



# Mountain areas of large Mediterranean islands

European issues, National and Regional  
policies and local mechanisms

—  
*Edition: Dimitris Goussios, Dimitra Gaki, Alice Garnier & François Lerin*

“

## **European Conference Troodos-Cyprus**

*organized under the aegis of the President  
of the Republic of Cyprus*

**28 - 31 January 2020**

”







European Conference  
Troodos-Cyprus

This book is available in free access and in three languages: French, English and Greek, on the following sites: <https://www.press.uth.gr/>; <http://www.courrierdelaplanete.org/>; <http://papadourisfoundation.org>; <http://medmountains.com>

Free hard copies can be requested from the Rural Space Laboratory of the University of Thessaly in Volos email address: [rurlab@uth.gr](mailto:rurlab@uth.gr)

It was designed and edited by Dimitris Goussios and Dimitra Gaki of the Rural Space Laboratory of the Polytechnic School of the University of Thessaly, in Volos, Greece; and by Alice Garnier and François Lerin from the non-governmental organization AIDA, International Association for the Development of Agro-Environment, Combaillaux, France.

The template was proposed by Alice Garnier and François Lerin who developed the French version which served as the basis for the English and Greek versions. Dimitris Goussios and Dimitra Gaki liaised with the Cypriot authorities and institutions supporting the publication of these acts.

The team as a whole led the liaison with the authors, the proofreading and editing of the texts and the book in the three languages, as well as the printing press

Translation into English was provided by Chloé Gaille and into Greek by Dimitra Gaki, Nikos Poutsiakas, Serafeim Felekis

© **Copyright:** University of Thessaly Press, 2021

**ISBN** 978-960-9439-76-3



**University of  
Thessaly Press**

Pagason 99 - Konstada  
383 333 Volos  
TEL.: +30 24210 41842, 2421074641  
<http://press.uth.gr>  
e-mail: [press@uth.gr](mailto:press@uth.gr)

#### **Référence :**

Goussios D., Gaki D., Garnier A., Lerin F. (eds). *Mountain areas of large Mediterranean islands. European issues, National and Regional policies and local mechanisms. European Conference of Troodos-Cyprus, 28/31-january 2020.* University of Thessaly Press, Volos, Greece. July 2021. 120p.

## Foreword



*It is with great pleasure that I introduce this publication of the proceedings of the European Conference “Mountain areas of large Mediterranean islands: European issues National and Regional policies and local mechanisms” which was held in Cyprus in February 2020.*

*The heightened interest and participation in the Conference by academics and specialised organisations of international renown, highlight the importance of this interdisciplinary event, while constituting a practical recognition of the*

*work accomplished by the Republic of Cyprus in the revitalisation of its mountain communities.*

*Recognising, on the one hand, the elevated multidimensional, cultural, economic and social cost associated with the abandonment of mountain regions, and on the other hand, their value, dynamics and development prospects, the Government decided to intervene substantively for the revival of these regions.*

*To this end, following the recommendations of the United Nations and European policies, and taking into account best practices and initiatives of Mediterranean islands and other countries for the sustainable and integrated development of mountain regions, the Government of adopted its own specially devised Integrated Development Policy for Mountain Regions in 2018.*

*A decision which led to the conception of the National Strategy for the Development of Mountain Communities, marking in this context the beginning of a new era for mountain communities, and hence the revival of villages in the Troodos mountains.*

*Through the implementation of the Strategy, in line with our objective, mountain regions are organised, regarded and supported as a single development entity, thereby becoming an attractive place of residence and activity.*

*It is important to note that by adopting the principles of sustainable development, the Strategy harmonises the three major dimensions of human activity: the economy, the social fabric and the environment.*

*The complete plan for the mountain regions, to be implemented by 2030, consists of over 300 actions, with a total budget of 400 million euros, and several projects already in progress.*

*For this reason, I would like to express my gratitude to Mr John Papadouris for the kind contribution of the John Papadouris Foundation in the preparation of the National Strategy for the Development of Mountain Communities, as well as his contribution as the first Commissioner for the Development of Mountain Communities.*

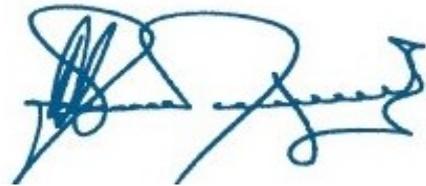
*The excellent cooperation between the current Commissioner Mr Kostas Champiaouris, the competent bodies and the Community Councils in these regions, is of particular importance to the implementation of all the actions and policies providing a new dynamic to mountain communities.*

*In this context, and given the will we possess, I would like to stress that we will continue, with the same determination, to implement the National Strategy for Mountain Communities, which will be extended to include the Districts of Limassol, Larnaca and Paphos in 2021, enriching it with new complementary and productive actions and policies, while promoting other important development projects.*

*I am absolutely certain that through the cooperation of all the competent bodies, as well as the development of synergies comparable to those of the Conference, we will be able to ensure the protection and rational development of our mountain regions, highlighting their particular characteristics for the benefit both of residents and our country.*

His Excellency the President of the Republic of Cyprus

Nikos Anastasiadis

A handwritten signature in blue ink, appearing to read 'Nikos Anastasiadis', with a stylized flourish at the end.

