energy, water, public buildings, lighting, and services) and data interfacing

Development of services for the actors-experimenters and awareness raising of the population



Smart Paesi : Emergence of Smart territories (2017-2021)

Background and emergence of the project



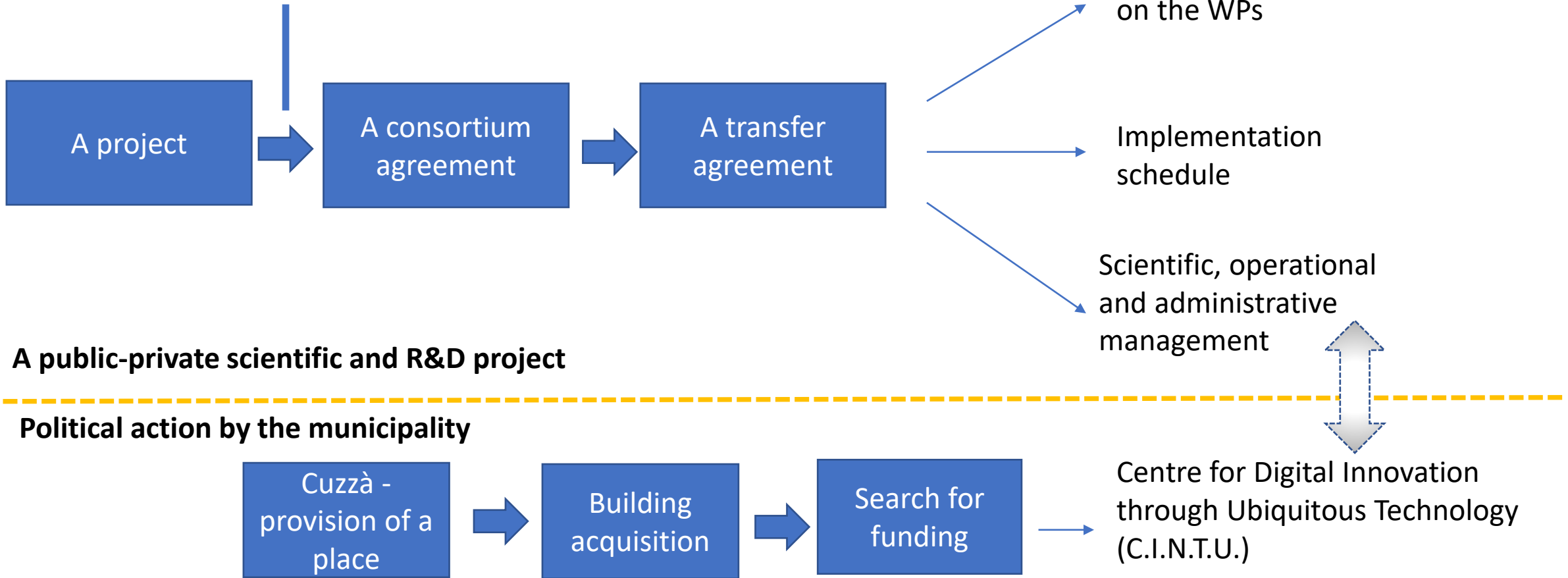
UNIVERSITÀ
DI CORSICA
PASQUALE
PAOLI

LABORATOIRE
SCIENCES POUR
L'ENVIRONNEMENT
UMR 6134 SPE



Smart Village Project governance

Response(s) to the Calls for Proposals

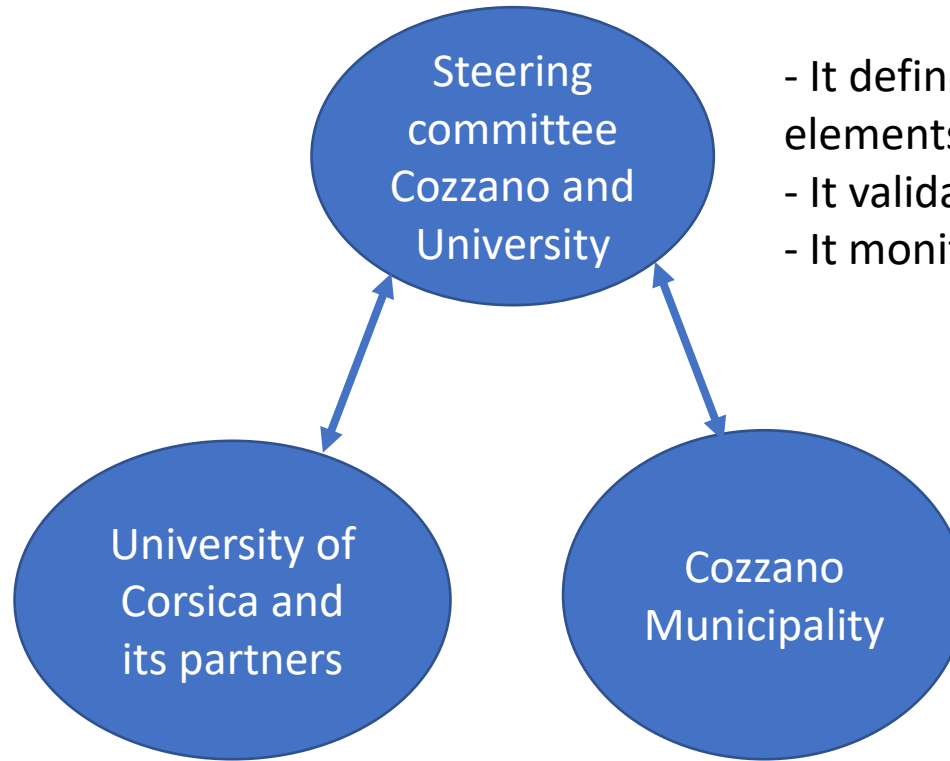


Smart Village Project governance

- It develops basic and applied research actions in a Living Lab mode

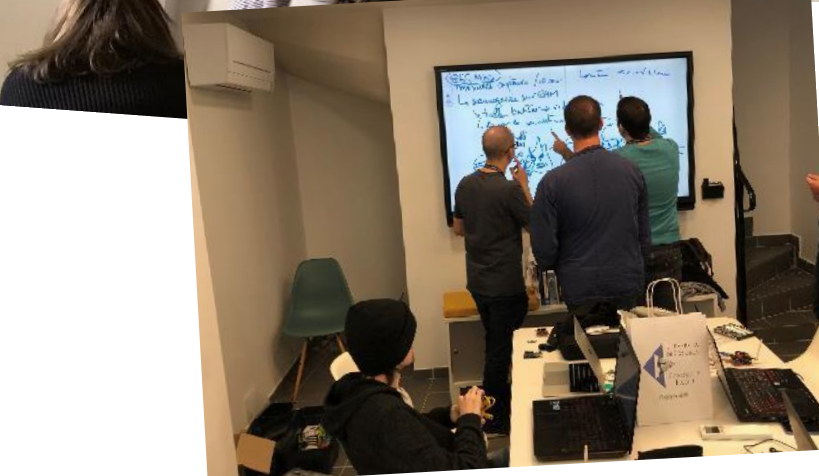
- It communicates on the scientific field and on the popularisation to the population (Sciences with and for society)

- It works on foresight in the field of intelligent territories



- It defines the strategic and the operational elements
- It validates the actions
- It monitors the progress of actions

- It develops new infrastructures in the Smart Village philosophy
- It relays the actions at the political level
- It communicates on the actions at village level
- It has set up a digital advisor to serve the population



THANK YOU / MERCI / GRAZIE!



How to develop social innovation in marginalised rural areas? Practical examples and policy lessons

Bill Slee

The Rural Development Company
Emeritus Fellow, The James Hutton
Institute

We are at an important inflexion point in global development

- All is not well with the environment, with climate change, biodiversity loss, water quality decline
- All is not well with society, with overconsumption and increasing income and spatial inequality etc
- These challenges mean we must fundamentally change the way we think and act. The late Bruno Latour's work reminds of the inseparability of nature and culture.
- Development is not just about growth, but about human and planetary wellbeing
- Social innovation is one important way of exploring possible ways of driving positive change – a laboratory of practice

What I want to talk about

Why we should be interested in social innovation in marginal rural areas?

Where does social innovation come from?

What triggers social innovation?

Suggest that a definition that embraces civil society and third sector actors is useful

Observe that a binary model of state and public sector as providers of goods and services is wholly inadequate

Using examples, explore why social innovation and its conceptual cousins have high relevance for rural mountain areas

Explore how policy could better assist social innovation

Why social innovation is so important for marginal rural areas



Markets are often weak and in retreat, in spite of ephemeral booms

Public service delivery is very costly and infrastructure costs are high and austerity policies have led to service decline

Rural communities are often repositories of distinctive cultures

Those that stay are often willing to act collaboratively because of their strong place roots

Without social innovation these places would be likely to decline further

Artieda, Aragon, Spain

A community in a
depopulating part of Spain
determined to thrive

Multiple projects

- Deep engagement with community planning
- Local food
- Ecotourism
- ICT infrastructure
- Access to housing-
bringing young people
back

A collective collaborative
venture





Portsoy, Aberdeenshire: its story



The divergent roots of recent social innovation

Third way managerialist politics to solve wicked problems/grand societal challenges

Espoused by N American social enterprise academics, Geoff Mulgan, NESTA and implanted into EU thinking in BEPA publications

“Scaling up” successful SIs

Radical (mostly urban) movements for citizen empowerment addressing inequality and the casualties of deindustrialisation

Espoused by urban social scientists such as Swyngedouw, Moulaert and MacCallum and paralleled in Erik Olin Wright’s work

Giving agency to local actors to engage in place making

What triggers social innovation?

- A perceived injustice or inadequacy of the prevailing mode of provision
- Normally closure of a keystone service (school, post office, only shop, bus service, garage) or main employer or other threat
- Decline in quality of a service (esp social care, public transport, but also retail)
- Resistance to a general decline in socioeconomic wellbeing
- Sometimes (but probably less frequently) recognition of an unrealised opportunity (such as community renewable energy)

Leading to

- *A collective response by the community*
- *A willingness to invest time and resources to resolve the problem, realise a project and work together*

The importance of place-based local actors



The specificity of place in a world of common problems



A physical community has:

A physical identity, buildings and landscape	Distinct socio-ecological systems	Specific power relations in relation to public and private actors	Specific stock of natural social and human capital	Often, but maybe not to all, a sense of my place: I belong here
--	-----------------------------------	---	--	--

Place based actors are a critical force in SI

The SIMRA approach

*“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**”*

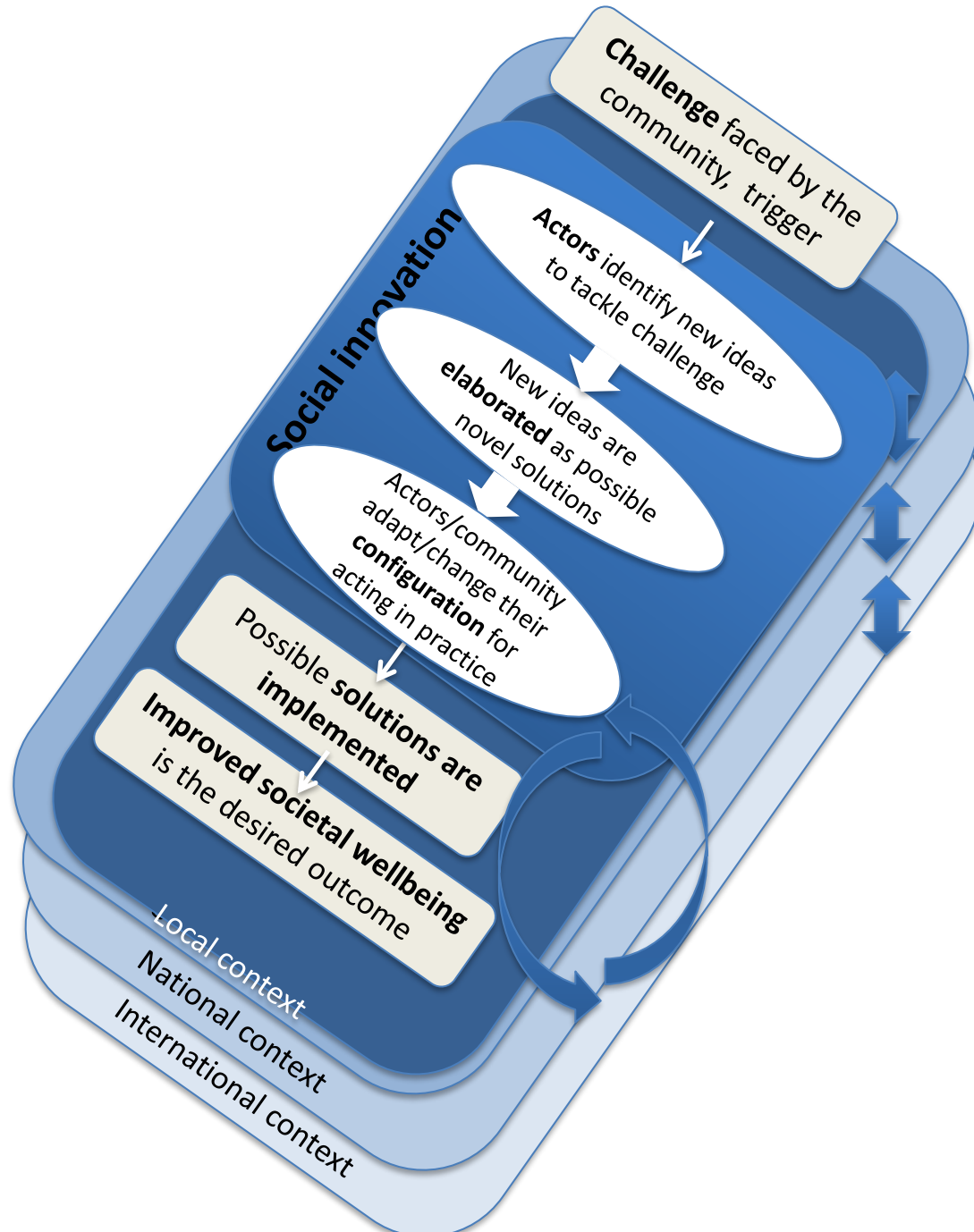
- Scope for environmental and economic elements not just social (although there is a social process behind it)
- Reconfigured institutions and practices are key
- It seeks enhanced social wellbeing
- It recognises and accepts trade-offs
- **It asserts the centrality of agency of civil society actors working alone or with others**

....SI overlaps and interweaves with a raft of related concepts

co-production; transition theory; stakeholder capitalism;
deliberative democracy; place-based community development;
community-led local development (CLLD); bottom-up
development; smart villages; the collaborative economy; the
sharing economy; the social solidarity economy; community
empowerment; Big society; creative commons; creative class;
institutional bricolage.