# Summary

|  |           |
|--|-----------|
| <b>Opening</b> .....   | <b>9</b>  |
| Welcome speech by the President of the Republic Nikos Anastasiadis .....   | 11        |
| A European Conference on insular mountain territories in the Mediterranean. <i>Dimitris Goussios, François Lerin</i> .....   | 13        |
| <b>Presentation &amp; program</b> .....  | <b>17</b> |
| Presentation of the conference .....   | 19        |
| Program.....   | 22        |
| <b>Communications</b> .....  | <b>29</b> |
| Territorial challenges of European mountain areas. <i>Laurent Rieutort</i> .....   | 31        |
| The French Mountain Law: its pioneering character and its current impact. <i>René Souchon</i> ....   | 35        |
| Regional perspective of mountain policy. Lessons from implementation in Austria. <i>Thomas Dax</i> .....   | 38        |
| The regional dimension of Spanish mountain policy. The case of Galicia. <i>Rubén Camilo Lois-González, Valerià Paül-Carril, Luis Martin Agrelo-Janza</i> .....           | 42        |
| Cooperation in mountain areas. Cross-border cooperation in the Pyrenees. <i>Jean-Louis Valls</i> 45  |           |
| The Euromontana network and its strategy: what interests for mountain dwellers to collaborate? <i>Marie Clotteau, Juanan Gutierrez</i> .....                             | 47        |
| Territorial resources. An opportunity for local development. <i>Bernard Pecqueur</i> .....   | 50        |
| Development and spatial and environmental planning of mountainous regions in the Mediterranean. Mountains, between insularity and altitude . <i>Elias Beriatos</i> ..... | 52        |
| Anchoring mountain tourism and integration into international networks. <i>Mari Oiry Varacca</i> .....   | 55        |
| Making mountains matter. Signs of quality and internalization of product value. <i>Geneviève Teil</i> ..   | 58        |
| Land issues in the Mediterranean island mountains. <i>Jean Christophe Paoli</i> .....  | 62        |
| Social and Solidarity Economy (SSE) and the socio-economic cohesion of mountain communities. <i>Theodosia Anthopoulou</i> .....  | 64        |
| Effectively managed Natura 2000 areas: a tool for sustainable development of mountainous areas. <i>Fotios Papoulias</i> .....  | 69        |

|   |            |
|---|------------|
| Evolution of the agriculture / environment interface. For the construction of Mediterranean territorial strategic issues. <i>François Lerin, Claire Bernard-Mongin</i> .....  | 70         |
| Climate trends, variability and extremes in the Mediterranean region. <i>Monia Santini</i> .....  | 74         |
| Ecolabelling: idea and praxis. Samaria National Park (Crete). <i>Petros Lymberakis</i> .....  | 79         |
| Territorial engineering and governance. Mountain territories of the large Mediterranean islands. <i>Sylvie Lardon</i> .....   | 81         |
| Participatory dynamics of smart villages. <i>Marjorie Jouen</i> .....   | 85         |
| Product qualification and participatory guarantee systems. <i>Dominique Barjolle</i> .....  | 87         |
| Mountain areas of Sardinia. The challenge of harmonizing pastoral activity, dairy products quality and care for the environment. <i>Andrea Cabiddu, Mauro Decandia, Jean Christophe Paoli, Giovanni Molle</i> ..... | 92         |
| Innovative approaches in High Nature Value Systems' agroecological management. The case of Troodos mountain in Cyprus. <i>Georges Vlachos</i> .....   | 94         |
| Approaches and practices of agro-ecosystem management in Cyprus. <i>Menelaos Stavriniadis</i> .....   | 96         |
| Margins: spaces for the affirmation of collective intelligence ? <i>Pierre-Antoine Landel</i> .....   | 98         |
| Expectations on the European reform discussion for future mountain policies. <i>Thomas Dax</i>  | 101        |
| What methods to meet the challenges to the mountains of the large Mediterranean islands ? <i>Laurent Rieutort</i> .....   | 105        |
| Governance and tourism diversification in the Alpine Valleys. <i>Emmanuelle George, Coralie Achin</i> .....   | 109        |
| <b>Conclusion</b> .....   | <b>113</b> |
| « Troodos Declaration» For the attention of the Government of the Republic of Cyprus .....  | 115        |



1

# Opening





# Welcome speech by the President of the Republic Nikos Anastasiadis

## **European Conference: "Mountain areas of large Mediterranean islands. European issues, National and Regional policies and local mechanisms"**

**Tuesday 28 January 2019, Presidential Palace, Nicosia**

Dear friends,

It is with great pleasure that I welcome you today, to the Presidential Palace, for the opening of the European Conference "Mountain territories of the large Mediterranean islands. European issues, National and Regional policies and local mechanisms".

The presence of academic figures and specialised international organisations at this conference underlines the importance of this interdisciplinary event, while being a recognition of the work accomplished by the Cypriot Republic for the rebirth of its mountain communities.

Undoubtedly, mountainous regions throughout the world are vital places for human life because they constitute the largest reserves of fresh water on earth, they are centres rich in biodiversity, popular destinations for leisure and tourism, but also important cultural heritage sites.

However, mountain areas are currently extremely vulnerable and face many natural and man-made risks which are caused, inter alia, by climate change, severe weather, fires, soil erosion, land use change, the intensification of mountain agriculture and the irrational implementation of major technical projects.

These risks on the whole degrade the natural environment of mountain areas, impoverish their natural beauty and affect the availability of natural resources and other goods.

In this context, and taking into account the ensuing repercussions, the impacts on the ecosystem of mountainous regions are in most cases irreversible, and the need for protection and rational development becomes imperative.

This need was highlighted in the document Agenda 21 (giving birth to Agenda 21) at the United Nations Conference on Environment and Development in 1992, as well as in 1998 at the General Assembly of the United Nations, where a resolution was adopted establishing 2002 as the International Year of Mountains.

Since then, according to the annual reports of the Secretary General from 2002 to 2019, many countries have launched national programs to "celebrate the mountain", notably by creating more than seventy national committees, most of which have become permanent organizations, and several countries have established long-term national strategies for their mountain regions.

Cyprus adopted its own Integrated Development Policy for the mountain regions of Cyprus in 2018, while implementing the recommendations of the United Nations and European policies, and taking into account good practices and initiatives from other countries and Mediterranean islands.

This concrete intervention decision for the revitalization of mountain communities led to the development of the National Strategy for the Development of Mountain Communities, formally approved by the Council of Ministers in 2019.

In addition, I would like to stress that we encourage the adoption of a bill on the "Principle of Mountainness" and the policy for mountain regions.

In this context, a new era for mountain communities has begun, leading to the reversal of the trend and the rebirth of the mountain villages of the Troodos mountain range.

More specifically, through the implementation of this strategy, in line with our objective, the mountain regions are treated and supported as a single development entity, making mountainous Cyprus an attractive place of residence and activity.

The development of this Strategy was carried out by a large interdisciplinary team of more than 90 professors and experts from different fields, from prestigious universities, who systematically consulted specialists and government services, but also all the Municipal Councils - i.e. 112 municipalities in total.

I would also like to mention that the Strategy was designed on the basis of European development standards and that it consists of 14 studies covering all issues related to this region, while adopting the principles of sustainable development harmonizing the three major dimensions of human action: the economy, the social fabric and the environment.