....all seeking the policy maker's attention

All are built around the belief (which I share) that current models
are not working, for all sort of reasons; and new models are
needed



What makes a vibrant community?

- An element of economic competitiveness- an economic rationale – and supporting services
- Its ability to continue intergenerationally
- An identity that bonds its inhabitants
- An active civil society
- A supportive local and national state
- Resilience – capacity to act in the face of challenges and capacity to recover from shocks

How does change happen?

after EO Wright's Envisioning Real Utopias

- **Ruptural** change- a major break with the past
- **Interstitial** change (something filling gaps/needs unmet by existing modes of provision)
- **Symbiotic** change: working with existing agency to deliver enhanced outcomes

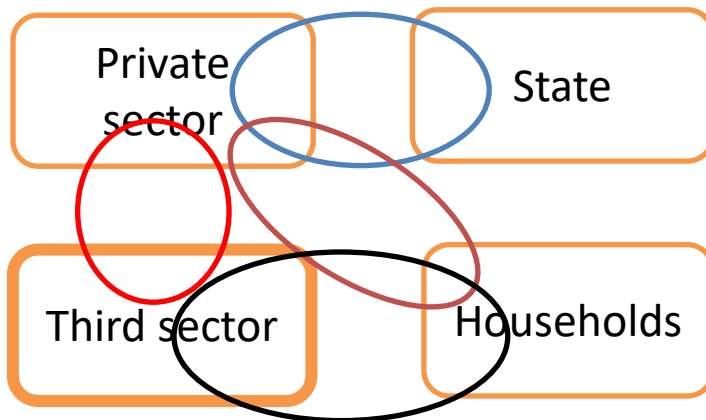
Social Innovation can work with all three models of change.

Wright argues that ruptural change is the least likely routeBut the rise of populist movements may represent a kind of rupture...

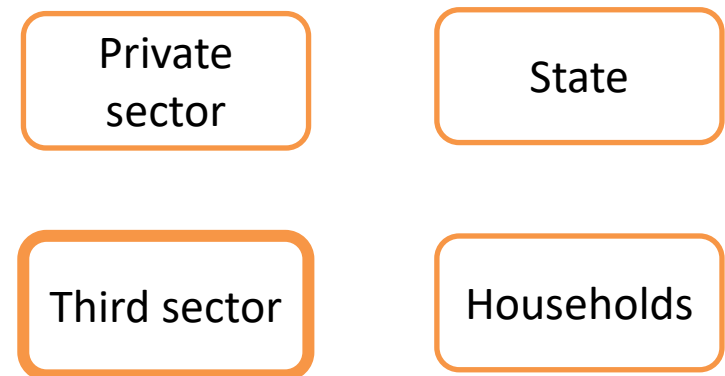
...even if interstitial and symbiotic change are more likely

Four modes of provision not two

Electricity



Elderly social care



Choices are based on socio-cultural and political values
No unilinearity of direction of travel
No inexorability of commodification
Movement from one to another mode is possible
Increased hybridity over time

Four examples of socially innovative projects

- DNT refugee integration project, Norway
- Huntly Development Trust, Huntly Aberdeenshire
- Mit Bäuerinnen lernen-wachsen-leben, South Tyrol, Italy
- Creative Worlds of Apprenticeship Styria, Austria

Case study 1 Integrating immigrants into Norwegian culture

Norwegian Trekking Association (DNT) 260,000 members

SIMRA Innovation Action to integrate immigrants into this central part of Norwegian identity

Located in Gudbrandsdalen - an area with declining population

Organised walks with diverse immigrants

The key is helping repopulation through integration

Creating and maintaining new networks is challenging



Case Study 2 Re-purposing, refurbishing, rekindling the heart of a community

Huntly Development Trust was built on foundations laid in a fixed term municipal small towns project

Five years of chasing project funding to secure survival

Realisation of a need for a stable income generating activity

Wind energy was the key to unlocking new opportunities

HDT runs an electric car club, major multipurpose community hub, farmers market, farming and forestry projects, community bookshop etc.



Case study 3 Social care in South Tyrol

Motivated by a desire to provide an alternative culturally sensitive model of childcare by farm women on the farm and by the disadvantaged socioeconomic condition of women in rural areas of South Tyrol

Leadership critical in creating a cooperative structure in 2007

118 providers offering 6 spaces per farm with over 500 children

School visits to farms added as part of a wider cultural programme (10 k visits in one year)

30 providers of day care for elderly people now offered

A national law gives official recognition of social farming 2015



Styria Austria Creative Apprenticeships project

Creation of mobile modular “workboxes” to exhibit local crafts to schoolchildren...

..to give them a taste of SME and microbusiness activities in region and help recruitment and survival of small businesses

Since 2014, 7000 teenagers have been involved, accompanied by 500 local entrepreneurs, who participate as volunteer mentors in these career orientation days

Children get taster sessions and build relationships with business actors

Lately a mobile version on an large lorry container has been developed

This builds on a develops an earlier model; it reaches out to the challenge of intergenerational survival of small business



Resilient Futures

Vote now for



Creative Apprentice Worlds



Policy and social innovation: uneasy partners

Social innovation is often a form of collective bottom up reaction to adversity (market failure, environmental threat, policy failure, inequality, powerlessness)

...so if there were effective policies to address that adversity social innovation would not happen

Social innovation often challenges the status quo

But

“Policy” can enhance the opportunity for successful social innovation

It can create the appropriate institutional architecture

It can enable/support participatory fora and actions

It can provide seedcorn funding, training, capacity building

EIP Agri has begun to operate in this field

so in practice

....there is a unrehearsed and clumsy dance between community agency and collaborators- the social innovators- and public authority in designing policy

...and sometimes policies are inappropriate of bureaucratically burdensome and actually subvert or undermine social innovation

Sometimes there is policy capture by elites which stifles social innovation and exacerbates inequality

Challenge funding has become an unhelpful norm

Policy often plays catch up- Multi-actor partnerships and Bottom up development predate CLLD

New institutions emerge and the widening range of community-led enterprise necessitated new legal forms

Their lack of access to credit triggered new policies

Scotland's policy support for social innovation

- A desire to do things differently after Scottish devolution 1999
- The support for community based land reform following strong social movements
- Two Land Reform Acts establishing and extending community right to buy and a Community Empowerment Act extending community rights further
- Publicly supported arm's length support agencies not led by civil service (Local Energy Scotland, Climate Challenge Fund, Community Land Scotland)
- Local Energy Scotland's CARES fund as an example
- Active support of Leader and CLLD approach but increasingly bureaucratic and municipally controlled
- National policies for community empowerment and the creation of new institutional forms are the key drivers

The Scottish Government's Community and Renewable Energy Scheme



Community renewables Schemes have high up front costs and long times from idea to completion

Community groups have much to gain but limited access to risk capital

Quite a high proportion of projects fail on technical or planning appraisal

But those that are successful contribute to climate targets, and generate large incomes for investing locally

Local Energy Scotland provide grant/loan finance for pre-construction and construction costs

If the project is feasible and gets consent, the finance is treated as a loan; if it fails to come to fruition, then the finance is treated as a grant

The CARES model also offers an innovation grant to innovative community projects

Doubts and worries

- The neo-liberalisation of social innovation through competitive funding (we don't want policy as a form of social Darwinism)
- Little evidence of affirmative action. Funding agencies want to pick winners.
- There is not so much a social innovation ecosystem as place-based endeavour, sometimes supported and sometimes subverted by public agency
- Municipalities can be enabling or resistant (they are often adversely affected by austerity). Smaller municipalities seem more grounded and engaged
- But big municipalities like Bologna are also getting close to their citizens (Ianone)
- Strong social capital esp bridging capital becomes key to drawing down funding
- Success owes as much to “sheer bloody minded determination” as to favourable policies. Doing SI is not easy.



To conclude

- All too often the term SI gets lost in a conceptual fog of alternatives and similar ideas. In EU policy it is currently only present in rather small niches.
- At its core is the belief that alone or in concert with others, communities and collective action can acquire agency and respond to challenges
- Its classic manifestation in marginal rural areas is as place-based, place-bonded institutions plugging the gaps of market and state and sometimes outperforming them
- We need to acknowledge, affirm and support third sector ownership as a dynamic force in local development, sometimes alone often in partnership (aka community wealth building)
- In reality, SI is about reconfiguring formal and informal institutions (new governance models) to address what are mostly place-based challenges, but sometimes sectoral issues like integrated catchment management, refugee integration etc.

Conclusions (2)

- In reality, interstitial and symbiotic transformative action is much more likely than ruptural change: that is how transformative actions begin and happen. Local actors can and do acquire agency but this is often context-specific
- SI is not so much a panacea as a practical laboratory of ideas, driven by local challenges and local people
- Collective self-organised activity needs a reliable income stream *
- SI needs operating space and legitimised institutions: Policy can help create enabling conditions for local action
- Policy can be proactive but mostly comes along as a means of nurturing what SI has already shown to be effective; but sometimes can suppress community-based endeavour by its bureaucratic entanglements
- “collective self-organising...(can) significantly add to the material and social possibilities available to the people who live work visit and conduct business” in marginal rural areas

Huntly

& District Development Trust

10th YEAR ANNIVERSARY

TRUST CELEBRATES 10th ANNIVERSARY OF COMMUNITY DEVELOPMENT ACROSS HUNTLY & DISTRICT



2010 - Those First Little Steps

- Huntly Walking Festival
- First visit to Finland exploring exchange opportunity
- Huntly Traffic Management Review on behalf of Aberdeenshire Council
- Huntly Sustainability Plan produced

2012 - Starting to Engage

- Partnership with Grampian Housing Association
- Walks Around Huntly and District published
- Jubilee path commissioned June 2012
- Trust officially registered as a charity

2014 - Tight Corner Turned

- Purchase of Greenmyres
- Secured 3 year DTAS funding for Trust core costs
- Green Travel Hub created including car club and e-bikes
- 1st Room to Run (with Huntly Home)
- 1st Energise newsletter launched

2016 - Good Report Card

- Gold star from HM Inspectorate
- Wheelmont turbine onstream
- Contract Signed for Greenmyres turbine construction
- Greenmyres turbine commissioned

2018 - At Full Speed

- Trust secure Huntly Express Archive
- Huntly Five concept launched
- Huntly receives Green Butterfly award
- Publication of Huntly's Place Standard
- Huntly 2030 Project launched



2009 - In the Beginning

- May 2009 - Trust Founded
- Trust office opened
- Community Survey Homecoming Mini Tattoo (with Huntly Home)
- Trust manages Huntly Flood Appeal
- Launch of Huntly, Scotland Facebook and Twitter Feed

2011 - Developing High Standards

- Hydro in Bogle explored
- Accounts year undertaken

2013 - Becoming Recognised

- New town gateway signs produced
- Huntly Cultural Fund/Creative Place Award (With Deveron Arts)
- Finland Transnational Exchange
- Cambornow partnership agreement signed

2015 - Things begin to Take Off

- Commonwealth Legacy Funding for Sports Veloc
- 1st Huntly Audax cycling event launched
- Room to Run entrants trouble

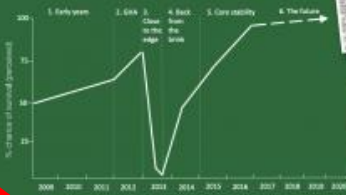
2017 - Community Keystone

- Cambornow Turbine commissioned
- Huntly Town Centre Regeneration Project Launched
- Greenmyres botby - planning permission secured
- Trust takes on supporting role for community minibus

2019

- Purchase of 1st building in Town Square - Former RBS building
- Town Centre Development Manager appointed
- Purchase Cruckshank's Building for Community Cultural Centre
- Improvement work starts at Greenmyres
- Lots more to come

The not always smooth financial path



Conclusions (2)

- In reality, interstitial and symbiotic transformative action is much more likely than ruptural change: that is how transformative actions begin and happen. Local actors can and do acquire agency but this is often context-specific
- SI is not so much a panacea as a practical laboratory of ideas, driven by local challenges and local people
- But sustaining collective self-organised activity needs a reliable income stream *
- SI also needs operating space and legitimised institutions: Policy can help create enabling governance conditions for local action
- Policy can be proactive but mostly comes along as a means of nurturing what SI has already shown to be effective; sometimes policy can suppress community-based endeavour by its bureaucratic entanglements
- “collective self-organising...(can) significantly add to the material and social possibilities available to the people who live work visit and conduct business” in marginal rural areas

Thank you

And thanks to the whole SIMRA team, in particular Robert Lukesch, Elisa Ravazolli and Tor Arnesen for the info on case studies and IAMZ Zaragoza for the Artieda visit which was part of the short course



Research and innovation as drivers of vibrant, sustainable, and attractive rural areas

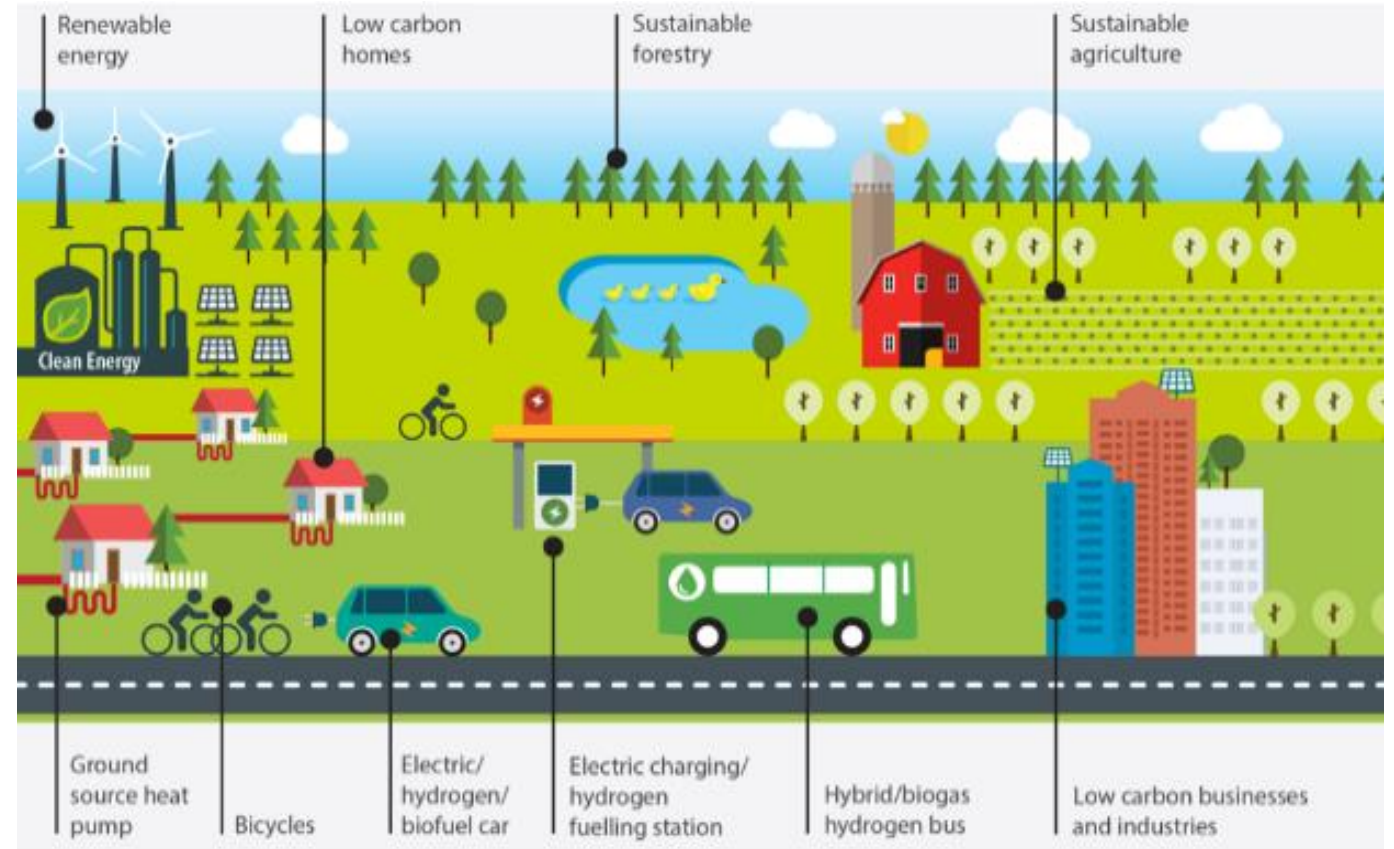
Enrique Nieto (Head of Policy Unit)

27 October 2022

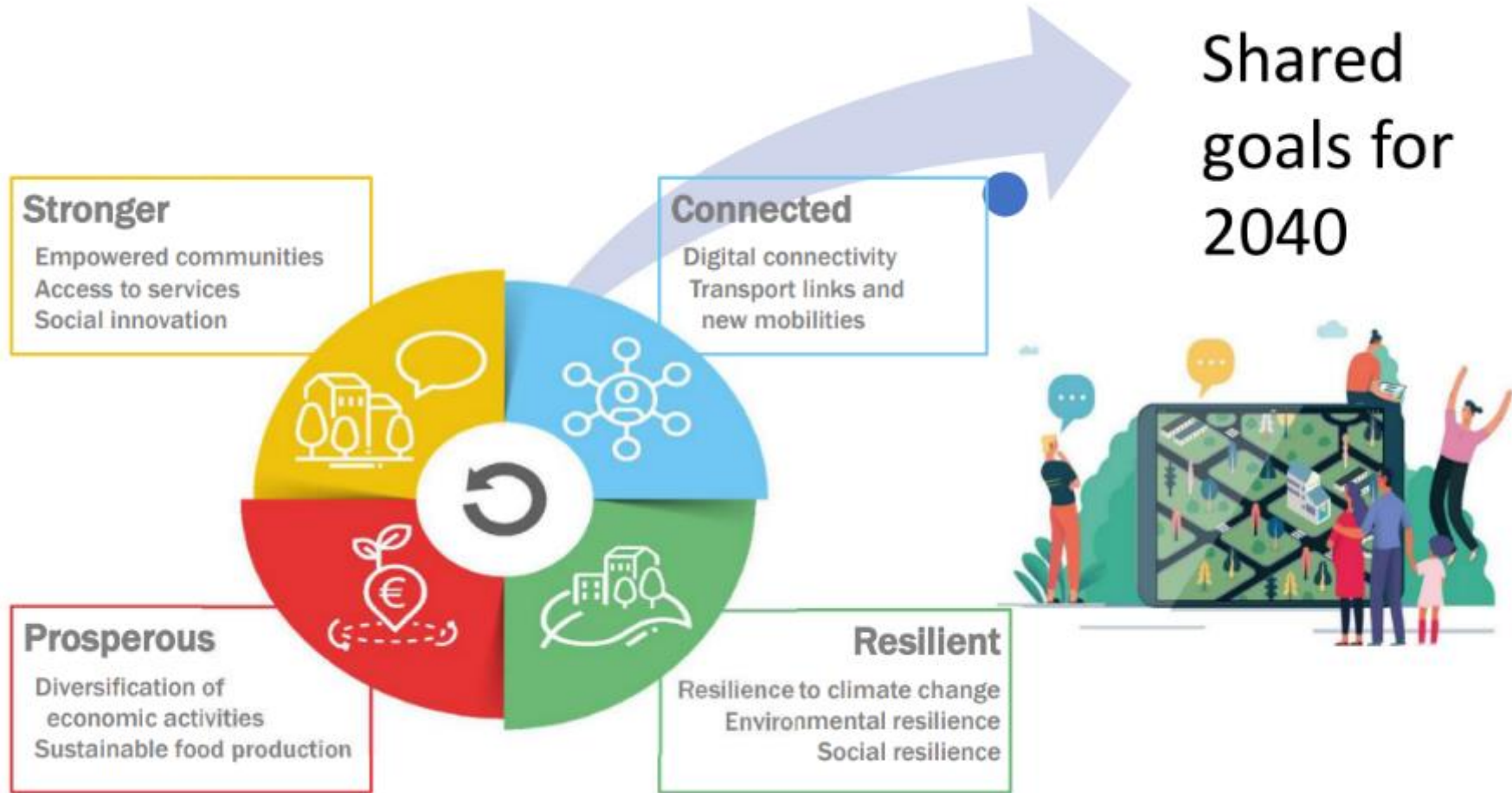
European Mountain Convention 2022



Rural Transformation



Long Term Vision for Rural Areas



Innovation as an enabling factor for the revitalisation of rural areas

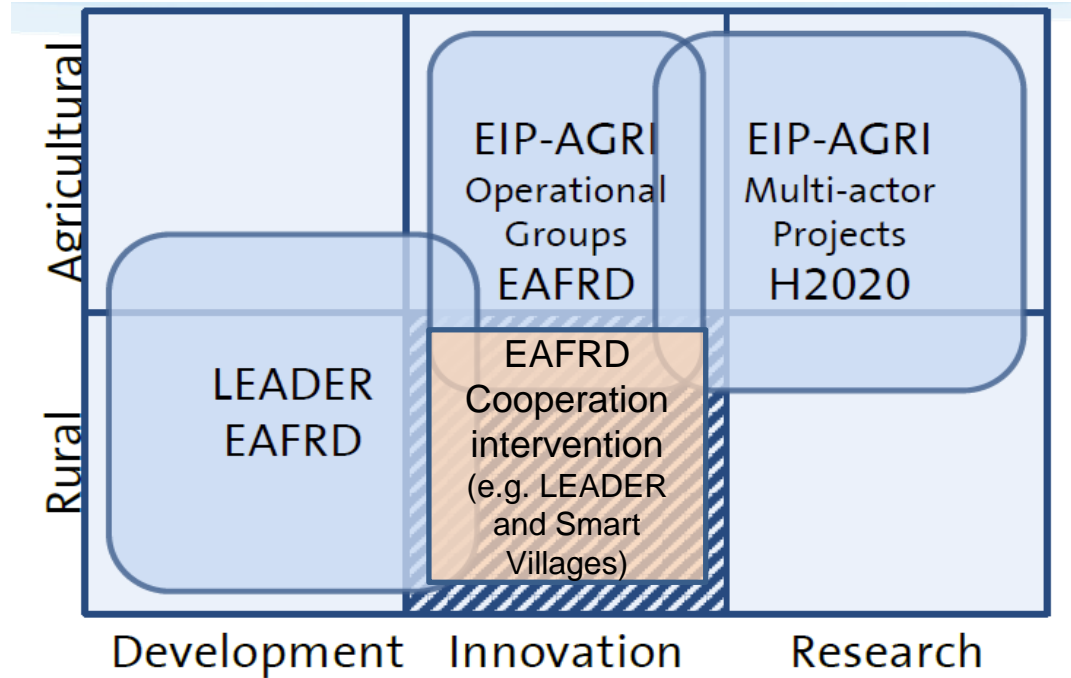


05. Local Innovation

- Partnerships for innovation
- Access and sharing knowledge, data and information



Rural Innovation – Policy instruments



Key instruments for wider rural innovation:

- LEADER CLLD
- Smart Villages

Source: Pertoldi, Muriel and Lopez (2016), page 5.

Pertoldi, M., Muriel, M., & Lopez, J. (2016). Smart LEADER: Challenging Smart specialization in the scope of rural development. Presentation at the conference on Smart Specialization and Territorial Development. Retrieved from https://3ftfah3bhjub3knerv1hneul-wpengine.netdna-ssl.com/wp-content/uploads/2018/07/Pertoldi_SmarLEADER_final.pdf. (Retrieved in January 2019).

Smart Villages

An inclusive definition

“Smart Villages are communities in rural areas that use **innovative solutions** to improve their resilience, **building on local strengths and opportunities**.

They rely on a **participatory approach** to develop and implement their strategy to improve their economic, social and/or environmental conditions, in particular by mobilizing solutions offered by **digital technologies**.

“The use of digital technologies is not a precondition for becoming a Smart Villages”.