At the same time, to achieve its objectives, it offers 250 group actions, thus ensuring that all policies and actions will be complementary and productive and will provide the expected benefits to the community and the local economy.

The implementation of the Strategy is expected to be completed within 12 years, with an implementation agenda for 2030 and a total expenditure budget of 250 million euros.

For the immediate implementation of the Strategy and beyond the 36 million already invested for the project, as well as the work already announced to modernize the road network totalling 150 million euros, the Council of Ministers has approved a set of short-term actions for the years 2019-2020 amounting to 34 million euros.

Planning provides that this Strategy, being a government policy, will be the basis for the development of a corresponding strategy for the mountain regions of Larnaca and Paphos. This is our intention

Ladies and gentlemen,

As the title of the Conference clearly indicates - as well as the objectives that have been set - I am absolutely convinced that this will be the start of a dialogue and cooperation between the main Mediterranean islands and the countries of the Union in order to meet common challenges and in particular to develop and revitalize their mountain ranges.

Considering the number of participants as well as their communications, the conclusions will undoubtedly contribute to the formulation of community, national and regional policies, the creation of financing tools and more effective mechanisms for collective challenges, threats and opportunities in our mountain regions, in particular the six large islands: Cyprus, Corsica, Crete, Sardinia, Sicily and the Balearics.

Furthermore, we look forward to the sustainable development of our mountain regions as another pillar of strategic cooperation between our countries for the common good of mountain ecosystems and the people who live there.

In conclusion, I would like to thank the scientific director of the Conference, Mr. Dimitris Goussios, and the eight members of the Scientific Committee of the Conference of Universities and Research Institutes of Greece, Austria, Switzerland, France and Cyprus. Also, I thank the former Commissioner for the Development of Mountain Communities Mr. Giannakis Papadouris and the new Commissioner Dr. Costa Hambiaouris, the Organizing Committee and the Troodos Development Company who took charge of the organization of the event.

I would like to warmly thank you all for your presence here, and to wish you every success in the work of the Conference.

Thank you.

# A European Conference on insular mountain territories in the Mediterranean

**Dimitris Goussios<sup>1</sup> & François Lerin<sup>2</sup>**

<sup>1</sup> University of Thessaly. School of Engineering. Department of Planning and Regional Development. Director of the Rural Space Laboratory.

<sup>2</sup> International Association for Agro-environmental Development (AIDA).

*Opening Remarks: The proceedings of the Troodos-Cyprus conference, organized and financed with the support of the John Papadouris Foundation under the aegis of the President of the Republic of Cyprus, are now available in the three languages in which the sessions were held: Greek, English and French. This has not been without difficulties in translating and consolidating the different versions. We hope that these will meet the expectations of participants and stakeholders. Furthermore, if this publication is of some importance, it is because this conference was not conceived as an operation in itself but as a moment in a dynamic of analysis, collective work, project construction and the exchange of experiences. This introduction, written after the event and during the final editing process, would like to restore, at least in part, this dynamic. We therefore thought it would be interesting to offer potential readers some key explanations on the why and how, regarding content and form, as well as possible applications. We believe that we have created a compact and comprehensive tool, consistent with the discussions and presentations that took place during the conference, but also useful for the later stages that we are contemplating and will outline in the conclusion.*

## **Genesis of the European conference**

The idea for this conference gradually emerged at the end of diagnostic work carried out in the Troodos region of Cyprus. This diagnostic work, funded by the John Papadouris Foundation, aimed to define a *National Strategy for the Development of Mountain Communities* (NSDMC-ΕΣΑΟΚ), an inclusive development plan for this mountain region of the island-state. It also aimed to consolidate the desire of the Cypriot government and local actors to give mountain issues a renewed and legitimate place, not only as a result of the resources (natural, economic, cultural, landscape) that these zones possess, but also the functions they can perform in national territorial management, as well as new sustainable development opportunities which can today be developed for this kind of territory.

This diagnostic and analytical work was undertaken by a Greek and Cypriot team during the years 2018-2019, coordinated by the Rural Space Laboratory of the University of Thessaly, under the responsibility of its director, Dimitris Goussios. Many Greek and Cypriot researchers conducted surveys, processed data and produced analyses in order to complete this work which has created a dynamic in the building of knowledge and an interest shared by a number of local actors. This strategy, widely discussed at different territorial levels and in various communities and institutions, has been validated and adopted by the Cypriot government.

Therefore, at the end of this diagnostic work, and numerous feedback sessions with national and local actors, it seemed to the organisers of this research-expertise that a conference or event on a local-national scale was neither necessary, nor the best solution. The idea of holding an international conference with a strong European dimension to address mountain issues, was thus gradually born. It seemed important that the work accomplished, as well as the Greek and Cypriot researchers involved, be included and discuss their thoughts in a broader methodological and analytical framework. Indeed, Troodos and other Cypriot and European mountains share a regulatory and legislative framework, common policy instruments and often, relatively, closely-related problems and dynamics which are important.

It also seemed necessary to maintain a Mediterranean and even insular focus two important characteristics of the geographical circumstances of mountain areas in the Cypriot Republic. The organising committee therefore insisted, on the one hand, on the “European Conference” dimension in its title, and on the other, on identifying in particular the “Mountain Territories of the large Mediterranean Islands” .... By “large islands”, we mean the

five largest: Cyprus, Crete, Sicily, Sardinia, Corsica (to which the Balearics were subsequently added). But this choice of a certain insularity and “mountainness” is not limiting. It represented here an opportunity and a possible grouping based on the fact these large islands are also, from an administrative and governance standpoint, regions (and in the case of Cyprus, a State). It was not a question of excluding reflections (and networks) concerning other European mountain territories (Alpine, Pyrenean or Carpathian for example), non-insular Mediterranean mountains, nor the common mountain issues on an international scale. It seemed important to insist, for this conference, on Mediterranean mountain areas in that they are, in European Union discussions, very largely underrepresented in spite of their common recognised specificities. The construction of a “focus” on Mediterranean and insular mountains therefore seemed useful and coherent in contextualising the Cypriot issue while marking a step in the construction of collective reflection on this specificity so as to bring it into the European, or even international, debate.

This was a means of including the issue of mountain areas in large Mediterranean islands into a broader institutional, methodological-analytical and strategic debate. For this purpose, it was important to define mountain issues on different levels, hence the conference’s multi-scalar subtitle: “European issues, national and regional policies and local mechanisms”.