Eco-socio-smart villages (2019). <https://digitevent-images.s3.amazonaws.com/5c0e6198801d2065233ff996-registrationfiletexteditor-1551115459927-smart-villages-briefing-note.pdf>

Smart Villages

Flexible tools to enable rural communities
to make the transition



Departure

- Declining jobs
- Inadequate Services
- Digital divide
- Depopulation
- Environmental crises



Arrival

- Digital transformation
- Green low carbon, circular
- Social -service innovation
- New value chains
- Rural –urban cooperation

Long term vision
for rural areas



Applied research and Innovation

Smart Villages

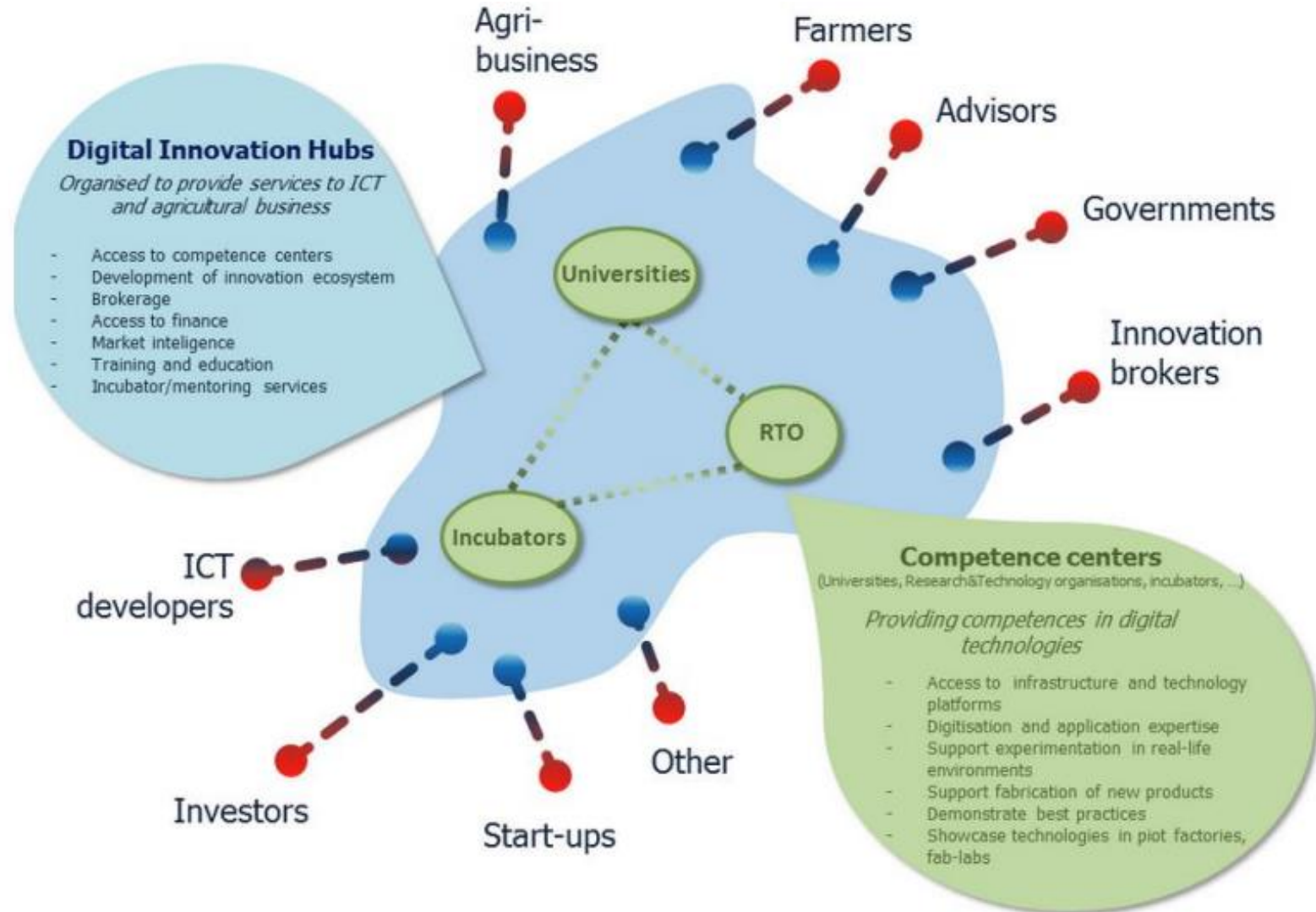


Smart Villages – Digital Villages



- Rural Innovation Ecosystem
- Development of cross-sectoral solutions
- Creation of a culture of collaboration between residents, municipalities, local industry and universities.
- Joint development of sustainable and affordable solutions

Rural Innovation Hubs

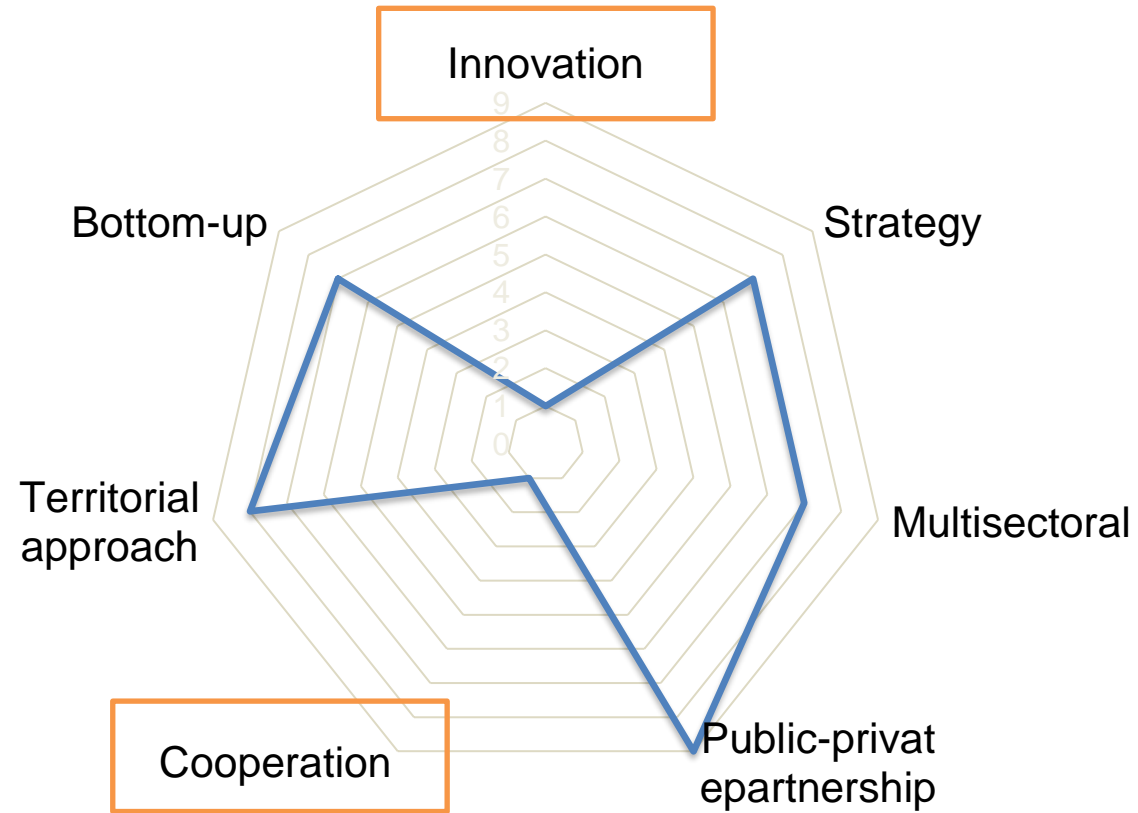


LEADER and Innovation

Seven LEADER principles

- ▶ Bottom-up
- ▶ Territorial approach
- ▶ Strategy
- ▶ Multi sectoral
- ▶ Public private partnership
- ▶ **Innovation**
- ▶ **Cooperation**

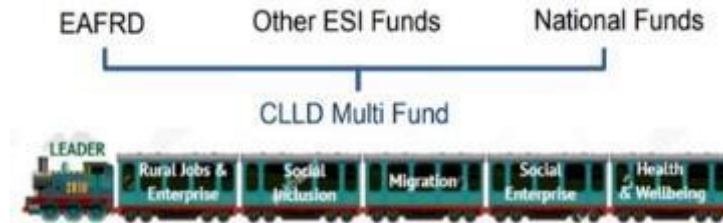
LEADER & Innovation



Source: Personal assessment based on the ENRD LEADER LAG Survey 2017.

https://enrd.ec.europa.eu/sites/default/files/leader-resources_lag_survey_results.pdf

LEADER & innovation



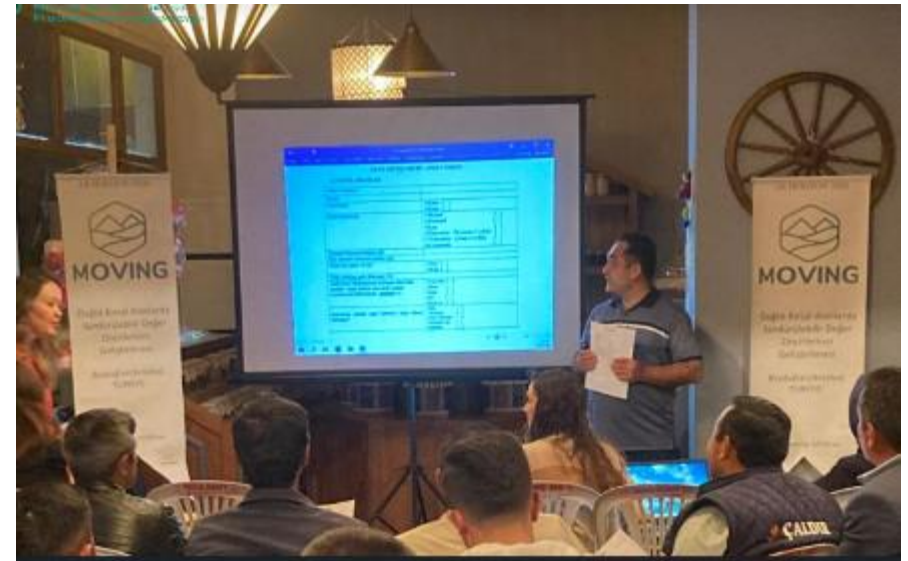
- ▶ A more flexible package of LEADER/CLLD support (eg. lump sums with draft budgets to support local cooperation)
- ▶ Allow broader scope of intervention (sometime limited by national/regional regulation)
- ▶ Better alignment of LEADER/CLLD with other policies

ENRD 2019, “How can LEADER/CLLD support Smart Villages”. European Network for Rural Development.

Rural areas as spaces for research & innovation



- Living Labs
- Multi-actor platforms (MAPs)



Rural areas as a space for modern policies



SHERPA
Rural Science-Society-Policy
Interfaces

To **gather relevant knowledge and opinions** that contribute to the formulation of recommendations for **future policies** and **research** relevant to EU rural areas

► **40 Rural Policy MAPs across Europe**

Multi Actor Platforms

*Dialogue between
Research, Policy, Civil Society*

Co-creation of knowledge
Co-learning

Effective use of
knowledge from
research

Empowering
key actors in
public policy
development

Thank you!



www.aeidl.eu



[@AEIDL.asbl](https://www.facebook.com/AEIDL.asbl)



[@AEIDL](https://twitter.com/AEIDL)



[/aeidl-european-association-for-information-on-local-development/](https://www.linkedin.com/company/aeidl-european-association-for-information-on-local-development/)

SMART MOUNTAINS

XII European
Mountain
Convention

25 – 26 – 27
October 2022

How to make our territories attractive and
future- oriented?

Gian Antonio Battistel

Senior Technologist,

Fondazione Edmund Mach-Centro di Ricerca Innovazione

Technological innovation for the management of natural resources in the mountains



Email: gianantonio.battistel@fmach.it

Technological innovation for the management of natural resources in the mountains



- It is widely recognized that Technological Innovation (TI) is a key factor that:
 - facilitates and promotes socio-economic and sustainable environmental development of mountain communities
 - improves the knowledge on condition, status and dynamics of Natural Resources (NRs) as well as on interaction of concerned ecosystems
 - gives impulse to other kind of innovations

Technological innovation for the management of natural resources in the mountains



- TI is a new or improved product (machines, equipment, plants), ... or process (i.e., product's life cycle, waste reduction, circular & bioeconomy, environment modelling/monitoring) in the marketplace or in the public whose technological **characteristics are significantly different from before**
- The product or process is considered to be an innovation if it **achieves specified advantages** for the local enterprises/territory-community in sustainably managing NRs concerned (i.e. water (rivers, lakes, air, soil, forest, flowers, grassland, pastures, wild game, ...))

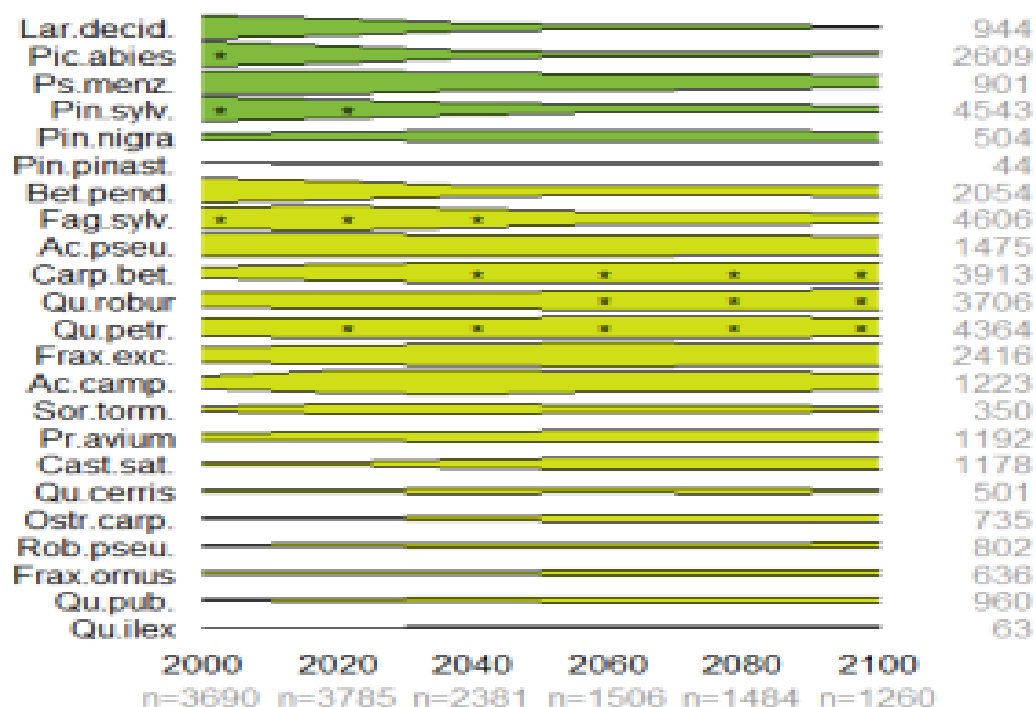
Technological innovation for the management of natural resources in the mountains



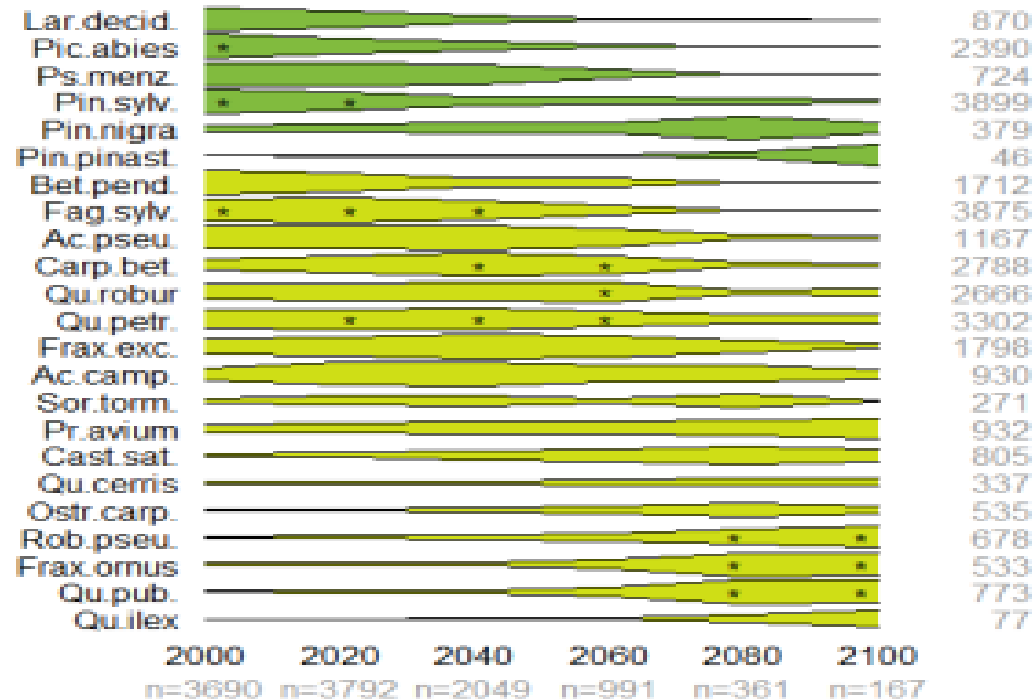
- When NRs are left unchecked or poorly managed, the above threats can critically undermine the benefits, or ecosystem services, that NRs generate and on which the ecosystem and mountain territories and communities survival depends
- TI is helping to make a difference in the way governments and communities lead NRs Management (NRM)

Technological innovation for the management of natural resources in the mountains

Mette, T.; Brandl, S.; Kölling, C. Climate Analogues for Temperate European Forests to Raise Silvicultural Evidence Using Twin Regions. Sustainability 2021, 13, 6522. <https://doi.org/10.3390/su13126522>



(a) Species prevalence trajectories for site Roth RCP 4.5 mean variant



(b) Species prevalence trajectories for site Roth RCP 8.5 mean variant

Technological innovation for the management of natural resources in the mountains



- Digital TI is helping to make a difference in the way governments, communities lead NRM
- Digital solutions, when developed and applied in a customisable and scalable way, can enhance the quality and efficiency of data collection, empower local and global communities to be engaged in conservation efforts, and aid real-time decision making towards extreme events of climate change

Technological innovation for the management of natural resources in the mountains

Interreg
Alpine Space
ALPTREES



European Regional Development Fund



native to north America

ALPTREES

A Transnational Cooperation for Sustainable Use and Management of Non-Native Trees in Urban, Peri-Urban and Forest Ecosystems in the Alpine Region

iNaturalist  Explore Community More

Citizen Science
Coupled with
Remote sensing



399,919
Species Observed

SIGN UP 

LEARN 



Faerthen Felix - Western Snakeroot from Sagehen Creek, California, USA



iNaturalist is a joint initiative of the California Academy of Sciences and the National Geographic Society.

Technological innovation for the management of natural resources in the mountains



The use of tools such as mobile devices, satellites, the Internet of Things (IoT) and artificial intelligence (AI) in NRM is still nascent

Over the last decade, a growing body of evidence has emerged showing how these technologies can bring incremental, and sometimes transformational, improvements to the way communities are tackling climate change, reduce biodiversity loss and optimizing NRs contribution to resilient livelihoods

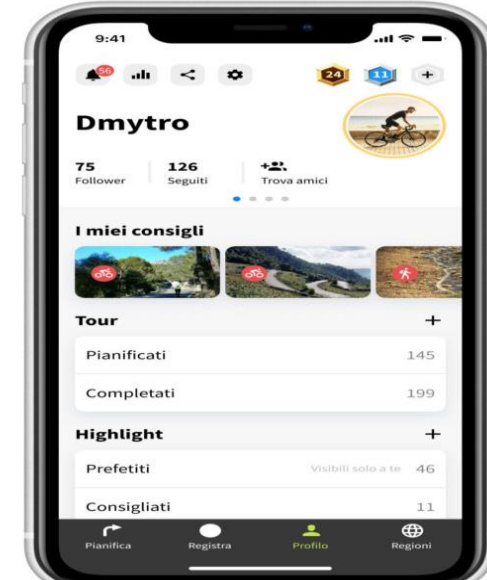
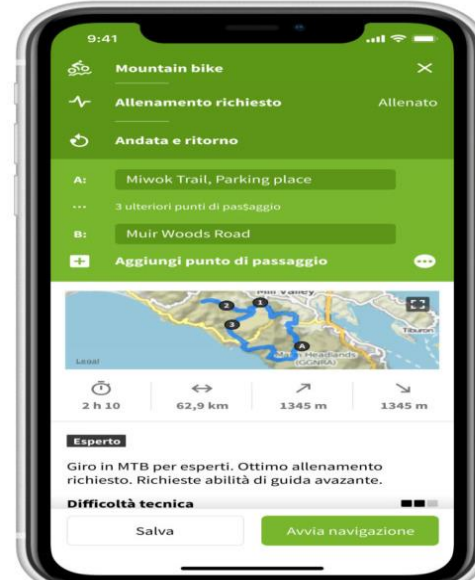
Digital technology is raising productivity and improve data mining and monitoring operations to assess the quality and quantity of ecosystem services (provisioning, regulating, cultural) provided by NRs

Technological innovation for the management of natural resources in the mountains



SmartAlp-Fund RDP

Technological innovation for the management of natural resources in the mountains



Technological innovation for the management of natural resources in the mountains

EUROMAMMALS is an umbrella project coordinating species-specific movement databases for several species and 1 group including different taxa:

- roe deer (*Capreolus capreolus*);
- red deer (*Cervus elaphus*);
- alpine ibex (*Ibex ibex*);
- wild boar (*Sus scrofa*);
- eurasian lynx (*Lynx lynx*);
- european wildcat (*Felis silvestris*);
- small mammals (rodents, insectivores, ...).

The approach of the EUROMAMMALS projects for data and knowledge sharing has proven to be effective in creating a strong network of researchers and ultimately to produce science not possible at the single study area level. The experience and success of the pioneer project EURODEER inspired the scientific community studying movement ecology of different species to experiment the same method.

The EUROMAMMALS databases are connected, facilitating inter-species studies. EUROMAMMALS has been established to coordinate each species-specific database as much as possible.

Other communities are truly welcome to join!



SPONSOR



VECTRONIC Aerospace

In 2012, **Vectronic Aerospace GmbH** has become the official sponsor for EURODEER. In 2018, it has started to support the entire EUROMAMMALS initiative, showing to strongly believe in collaborative science and in the scientific potentiality of animal-borne information, such that provided by their products. Vectronic has always been aware of the EURODEER initiative and progress-through the long-term co-operation with many research groups joining EURODEER. Vectronic has decided to actively support activities and spatial database development and maintenance, so directly supporting wildlife science, and the bio-logging approach in particular. On top of this, Vectronic applies 10% discount on collars for the network species to all EUROMAMMALS members.

VECTRONIC AEROSPACE GMBH PRODUCTS FOR EUROMAMMALS, AND BEYOND

Vectronic Aerospace GmbH develops and manufactures GPS collars, software, and sensor options for EUROMAMMALS projects and other wildlife research around the world. It was the first company in the world to release GPS-GSM collars for wildlife applications in the year 2000. Since then, its engineers have constantly improved their products: they keep up to date with wireless communication and other electronics, and stay in close contact with their customers to react on the needs of current research. GPS collars are not simply business for Vectronic, they want to offer reliable equipment for researchers with high performance and low impact on the animals. Vectronic sponsorship for EUROMAMMALS is a clear sign of the tight relationship with the scientific world.

For detailed information on Vectronic products for wildlife, and deployments please visit the company's [website](#).

GPS COLLARS: AN OVERVIEW

GPS PLUS collars are built on a modular concept that allows choosing a configuration which is best suited for the study. Users can choose between several communication and sensor options, seven different battery sizes, and suitable belt shape, width, and thickness. The belt is made of durable, UV- and water-resistant polyurethane. Due to its round edges it causes no or only a little irritation on the animal's neck. All antennas are integrated into the belt or the electronic housing. This prevents antennas from breaking or injuring the animal. Vectronic collars are designed to operate at the wide range of temperatures from -40°C to +70°C. They are waterproof and can withstand even total immersion for several hours. To simplify the recovery of the collar, Vectronic offers additional drop-off mechanisms with radio and timer control, which are integrated into the battery pack to keep the collar more compact without unnecessary weak points. Battery packs and drop-offs can be exchanged in the field, so the collar can be easily re-deployed. Users are also welcome to send us the collar for a check-up, battery change, and refurbishment. If needed, Vectronic can change a roe deer collar into a wild boar collar - or even into a lion collar!

SENSOR OPTIONS: MORE THAN JUST GPS POSITIONS

All collars can be equipped with activity, mortality and temperature sensors without adding weight or energy consumption.

Activity sensor plus Activity Pattern software: all Vectronic collars can be equipped with a three-axes acceleration sensor without adding weight or energy consumption. Activity can be stored in

Technological innovation for the management of natural resources in the mountains



Inland waters are one of the most precious natural resources on Earth, but they are also highly endangered by human activities. To detect changes in inland waters, a regular monitoring is indispensable. Eco-AlpsWater improved the traditional monitoring approaches by using advanced DNA sequencing techniques such as metabarcoding. It makes use of Next Generation Sequencing (NGS) to analyse environmental DNA in waterbodies. This technique allows for rapid and improved species identification at low costs (e.g. fish or bacteria) as well as an automation in data processing, data storage and information retrieval. The method was tested and optimized in 37 lakes and 23 rivers, and the new findings and experiences were gathered in a toolbox shared with decision makers and water managers.

Eco-AlpsWater

Innovative Ecological Assessment and Water Management
Strategy for the Protection of Ecosystem Services in Alpine Lakes
and Rivers

HOME

OUTCOMES

RESOURCES

Technological innovation for the management of natural resources in the mountains



- TI for NRM is a process of many discrete decision and behaviors involving
 - social units at many different levels of aggregation (including individuals, groups, organizations, industries and economies) and most of them are not even selfconsciously aware of being part of such process
 - institutions (as regulation, standard, ...) at national, regional and local level not always interconnected and prone to digital transition
- Use and benefits from development of connecting technologies may be locally delayed due to low digital literacy of communities of rural remote areas or even limited by bureaucracy or inadequate investments on infrastructures.

Technological innovation for the management of natural resources in the mountains



HOME

OUR VISION

PRODUCTS

CONTACT US



several devices on microprocessor and wireless data transmission via radio (LoRa- Sigfox) for monitoring environmental parameters with applications in the agricultural and forestry fields. In particular, the company has developed a device called TreeTalker (TT +) capable of measuring in real time the water consumption of trees, the growth of biomass (diameter) and the state of health of the leaves

FROM INDUSTRY 4.0 TO NATURE 4.0

Nature 4.0 is a company dedicated to Digital Empowerment of Nature. We develop innovative IoT devices for Internet of Nature and digital management of Environment, Forestry, Crops and Wildlife.



Technological innovation for the management of natural resources in the mountains

Anticipate Future Jobs on Alpine Remote Areas



Partners

ALPJOB is a two-years (March 2018- February 2020) pilot project funded by the European Parliament, which has allocated a specific budget in the form of a preparatory action named **Alpine Region Preparatory Action Fund (ARPAF)**.

Observers

State of art

ARPAF aims to facilitate the implementation of the EU Macroregional Strategy for the Alpine Region (**EUSALP**). This Strategy concerns 7 COUNTRIES, of which 5 EU Member States (Austria, France, Germany, Italy and Slovenia) and 2 non-EU countries (Liechtenstein and Switzerland), and 48 REGIONS.

Objectives

The main added value of EUSALP consists in performing a new relationship between metropolitan, peri-

Use and benefits from development of connecting technologies may be locally delayed due to **low digital literacy** of communities of rural remote areas or even limited by **bureaucracy** or **inadequate investments on infrastructures**.

Technological innovation for the management of natural resources in the mountains



- Role of digital TI on NRM crucially depends on ability of communities to keep up with the change. This induces shifts in their skill education and long-life learning. “Learning communities” generate roadmapping/backcasting pathways in a long run (vision) to foresee and monitor their digital transition and to become real “Smart communities” able to anticipate uncertainties on NRM
- Digital TI on NRM requires an accompanying process of organizational change. National, regional, local or sectoral innovation systems (see clusters, hubs competence centers) of each region should enhance networking with those of other territories and involve in a participatory way digital TI users, interested decision makers, research centers and further stakeholders
- Effective digital TI on NRM needs to overcome the fragmentation and reluctance to share the collected data, to standardize their quality and to enhance their interoperability. Data should be accessible from one entry point in order to use them for NRM policy monitoring and better guide public and/or private subvention, ...