A scientific committee was established, under the aegis of Dimitris Goussios, to undertake the work of identifying and inviting researchers and practitioners able to provide substantial input to the theme of the Conference as this was developing. From the Greek and Cypriot side, Elias Beriatos, George Vlahos and Menelaos Stavrinidis worked on the construction of the programme; on the side of other Europeans: Thomas Dax from the Federal Institute of Agricultural Economics, Rural and Mountain Research in Austria; in France, Laurent Rieutord from the University of Clermont-Ferrand and Francois Lerin from the AIDA Association; and Dominique Barjolle from the Federal Institute of Technology ETH in Zurich, Switzerland.

Thanks to the combination of the different knowledge networks of the scientific Committee, and the funding of the invitations by the Cypriot authorities, the Conference was able to select around 40 participants from seven European countries. Of course, a number of Greek colleagues (some from Crete) and Cypriots, but also Italian and Spanish colleagues – for there to be, in a way, a marked “representation” of the large Mediterranean islands (for Sicily and Sardinia on the Italian side, the Balearics for Spain). French colleagues were also particularly approached. There is of course the fact that Corsica is one of the large islands/regions in Mediterranean Europe. But the French “over-representation” is a result of two factors that can be explained: One is that the Rural Space Laboratory of Volos has a long-standing collaborative relationship (in teaching as well as research) with French institutions, and in particular in developing programmes with Clermont-Ferrand and Montpellier. This cooperation is not Franco-Hellenic merely by chance, but is also explained by Rural Geography being a core module in the Volos Lab and is associated to the substantive background in research and analysis in France, and more widely in French-speaking countries. This relates specifically to the importance, established long ago, of the “rural” in traditional French geography (and history). It also concerns, concomitantly, the tradition in “agriculture-agronomy” for research in rural economics and rural sociology to involve detailed field work-regarding agrarian systems, the place of the “environment” and more recently, work in terms of landscapes and agroecology.

Finally, it should be noted that the Volos Laboratory and its French colleagues share an approach that is organised by “territories” and the construction of “territorial projects” with local actors, and notably but not exclusively, farmers. This research stance leads to particular attention to cognitive tools and imagery which allows and facilitates this co-construction with actors and stakeholders.

From a point of view of the scientific disciplines covered by the presentations, the presence of many geographers is therefore not unusual, but also economists- as well as colleagues referring more directly to sociology, anthropology, political sciences and management...Given our working themes, it is not strange either to have established a dialogue with agronomists and ecologists.

However, the scientific multidisciplinary of this presentation must not obscure two interesting aspects regarding the collective that was brought together for this conference. On the one hand, the presence of many “practitioners”, in other words people who, regardless of academic background, undertake intervention work with organisations of very different statuses (international networks, regional authorities, public administrations, non-governmental organisations...). On the other hand, it should be noted that a number of participants discarded strict affiliations to disciplines in favour of: either a more general reference to the humanities and social sciences (HSS), or (and often in a complementary way) being defined less by disciplines than by the “object” and “issue” of scientific enquiry. This, in a way, gives priority to the “field” and the questions that it raises regarding a discipline’s referential framework, all the more so in a process where the researcher is most often

“involved” through the assignment and the implemented intentional perspective (in particular, inclusive and sustainable development).

## **Conclusion**

The 26 papers that follow have been calibrated for a concise reading presenting, in a compact way (between two and four pages), a work perspective, an organisation, an experience. The authors submitted to this difficult exercise and we thank them for this. Despite the apparent dispersion of approaches and disciplines mobilised, of actions carried out or the type of activity, there is a sort of “convergence platform” among participants which allows us to present this resulting volume as the beginning of a network of skills regarding the issue of Mediterranean insular mountains and its inclusion in Mediterranean, European, even global, debates. This network’s functions and operation have not been established; it is of course not closed and can be enriched by other colleagues and skills as it is used. This network is defined beyond an “epistemological community” as a “community of practices” that are certainly different but have common perspectives.

This convergence agreed on the interest in a Mediterranean geographical scope (mountainous, insular without necessarily being limited to “large islands”); a methodological scope which insists more on a “discourse on method” than on a methodology in the form of a “model” (of development or implementation). Several points of convergence that have already been addressed in this introduction can be reiterated here as they are widely shared in this collective: the need for a territorial and local approach, but with a multi-scale conception of strategies and understandings; the combination of multiple issues and the complexity of dealing with this set of nexuses; the approach to certain tools (Geographical Indications or quality marks for example) as “boundary objects”; a stance - in research or in brockering - of facilitation (and at the heart of this brockering, that of knowledge). Finally, the objective of this pooling is not to identify “good practices” or scalable or exportable solutions but rather the networking of experiences.

Finally, it is stimulating to be able to announce in the final sentence of this introduction that our colleagues from Crete, in attendance and interested in the Troodos-Cyprus European conference, are proposing to host a second meeting in 2022.

---

## **Dimitris Goussios**

### **Activities, research themes and areas of interest:**

His research centres on the questions of territoriality, ownership of territorial resources, governance and diagnosis. The Laboratory focuses more specifically on diagnostic methodology, emphasising visualisation and 3D representations and their contribution to the sensitisation and active participation of local actors in the development of territorial projects.

### **Indicative author bibliography :**

1. Goussios D. (2013). Zones à faible densité en Grèce. Ed. CERAMAC. Université Blaise Pascal. Clermont Ferrand. France
2. Goussios D., Anthopoulou Th., (2016): Relocalisation de la feta AOP par la coopération des petits territoires laitiers en Thessalie : de la coordination de la filière à la coordination territoriale. In : *Au cœur des territoires créatifs. Proximité et ressources territoriales*. Eds. Pecqueur B et Glon E. : PUR (Presses Universitaires de Rennes).
3. Goussios D. Rieutort L. (2018). Politiques d’accueil et dynamiques collectives dans les territoires ruraux de montagne en Grèce. In : *Les campagnes européennes : espaces d’innovations dans un monde urbain*, pp. 183-196. Presses universitaires du Midi, Toulouse,

## **Francois Lerin**

### **Activities, research themes and areas of interest :**

François Lerin, social sciences, member of AIDA (International Association for agro-environmental Development). Senior researcher on environmental and agro-environmental challenges and methodological issues in social sciences (the issue of scales and transdisciplinarity). As scientific administrator in an international Mediterranean organisation for a number of years, he coordinated numerous network “embedded” research programmes

(French and European). His work is currently focused on the Western Balkans, member countries and candidate countries based on the relationship between environmental regimes and local situations and mechanisms.