THANK YOU / MERCI / GRAZIE!





Drivers of change affecting resilience in mountain areas: MOVING project

M. Mar Delgado-Serrano

27th October 2022

XII European Mountain Convention. Sila National Park



What is MOVING?



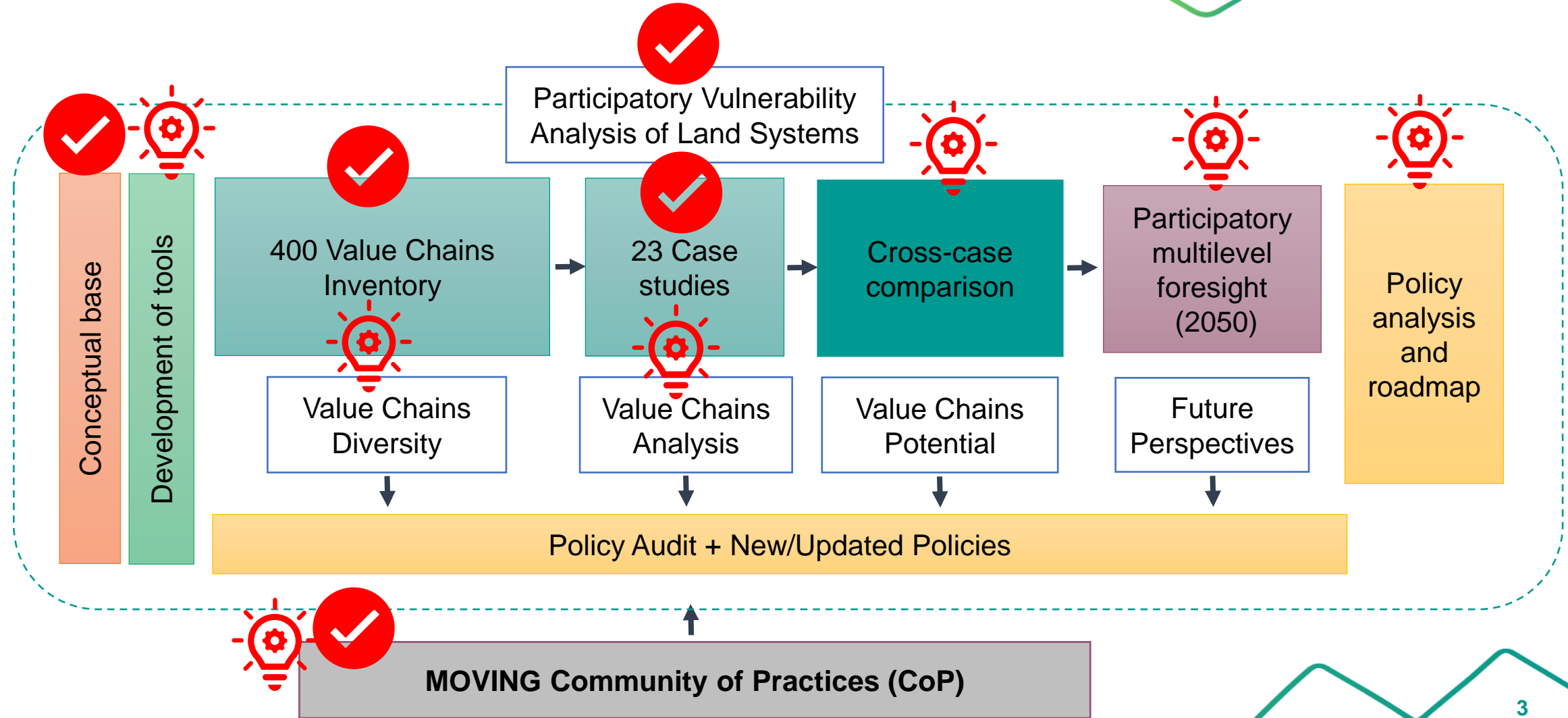
MOVING (MOUNTAIN Valorisation through INterconnectedness and Green growth) – is a four-year project (2020-2024) gathering 23 partners and coordinated by University of Córdoba, Spain. The project is funded by the **Horizon 2020** programme.



The **project main objective** is to build capacities and co-develop relevant policy frameworks across Europe for the establishment of value chains that contribute to the resilience and sustainability of mountain areas to climate change.



MOVING Approach



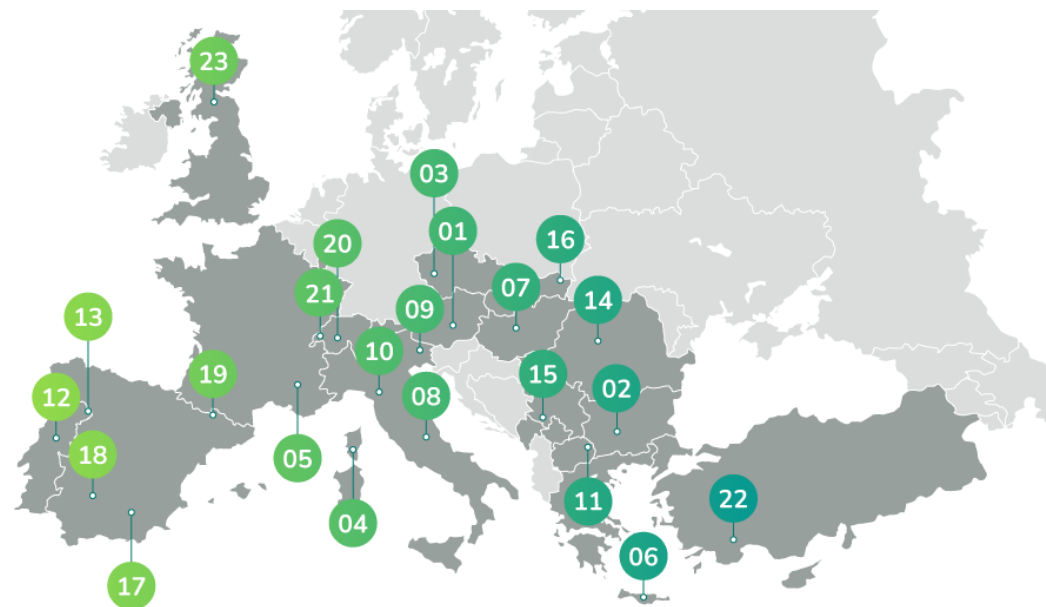
MOVING Reference Regions



23 Mountain Reference Regions distributed in 16 European and neighbouring countries.

The characterisation of the studied mountain areas allows:

- the **establishment of linkages between the region specific land use systems and expected changes** driven by new large scale environmental conditions.
- **transferability of** place-based research to **understanding** processes of change **in similar areas**.



23 case studies

23 vulnerability matrixes locally atuned

Main MOVING outputs



**Inventory 453
Value Chains**



**23 Case studies
23+23 vulnerability matrixes
(Land Use & Value Chain)**



**Conceptual & Analytical
Framework. MOVING App**



28 foresight exercises



**Susceptibility/vulnerability
maps**



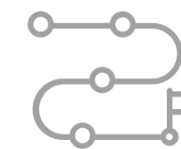
**Community of
Practice**



**Policy
recommendations**



Policy Roadmap



Multi-actor and multi-scale analysis



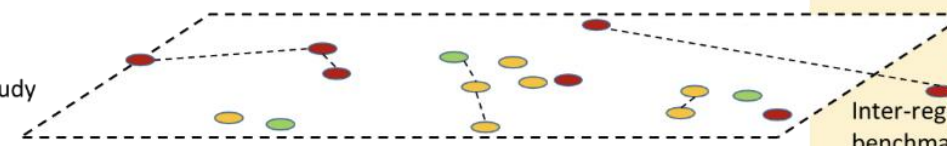
- Strong stakeholder's interactions
- Role of women and youngsters
- Socially responsible enterprises
- Social innovation

SCALE AND SCOPE

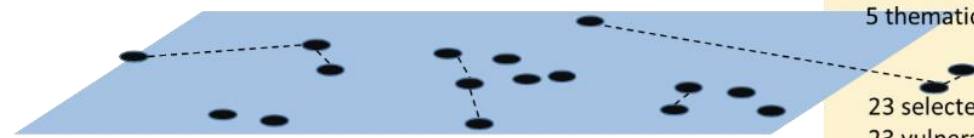
ASSESSMENT
Participatory approach



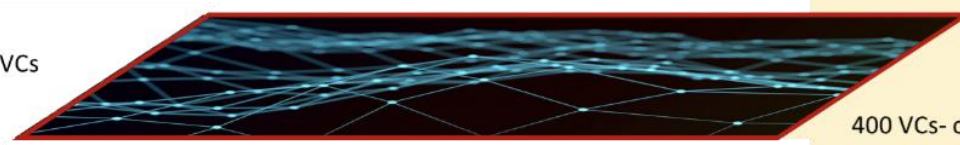
CROSS-CASE
5 thematic clusters
Grouping the 23 cases of study



REFERENCE REGIONS
23 cases of study



EUROPE
Inventory of 400 mountain VCs



EUROPE: 23 regions in 16 countries
But accounting for global EU diversity



MAIN RESULTS

Policy Roadmap and Policy design tools
Foresight of vulnerability/ opportunities for 2050

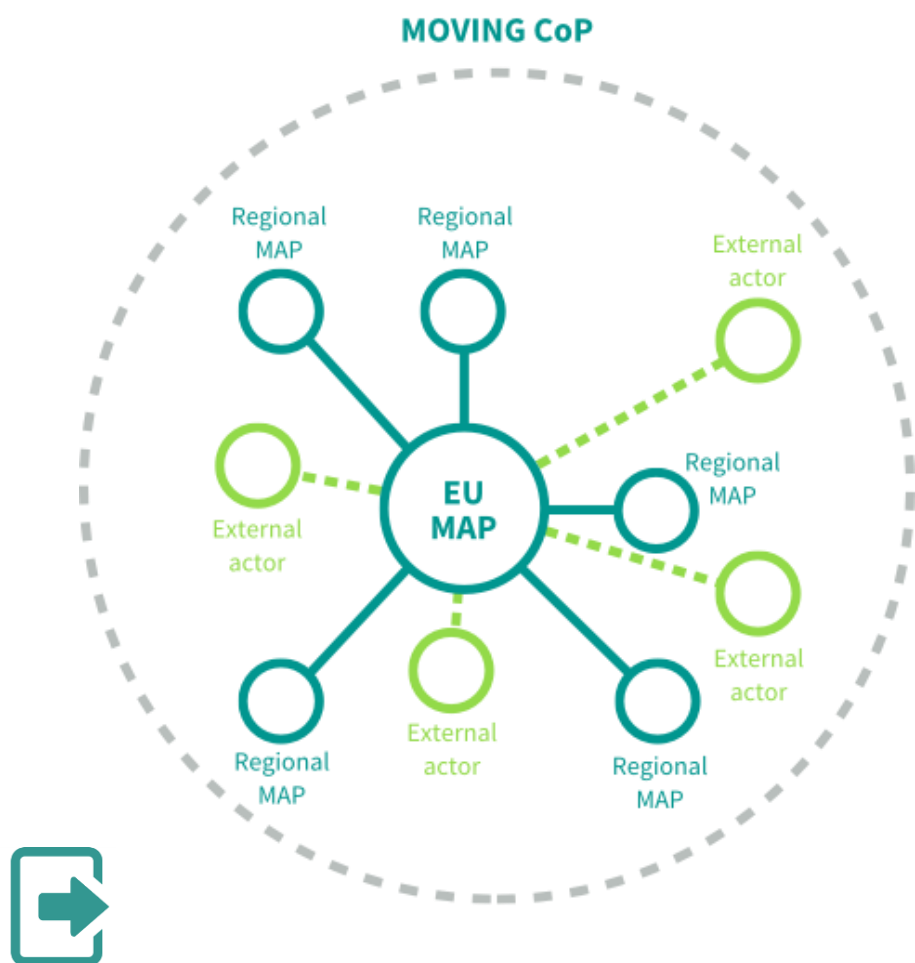
Inter-regional comparison and benchmarking
5 thematic clusters

23 selected study cases
23 vulnerability matrix locally attuned

400 VCs- characterised

EU Susceptibility/ vulnerability maps

MOVING Community of Practice



European-wide Science-Society-Policy interface and **nested structure** built upon:

- 23 regional MAPs established in the 23 Reference Regions
- 1 European-level Multi-Actor Platform (EU MAP)

OBJECTIVES

1. Co-creation and validation of key research outputs and results delivered by MOVING;
2. Exchange of knowledge and experience
3. Build a long-lasting community

MOVING EU MAP



The **European-level Multi-Actor Platform** (EU MAP): stakeholders interested to exchange, learn and interact at the EU level on resilience to climate change of mountain value chains.