***Indicative author bibliography:***

1. Lerin, F. (2015). The Scale Issue in Global International Environment Governance: For a Transdisciplinary Perspective. In : O. Charnoz, V. Diaz Pedregal & A. L. Kolata (Eds.), *Local Politics, Global Impacts. Steps to a Multi-Disciplinary Analysis of Scales* (pp. 39-66). Surrey, UK and Burlington, USA: Ashgate Publishing
2. Lerin F., Tubiana L. (2020). Climate Change: Anticipated Risk or Heralded Catastrophe? Questions from a thwarted Public Enquiry. In: *Society Under Stress: A Pluridisciplinary Approach* (ed.: D. Jodelet, J. Vala, E. Drozda-Senkowska), *Springer Publishing* – pp. 161-176



2

# Presentation & program



# Presentation of the conference

## Conference Objectives

This conference aims to show the importance of Mediterranean mountain areas as well as the need to reinforce territorial strategies concerning them. It gathers the six large Mediterranean islands that form a special group which should contribute to broader European discussions on mountains, islands, the environment and the problems of sustainable territorial development. It aims to combine academic and operational approaches. It will thus make it possible to better identify the issues regarding method and use of knowledge while clarifying the strategic issues regarding territorial engineering and governance.

Mountain areas face a set of problems, issues and opportunities and are vital to the regions and countries of which they are part, while being on the European scale hotspots of biodiversity and environmental capital. They are areas under pressure and often in decline but, at the same time, they are experiencing new dynamics and possess important assets and resources of European Community interest.

Island mountain areas are thus decisive at the regional, national and European level. Sustainability strategies are therefore not only based on the collective action of local actors but also respond to major collective European challenges, first and foremost those concerning the environment and ecological and social transitions. The Conference will therefore be resolutely multi-scale, multi-actor and multi-institutional.

## Thematic of the Conference

This European conference aims at combining the perspectives and analyses of researchers, public officials and local stakeholders from insular mountain areas. The goal is to renew, through a strategic approach, the vision of policies and mechanisms for the development of these areas, in order to take full advantage of their assets and better prepare them for global challenges by interactive debates: environmental, social, economic and governance challenges. It is a question of addressing this issue from a multi-stakeholder and multi-institutional point of view but also at relevant levels, i.e. insular, mountainous, regional, State and European Union level.

Today, in the large Mediterranean islands, just like in all European mountains and islands, despite their assets – their dynamics of tourism and their environmental, cultural and landscape heritage – there are rural regions in decline. Economic, social and connectivity issues are compounded by the magnitude of slow but inexorable and complex ecological changes – firstly, those related to climate change but also those related to the collapse of biodiversity and the degradation of resources (water, soil, forests, etc). Thus, these areas are threatened and under pressure.

Assessing the effects of climate change and its impact on natural and semi-natural environments, as well as developing adaptation strategies, is not just a local issue. These Euro-Mediterranean mountain areas are biodiversity hotspots which should be regarded, at the community level, as public assets of major importance

In this case, mobilising local stakeholders is a necessity because these specific environments require knowledge of practitioners - often-traditional knowledge transmitted to new stakeholders. Local choices can only be made by convergence of interest in mountain communities. Hence the need to focus work and research on stakeholders and local/regional action, while taking into account the global challenges and existing and evolving European Community schemes on these issues. Dynamics of local stakeholders which must also be accompanied by "scale-jumping" strategies (regional, national, European and even international) in order to mobilize the institutional, intellectual, scientific and technical resources, as well as the necessary practices and means.

These sensitive and threatened patrimonial territories are thus at the crossroads of important global and European community issues and very specific local and regional dynamics. Experiences and innovations that take place there, such as policies and tools (regional, national and community) are of prime importance and contain

applications/adaptations of new technologies (digital, energy, etc) that respond to both local specificities and global challenges. The same goes for farming production and the management of semi-natural environments that provide both recreational spaces for tourists and urban populations but also high quality products and high typicity, thanks to High Natural Value (HNV) farming often preserved from the negative effects of modernization and specialization owing to natural conditions.

By aiming at a better construction of innovation, conservation and development goals for these territories, while disseminating knowledge and sharing experiences, the objectives are both:

- **Methodological and conceptual:** how to identify these insular mountain territories and elaborate with local stakeholders' specific policies that do not ignore global contexts? How to elaborate innovative and participatory development strategies and mechanisms, taking into account the needs of the population and the condition of local resources? How to evaluate the trajectories (ecological, social and economic) of these mountain areas and identify the improvement or creation of necessary regulations?
- **Operational and strategic:** what place should mountainous islands occupy in future European policies? How can they adapt to current climate and environmental changes? Which forms of governance and engineering are necessary to ensure sustainability of actions? Which networking policies are necessary for these territories to launch exchanges and interactions without underestimating the specificity of each situation? What cohesion is sought between all mountain areas at a European level? How to combine the challenges and tools available in innovative local mechanisms?

Even though mountain areas of the large Mediterranean islands define specific challenges, the development of strategic solutions can only benefit from its inclusion in more general European debates (in particular those on mountains, insularity, environment, farming, etc.). Reflection on the specificity of these territories can and must also inform and enrich the European common debates.

In this conference, it is not a question of creating a "development model" for the Mediterranean insular mountain territories and general recommendations which are often not applicable in the field. The aim is to proceed to a debate on the method to be used, which shall necessarily be multi-disciplinary, multi-stakeholder, multi-institutional and multi-scale based on specific situations, on the expertise of local stakeholders and on the results of scientific and technical research. It is not a question either of creating experiments in "good practices" that would be enough to reproduce in each territory. What is important is to give food for thought for all the mountain and insular geography, allowing stakeholders to connect and to identify innovations that could inspire everybody while taking into account local specificities and issues. Since the debate on declining rural areas has intensified in recent years, it is becoming necessary for insular mountain areas to strengthen cooperation both with each other and with the continental mountain areas in order to actively participate in the elaboration of appropriate European policies. The Conference will contribute to the content and form of this cooperation.