The EU MAP seeks to **engage external stakeholders from policy, research and relevant practice groups working in other Member State or at EU level.**

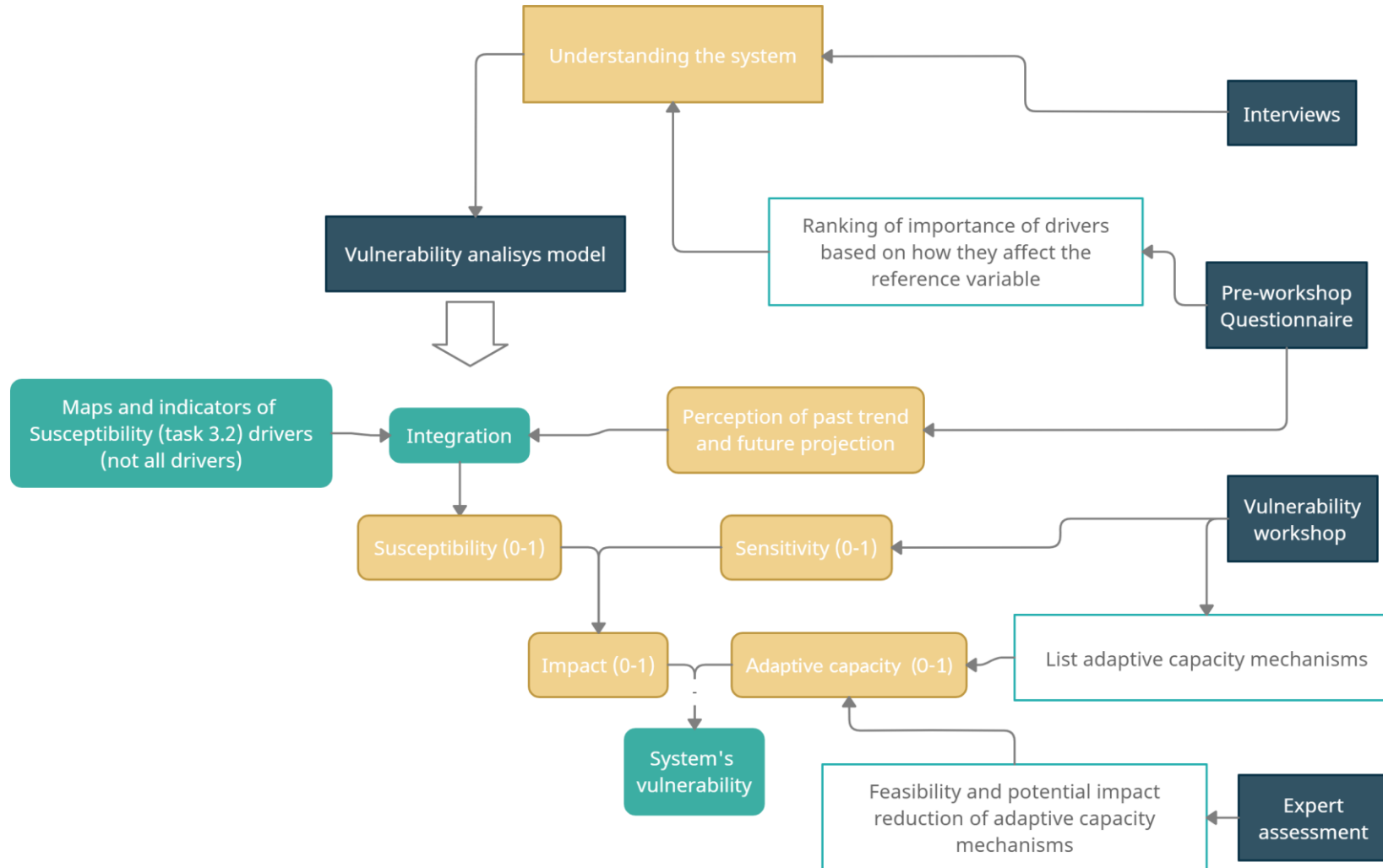
The EU MAP will also support **peer-to-peer exchanges on additional topics** relevant for the members and for the regional MAPs.



**NOVEMBER 8, 2022, 9.30 - 1.15 (CET)
ONLINE**

<https://www.moving-h2020.eu/event/moving-eu-map-webinar-european-quality-schemes-the-added-value-for-mountain-value-chains/>

Land Use System. Vulnerability conceptual framework



Vulnerability: Biophysical drivers of change



Exogenous	
Climate change - precipitation	Changes in precipitation regime (rain or snow) with potential impact in the hydrological system (rivers and groundwater), soil and vegetation.
Climate change - temperature	Increase in mean temperature seasonal or annual. (average, maximum and minimum temperatures)
Climate change - extreme events	Changes in intensity, frequency, or timing of flooding, heat waves, storms (wind) hail and frost periods.
Climate change – wildfire	Intensity, frequency, or timing of wildfires (forest and soil)

Endogenous	
Land-use and land-cover change	Complete changes in land-cover such as conversion from forest to agriculture linked to climate change or other driving forces Changes in vegetation cover such as reduction of tree cover or shrub encroachment.
Soil physical degradation	Soil physical degradation through loss of organic of the soil,
Over-exploitation of resources	Water extraction (river or groundwater) Overgrazing – Livestock and wildlife density
Pests, diseases, and invasive species	Changes in intensity and frequency of pest and diseases, either native or invasive
Pollution	Contamination of soil, water (surface and groundwater), or the atmosphere by the discharge of harmful substances.
Demographic changes	Demographic changes such as population decline or immigration that produce changes in management practices and land-use abandonment. This driver could be a cause of land-use and land-cover change

Overall impact and vulnerability per region



MRL	Impact	Vulnerability considering Scenarios of adaptation		
		Vulnerability (all mechanisms)	Vulnerability (medium feasibility mechanisms)	Vulnerability (High feasibility mechanisms)
Beydaglari	0.7	0.2	0.2	0.3
Stara Planina	0.6	0.2	0.2	0.2
Cordilheira Central	0.6	0.4	0.4	0.4
Sierra Morena	0.6	0.2	0.3	0.3
Central Apennines	0.6	0.2	0.2	0.3
South Carpatians	0.6	0.1	0.1	0.1
Drôme Valley	0.5	0.4	0.4	0.5
Jura	0.5	0.2	0.2	0.2
Pyrenees	0.5	0.1	0.2	0.3
Crete	0.5	0.1	0.1	0.1
Maleshevski mountains	0.5	0.1	0.1	0.1
Slovak Carpathians	0.5	0.2	0.2	0.3
Austrian Alps	0.4	0.1	0.1	0.3
Transdanubian mountains	0.4	0.1	0.1	0.1
Maciço Noroeste	0.4	0.1	0.1	0.2
Northern Apennines	0.4	0.2	0.2	0.3
Eastern Alps	0.4	0.1	0.1	0.2
Speyside	0.3	0.1	0.1	*
Corsica	0.3	0.0	0.0	0.0
Betic systems	0.3	0.0	0.0	0.0
Šumava - Český les	0.2	0.1	0.1	0.1
Dinaric mountains	0.2	0.1	0.1	0.1
Swiss Alps	0.1	0.0	0.0	0.0

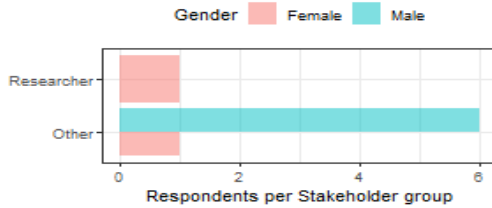
- Six regions showed high impact level (>0.5) covering wide geographical area from West to East Mediterranean.
- Some Mediterranean regions seem rather resistant to the drivers of change studied here (e.g., Betic and Crete).
- Regions covering alpine and central European ranges showed moderate to low impact.

Southern Romanian Carpathian Mountains

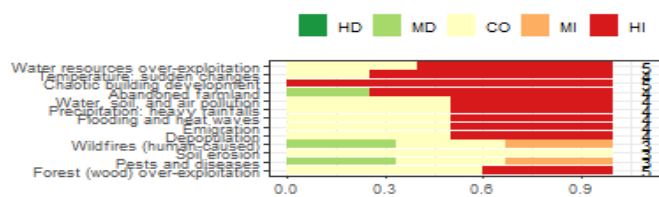


MOVING
MOUNTAIN VALORISATION THROUGH
INTERCONNECTEDNESS AND GREEN GROWTH

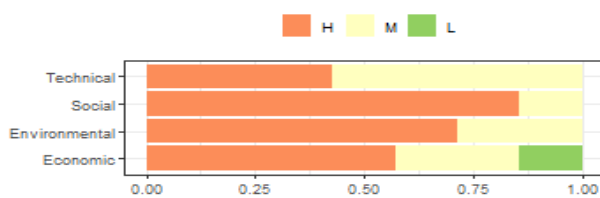
RO-SouthCarpatians



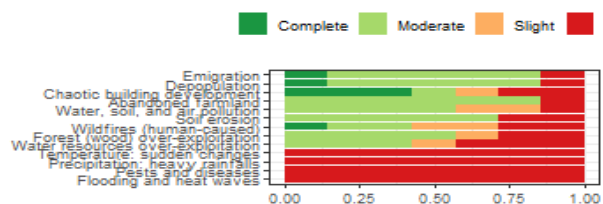
Trend



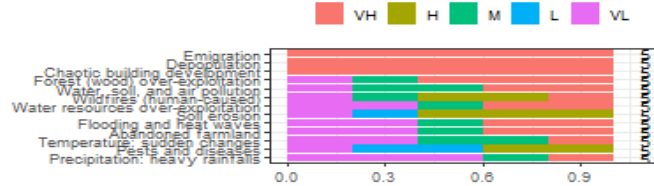
Feasibility



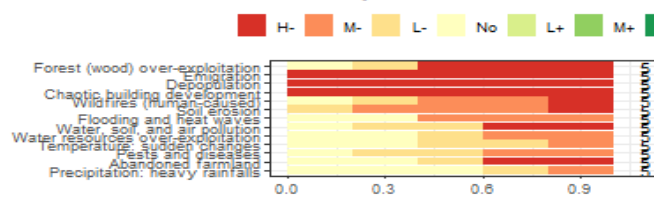
Adaptation mech. reduction



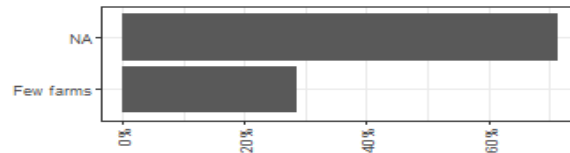
Ranking



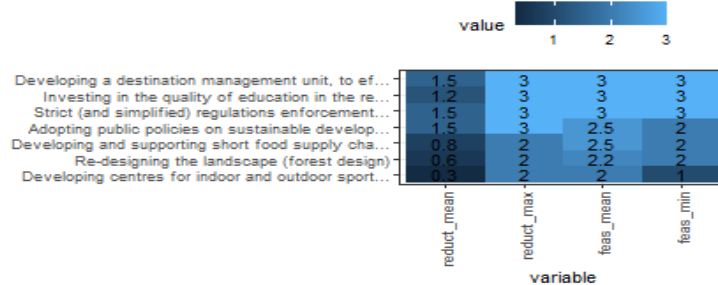
Sensitivity



Implementation



Vulnerability Matrix



Ranking

- Not relevant VL
- Slightly relevant L
- Moderate relevant M
- Very important H
- Extremely important VH

Trend in the last 20 years

- High decline HD
- Medium decline MD
- Constant CO
- Medium increase MI
- High increase HI

Sensitivity

- Total positive effect H+
- Severe positive effect M+
- Partial positive effect L+
- Does not affect No
- Partial negative effect L-
- Severe negative effect M-
- Total negative effect H-

Feasibility

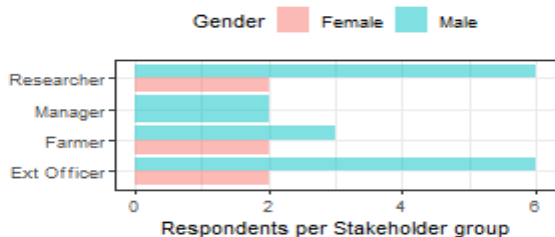
- High H
- Medium M
- Constant L

Sierra Morena (Spain)

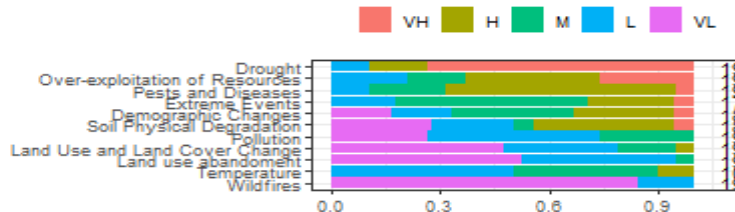


MOVING
MOUNTAIN VALORISATION THROUGH
INTERCONNECTEDNESS AND GREEN GROWTH

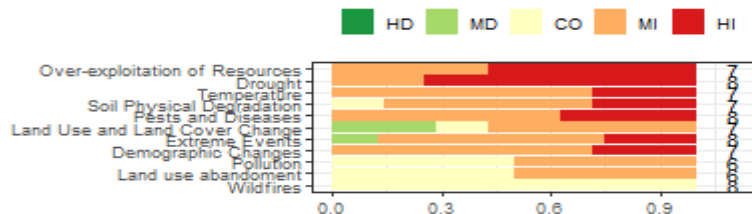
ES-SierraMorena



Ranking



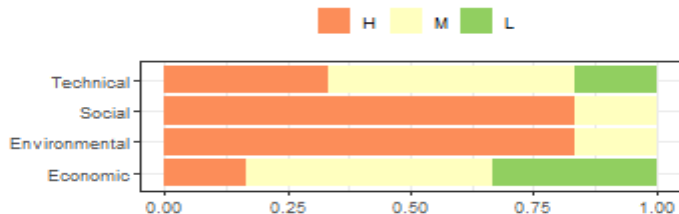
Trend



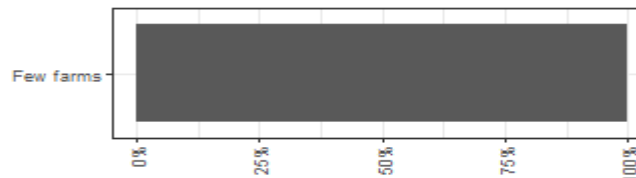
Sensitivity



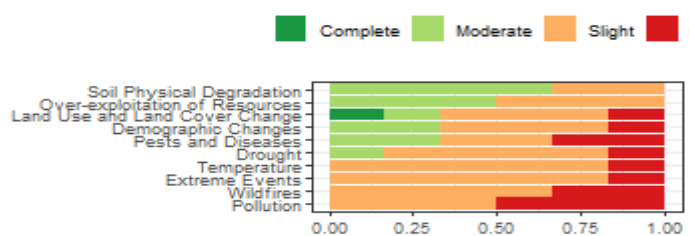
Feasibility



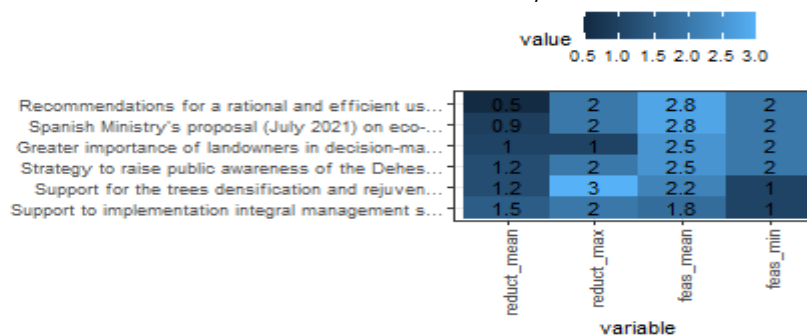
Implementation



Adaptation mech. reduction



Vulnerability Matrix



Ranking

- Not relevant VL
- Slightly relevant L
- Moderate relevant M
- Very important H
- Extremely important VH

Trend in the last 20 years

- High decline HD
- Medium decline MD
- Constant CO
- Medium increase MI
- High increase HI

Sensitivity

- Total positive effect H+
- Severe positive effect M+
- Partial positive effect L+
- Does not affect No
- Partial negative effect L-
- Severe negative effect M-
- Total negative effect H-

Feasibility

- High H
- Medium M
- Constant L

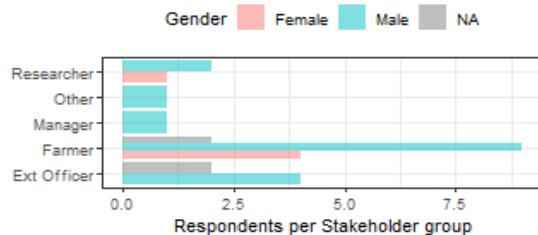


Austrian Alps

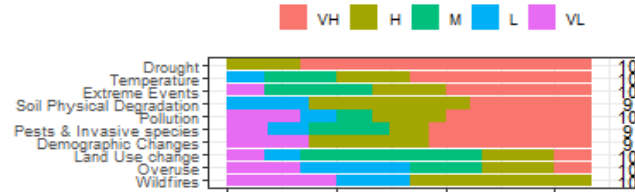


MOVING
MOUNTAIN VALORISATION THROUGH
INTERCONNECTEDNESS AND GREEN GROWTH

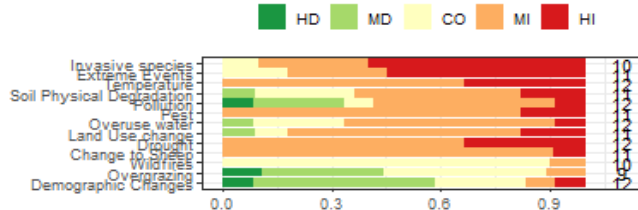
AT-Alps



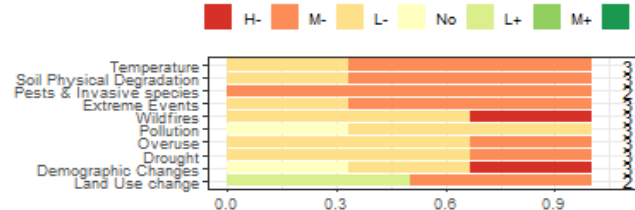
Ranking



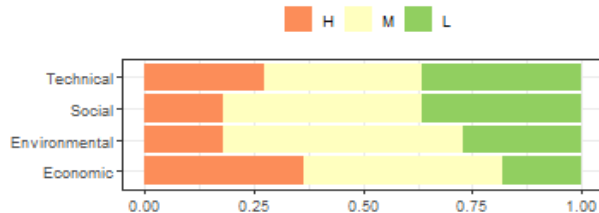
Trend



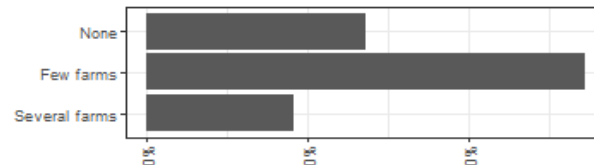
Sensitivity



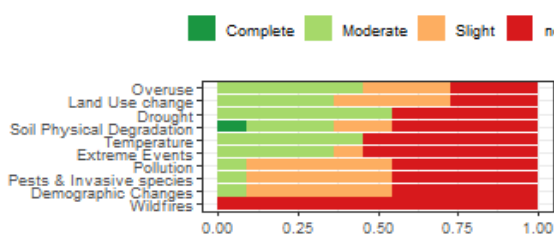
Feasibility



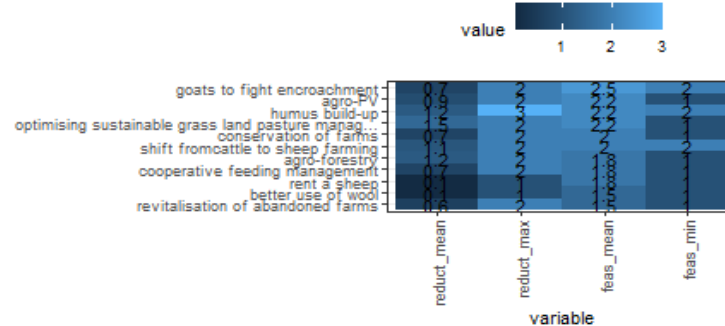
Implementation



Adaptation mech. reduction



Vulnerability Matrix



Ranking

- Not relevant VL
- Slightly relevant L
- Moderate relevant M
- Very important H
- Extremely important VH

Trend in the last 20 years

- High decline HD
- Medium decline MD
- Constant CO
- Medium increase MI
- High increase HI

Sensitivity

- Total positive effect H+
- Severe positive effect M+
- Partial positive effect L+
- Does not affect No
- Partial negative effect L-
- Severe negative effect M-
- Total negative effect H-

Feasibility

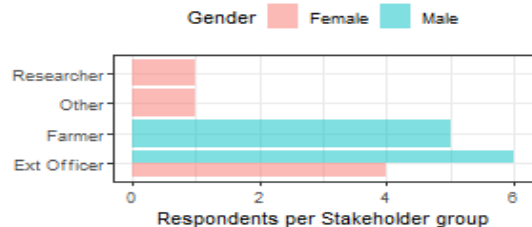
- High H
- Medium M
- Constant L

Corsica

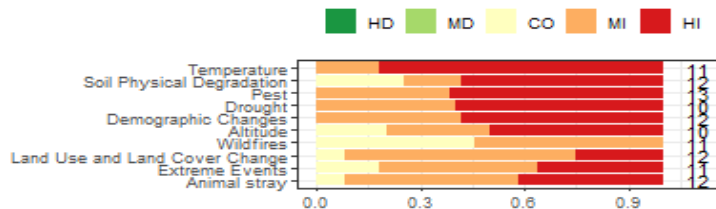


MOVING
MOUNTAIN VALORISATION THROUGH
INTERCONNECTEDNESS AND GREEN GROWTH

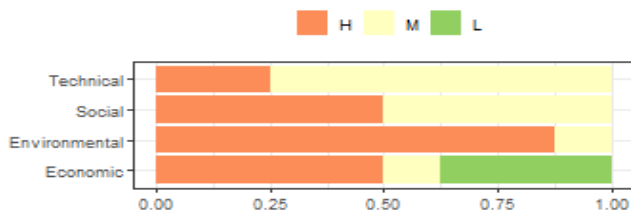
FR-Corsica



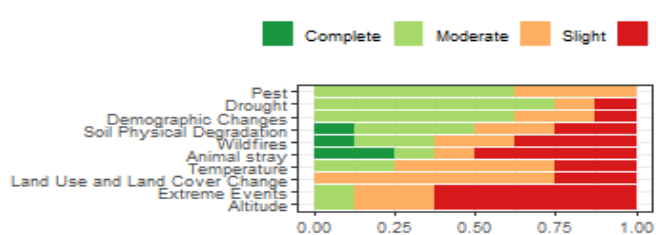
Trend



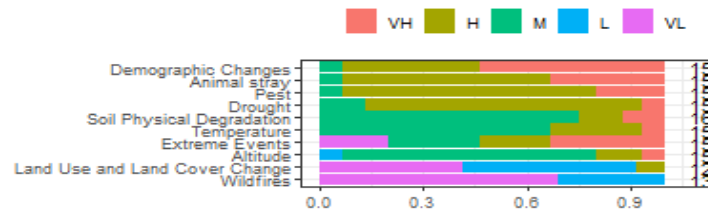
Feasibility



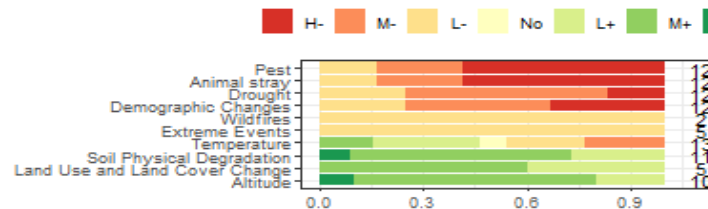
Adaptation mech. reduction



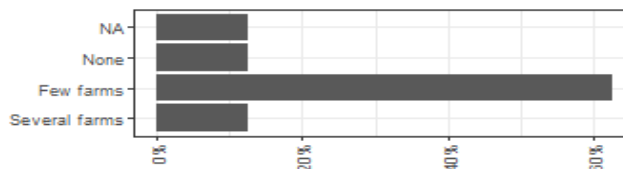
Ranking



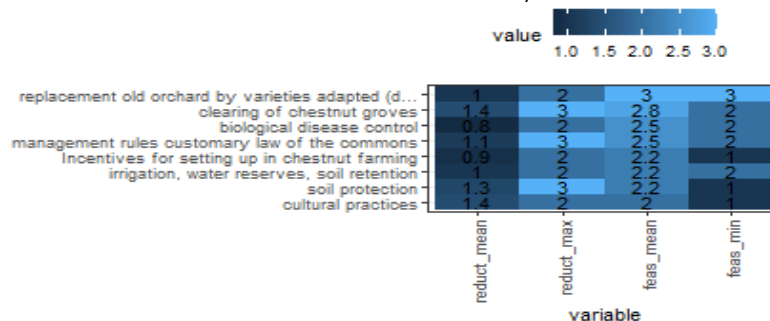
Sensitivity



Implementation



Vulnerability Matrix



Ranking

- Not relevant VL
- Slightly relevant L
- Moderate relevant M
- Very important H
- Extremely important VH

Trend in the last 20 years

- High decline HD
- Medium decline MD
- Constant CO
- Medium increase MI
- High increase HI

Sensitivity

- Total positive effect H+
- Severe positive effect M+
- Partial positive effect L+
- Does not affect No
- Partial negative effect L-
- Severe negative effect M-
- Total negative effect H-

Feasibility

- High H
- Medium M
- Constant L



What's next?



- **Youth** engagement workshops
- **MOVING Mountains APP** to foster engagement of people (citizens and visitors) to the resilience of the mountain regions through identification and sharing of information.
- Refine the concepts and approaches in the **Conceptual Analytical Framework**. Participatory Theory Building.
- **Visual** tools
- Value Chain **vulnerability** analysis
- Participatory **digital stories** describing the Value Chains
- **Benchmarking** and comparative assessment of Value Chains
- **Foresight analysis** at 2050 scenario
- **Policy Analysis** and **Policy Roadmap**

Final Reflections



- MOVING is identifying the **drivers of change** and **vulnerability** of the European mountains (at land use and value chain levels)
- Results show high vulnerability to **climate change effects** and **depopulation** in all the mountain regions analysed
- Results are based on **participatory analysis** and involvement of our **CoP** members (568 in the 23 MAPs and the EU MAP. Effort to engage **women** (31% in regional MAPs & 55% in EU MAP), **young people** (14 members under 25 & 135 between 25-40 in regional MAPs) and **diversified/non-agricultural business actors** (26,9% of Regional MAPs)
- **MOVING Mountains APP** will be launched by the end of the year to foster engagement of people (citizens and visitors) to the resilience of the mountain regions through identification and sharing of information.
- Next steps will be focused on identifying factors that enhance/hinder **sustainability and resilience** of mountain areas and in developing a **Policy Roadmap**

Get informed



<https://www.moving-h2020.eu/>



Subscribe to our [NEWSLETTER](#)



Follow us on [Facebook](#), [Twitter](#) and [LinkedIn](#)



[@MOVINGH2020](#)



[@MOVINGH2020](#)



[MOVING H2020](#)



MOVING
MOUNTAIN VALORISATION THROUGH
INTERCONNECTEDNESS AND GREEN GROWTH

Thank you!



MOVING receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 818194. The content of this document does not reflect the official opinion of the European Union. Responsibility for the information and views expressed therein lies entirely with the author(s).