In this new framework of negotiations, a remarkable European debate is developing, as well as an accumulation of innovative initiatives and experiences that can contribute significantly to the sustainable development of insular mountain territories. The work of this Conference can enrich the European debate on mountains, islands and geographical specificities in the E.U.

## Comité scientifique

- **Dominique BARJOLLE** : Senior researcher, Swiss Federal Institute of Technology ETH in Zurich, Swiss
- **Elias BERIATOS** : Honorary Professor, University of Thessaly, Greece
- **Thomas DAX** : Deputy Director, Federal Institute of Agricultural Economics, Rural and Mountain Research (BAB), Austria
- **Dimitris GOUSSIOS** : Professor, University of Thessaly, School of Engineering, Department of Planning and Regional Development, Director of the Rural Space Laboratory, Greece
- **François LERIN** : Senior Researcher in Agroenvironment and Social Sciences, International Association for the Development of AgroEnvironment (AIDA), France
- **Laurent RIEUTORT** : Professor, University of Clermont – Auvergne. Director of the Institut d'Auvergne-Rhône-Alpes du Développement des Territoires, France
- **Menelaos STAVRINIDES** : Assistant Professor, Cyprus University of Technology, Cyprus
- **George VLAHOS** : Assistant Professor, Agricultural University of Athens, Greece.

## Organisational Committee

- **Dimitra Gaki** : Rural Space Laboratory, University of Thessaly, Greece
- **Claire Bernard** : Researcher, University of Montpellier, France, (AIDA)
- **Anastasia Hamatsou** : Historian – Researcher, Officer of Office of the Commissioner for the Development of Mountain Communities
- **Katerina Yerou** : Officer of Office of the Commissioner for the Development of Mountain Communities
- **Xenofon Xenofodos** : President of Troodos Development Company (ANET), Cyprus
- **Petros Hatzikostas** : Director of Troodos Development Company (ANET), Cyprus
- **Elena Georgallidou** : Officer of Troodos Development Company (ANET), Cyprus
- **Evi Kazamia** : Officer of Troodos Development Company (ANET), Cyprus
- **Stavros Kazamias** : Coordinator for the Office of the Commissioner for the Development of Mountain Communities. Officer of Troodos Development Company (ANET), Cyprus
- **Konstantinos Konstantinou** : Officer of Troodos Tourism Development Company (ΕΤΑΠ), Cyprus

# Program

## Program synthetic

---

### *Tuesday, January 28 - Presidential Palace, Nicosia*

- Conference opening ceremony

### *Wednesday, January 29 - Cultural Center of Platres, Platres village - Troodos*

- **Session 1** : The mountain issue in European Community
- **Session 2** : Regional strategies – territorial cohesion and insular mountain areas

### *Thursday, January 30 - Cultural Center of Platres, Platres village - Troodos*

- **Session 3** : Reciprocal, multiple and multi-scale challenges of mountain areas

### *Friday, January 31 - "Oenou Yi" Winery, Ktima Vassiliades, Omodos village - Troodos*

- **Session 4** : Dynamics and approaches of territorial governance and engineering
  - **Session 5** : The conditions for the possibility of inclusive, sustainable and adaptive strategies for insular mountain areas
  - Preparation and approval of the Troodos-Cyprus Declaration.
-

## Session 1 : The mountain issue in the European Union

The specificity of mountain areas has long been recognized in many national policies. It has also become, in the context of European regional policy, a community issue. In some common sectoral policies, the mountain dimension is sometimes taken into account, such as the ICHN (compensatory allowance system for natural handicaps), in the Common Agricultural Policy (CAP), etc. The cohesion policy takes into account these specific situations, as well as the European Structural and Investment Funds (ESI), in particular the Cohesion Funds (for Greece and Cyprus), but also the European Regional Development Fund (ERDF) and the European Agricultural Fund for Rural Development (EAFRD) mechanism that have set out adaptation and derogation provisions.

This session (Part A) will try to make the most exhaustive assessment possible of these links between national/regional and community policies for mountain areas, in particular taking into account the ongoing discussions for the new programming period and parliamentary term. Part B will give some significant examples of national policies on mountain areas and Part C will describe the modalities and the stakes of existing cross-border cooperation concerning mountain areas.

### Opening session :

- Specific territorial challenges of mountain areas in Europe. **Laurent Rieutort**, *Professor of the University of Clermont-Auvergne, France*.

### A. European dimension of mountain policies

- Taking into account geographical specificities and handicaps in the current CAP and prospects in the new programming period. **Petros Angelopoulos**, *Policy Analyst, DG Agriculture and Rural Development, C1 – Policy perspectives European Commission*.
- Environmental dimension of EU policies on mountain areas. **Marco Onida**, *Team Leader, Forest. ENV.D1 - Land Use & Management, DG Environment, European Commission*.
- EU regional policy and the Integrated Territorial Investment (ITI) tool. The new targets for 2021-2027. **Maria Kostopoulou**, *Representative of the Ministry of Development and Investment of Greece*.

### B. National mountain policies: benefits and limits

- France: The Mountain Law, its preventive character and actual impact. **René Souchon**, *former Minister of Agriculture and Foodstuff, France*.
- Lessons from the experience of regional perspectives of mountain policy in Austria. **Thomas DAX**, *Deputy Director of Federal Institute of Agricultural Economics, Rural and Mountain Research, Vienna, Austria*.
- Spanish mountain policy: balance between central administration and autonomous regions, the example of the Autonomous Community of Galicia. **Rubén Lois Gonzales**, *Professor at Department of Geography and Faculty of Geography and History University of Santiago de Compostela, Spain*.

### C. Examples of cooperation between mountain, mainland and insular territories

- The Mountain Partnership: A global alliance. **Patricia Quillacq**, *Policy Officer, Mountain Partnership FAO/UN, Rome, Italy*.
- The Pyrenees Convention. **Jean-Louis Valls**, *Director of the Working Community of the Pyrenees, Huesca, Spain*.
- Are the mountains of the Mediterranean islands different? **Paulo Castro**, *Vice-chairman of EUROPARC Federation*.
- The Euromontana Network and its strategy. **Juanan Gutierrez**, *President of Euromontana*.

Chair : **Dominique Barjolle**. Rapporteurs : **Georges Vlachos, Claire Bernard**.

## Session 2 : Regional strategies – territorial cohesion and insular mountain areas

The six large Mediterranean islands (Corsica, Sardinia, Sicily, Crete, Balearic Islands, Cyprus) can be aggregated into a particular type of mountain area in insular territories. Representatives of these six regional entities (and national in the case of Cyprus) will present the state of play of mountain areas and their strategies for these territories. They will also present the various instruments mobilized (European, national or regional), emphasizing the scale relations between mountain areas and their regions with the national and the European Community level.

Rather than conventional cross-cutting challenges, contributions must highlight the combination of issues, constraints and opportunities in these territories. The objective of this session is to identify the specific problems raised by these mountain areas of the large Mediterranean islands and to highlight and emphasize their actual challenges and experiences.

### A. The situation of the six large Mediterranean islands

How do insular regional and local authorities consider the specificities and needs of their mountain areas? What are the specific procedures of governance for these territories? How does the local level relate to national policies and European instruments?

- Opening by the political representatives of the islands: the mountain policies of the islands

- Cyprus: **Dr Kostas Champiaouris**, Commissioner for the Development of Mountain Communities.
- Crete: **Giorgos E. Alexakis**, Vice Governor of Crete Region for European and International Affairs.
- Sicily: **Gaetano Armao**, Vice president of the autonomous region of Sicily.
- Balearic Islands: **Josep Antonio Manchado**, Council of Mallorca.
- Corsica: **Marie-Antoinette Maupertuis**, Executive Councilor of Corsica.

- Table Ronde : Questions de développement pour les territoires de montagne des grandes îles méditerranéennes

- **Georges Zervakis**, Mayor of Sitia Municipality.
- **Petros Hatzikostas**, Director of the Troodos Development Agency.
- **Josep Antonio Manchado**, Island Environment Director, Council of Mallorca.
- **Mathilde Woillez**, University of Corsica and Territorial Development Consultant
- **Petros Lymberakis**, President of the Management Body of the Samaria National Park – Western Crete, Museum of Natural History, University of Crete.

Coordination: **Dimitris Goussios**.

### B. State of the day: What are the links between European and national policies and regional and local strategies for insular mountain areas?

Complementary questions: to what extent should we (i) rethink the effectiveness of current coordination and adaptability of existing tools; (ii) explore new avenues and forms of partnership (e.g. exchange of experiences on the use territorial resources, networking, "clusters", exploitation through research and territorial engineering of inherited knowledge etc.?)

Finally: to what extent territorial cohesion strategies integrating mountain areas into the national/regional territory are implemented?

Chair: **Thomas DAX**. Rapporteurs : **Elias Beriatis**, **Marie Clotteau - Euromontana**.

## Session 3 : Reciprocal, multiple and multiscale challenges of European and Mediterranean mountain areas

The mountain territories of the large Mediterranean islands represent special cases of broader issues. Firstly, ecological and environmental issues: large parts of these territories are recognized as biodiversity hotspots and subject to dedicated protection measures (Natura 2000 zones, regional or national parks, etc.). They are HNV farming and agro-biodiversity territories, as well as evolutionary cultural landscapes. Therefore, they are significant heritage assets. Secondly, there are social and economic challenges arising in these demographically or economically declining territories (decline of agricultural and livestock activities). The transition to multi-functionality of these areas raises the question of the support of these new functions (recreational and tourism activities of which the challenge of connectivity and managing visitor reception is significant). Finally, there are territorial issues since the question of coordinating the development of resources of these areas and connecting these demographically declining areas with the dynamics of coastal areas (urbanization, metropolisation, coastal tourism, intensive farming, coast and maritime territories, etc.) is raised.

### A. Territorial challenges

- Revealing the specific resources, a strategic opportunity for mountain areas in the Mediterranean. **Bernard Pecqueur**, Professor, University Grenoble, France.
- The issue of environmental development and planning: mountain areas between insularity and altitude. **Elias Beriatos**, Honorary Professor, University of Thessaly, Greece.

### B. Economic and social Challenges

- Anchoring mountain tourism and integration into international networks. **Marie Oiry Varacca**, Lecturer, Paris-Est University, France.
- Development of artisanal production: research feedback. **Geneviève Teil**, Researcher at Agroparitech, Paris, France.
- Land issues in the Mediterranean insular mountains. **Jean Christophe Paoli**, Researcher INRAE, Corsica, France.
- The role of Social Economy in strengthening the socio-economic cohesion of mountain areas. **Theodosia Anthopoulou**, Professor of Panteion University, Athens, Greece.

### C. Environmental challenges

- Biodiversity and Natura 2000 zones. **Fotios Papoulias**, European Commission, DG Environment - Unit D.3 "Nature protection" BU-5 6/148.
- Farming-environment interface: the Mediterranean challenges. **François Lerin**, Senior Researcher AIDA, **Claire Bernard**, Researcher at University of Montpellier, France.
- Mediterranean islands' biodiversity. **Antonio Pollutri**, Senior Biodiversity Officer for WWF Italy.
- Climate trends, variability and extremes in the Mediterranean region: what risks and dangers for islands and mountains? **Monia Santini**, Director of the Division on Impacts on Agriculture, Forests and Ecosystem Services (IAFES) at Euro-Mediterranean Center on Climate Change (CMCC), Puglia, Italy.
- Renewable energy challenge: experiences from the islands. **Myriam Castanié**, Clean energy for EU Islands.

### D. Debate: How to address the combination of issues in inclusive policies and strategies in insular areas?

Chair: **Rubén Lois Gonzales**. Rapporteurs : **Dominique Barjolle**, **Claire Bernard**.

## Session 4 : Dynamics and approaches of governance and territorial engineering

In Europe there are many examples of local development that illustrate the importance of territorial and integrated approaches for areas with specific geographical features, such as the insular mountain areas. Despite their handicaps linked to their territorial marginality and the geographical and communication constraints,

mountain areas are spaces of initiatives and innovations adapted to their very specific characteristics. In terms of valorization of agricultural production based on an agro-biodiversity heritage, Protected Designations of Origin and Geographical Indications, Experimental Tourism and Participatory Guarantee Systems are particularly well-adapted provisions. "Smart villages" initiated by the European Parliament and supported by the Cohesion Funds are also promising avenues for these territories.

### **Opening session**

The territorial engineering and governance issue. **Sylvie Lardon**, Director of research INRA, Agroparistech Clermont Ferrand, France.

### **A. Dynamics of governance and innovation**

- Participatory dynamics of "Smart villages". **Marjorie Jouen**, Notre Europe, Jacques Delors Institute, France.
- Maintain the specificity of mountain areas thanks to certification systems and participatory guarantee systems (PGS). **Dominique Barjolle**, Swiss Federal Institute of Technology ETH in Zurich, Switzerland.
- Mountain areas in Sardinia: the issue of harmonizing livestock activity, the quality of dairy products and the protection of the environment. **Andrea Cabiddu** (presenter), **Mauro Decandia**, **Jean Christophe Paoli**, **Giovanni Molle**, Italy.
- Innovative approaches for managing spaces of great environmental interest. **Georges Vlachos** Assistant Professor at Agricultural University of Athens, Athens, Greece.
- Agro-ecosystem approaches and management practices in Cyprus. **Menelaos Stavriniadis**, Professeur, Professor, Cyprus University of Technology (CUT), Cyprus.
  - Construction and Transmission in Transition Contexts: Explaining the Experience Capitalization Process. **Pierre-Antoine Landel**, Assistant Professor, University of Grenoble, France.

### **B. Debate: how can insular mountain areas benefit from the transformation of experiences into common resources? Methodological questions**

Chair : **Laurent Rieutort**. Rapporteur : **François Lerin**.

## Session 5 : Conditions for the possibility of inclusive, sustainable and adaptive strategies for insular mountain areas.

Mountain areas are of prime importance for the large Mediterranean islands that are challenged to re-articulate these human, economic and ecological spaces throughout the regional territory. In terms of biodiversity and resources, they are also a Mediterranean, European and global issue. Strategies, innovations and governance must therefore be deployed in this multiscale framework: local mountain, regional and national, European and global.

How to evaluate and anticipate the effects of climate change on these biodiversity and ecosystem hotspots? How to reconnect these declining territories to the whole regional territory? How to revitalize high nature value farming protecting and producing agro-biodiversity and quality products? How to ensure the protection and reproduction of resources? How to rely on the networking of these territories? What tools does this networking need to build ?

Preceded by a round table on the conception and the orientations of community policies of the new parliamentary term, the collective discussion will focus on the conditions for the possibility of the elaboration of multi-scale, inclusive, durable and adaptive strategies for the mountain areas in the Mediterranean region and its large islands.

### A. Round Table

- Question 1 : What can we expect from the European debate on mountains? What are the prospects for using European tools in mountain dynamics in the years to come ?

**Thomas Dax**, *Federal Institute of Agricultural Economics, Rural and Mountain Research, Austria.*

- Question 2 : What method can we use to answer the "question of the day" of the mountains of the large Mediterranean islands? Scientific and territorial engineering aspects.

**Laurent Rieutort**, *University of Clermont – Auvergne – Travail collectif.*

- Question 3 : Governance and collective action. What are the prospects and challenges for the years to come (in a multi-scale and regional perspective)?

**Emmanuelle George**, *Director of the Mountain Ecosystems and Societies Laboratory, Irstea- Grenoble Centre, France.*

### B. Closing debate

Chair: **Juanan Gutierrez**, *President of Euromontana*. Rapporteur : **François Lerin**.

### C. Preparation and Approval of the Troodos - Cyprus Declaration

- Rapporteurs' work (incorporation of the conclusions of the discussion into the Declaration)
- Presentation of the Troodos – Cyprus Declaration, discussion and approval.



3

# Communications



# Territorial challenges of European mountain areas

---

## Laurent Rieutort

Clermont-Auvergne University, Mixed Research Unit (UMR) Territories  
Institute of Auvergne-Rhône-Alpes Territories Development (<https://www.iadt.fr>)

---

### **Introduction**

According to a shared definition, a mountain is a relief sufficiently high and extensive to reveal a tiering of ecosystems and induce a transformation of natural environments, socio-economic activities or public policies. However, it is very difficult for a definition to be applicable everywhere on the planet, or even in Europe. We very quickly encounter the complexity of the climate framework, the variations in topography or even the differences of perception of the local populations vis-a-vis this “spatial superlative”. Despite being difficult to define, mountains occupy a significant place. According to various studies (Rieutort, 2004), the highlands cover a third of the European continent for 10 to 15% of the total population but with many variations based on region - the share is more important in the Mediterranean mountain ranges - and on contemporary demographic dynamics.

### **The challenges of territorial development in the mountains**

#### **The issue of definition and ownership**

This is essential from a scientific, operational and public policy perspective. Two concepts can be mobilized by drawing inspiration from the islands distinguished for their insularity (which “has the configuration, the situation, the problems of the islands” for Roger Brunet et al. (1992), by emphasizing the socio-economic difficulties, remoteness, dependencies, and islandness, that is to say, the “set of representations and affects contributing to a form of island identity” (ibid. 1992). We could therefore propose to specify within the same model:

- mountainousness" considering the inequalities between lowlands and highlands, the lack of parity of income and living conditions, and environmental or territorial cohesion challenges, which lead to political reflection;
- "mountainousness" cemented by strong feelings of belonging to the same community of destinies and interests in which social ties and imaginaries are strong.

#### **From fragility to social innovation**

With the exception of the few mountain ranges specialising in winter sport tourism, mountains have long been perceived as "fragile", being the victim of two fundamental movements:

- d'une part, la concentration des hommes et des activités dans les plaines et littoraux où s'étendent les on the one hand, the concentration of people and activities in the plains and coasts where metropolitan areas extend, while demographic and economic decline affects the “peripheral” highlands, marginalised by remoteness and recessive socio-economic dynamics;
- on the other hand, the assimilation to rurality and to the pervasiveness of agriculture and forestry, even “natural”, with questionable perceptions of a supposed economic, social and cultural “backwardness” or a “wild space” imaginary without a social life!

However, since 1975, the outlook has been much more favourable. Of course, the process of “metropolisation” continues and the globalisation of the economy is accelerating with its competition between production systems ... even if this globalisation faces much resistance, cultural obstacles or new economic conditions (the “*territorial turning point*” mentioned by Bernard Pecqueur). In reality, another movement is emerging and is based on:

- a questioning of the “global” model of economic development and concerns related to climate change and environmental issues. New criteria for the location of people and activities are appearing. They are linked to specific resources (the differentiation advantage succeeds the comparative advantage, with its new sources of added value), to the natural, heritage or cultural amenities of certain spaces;
- public policies with the transition to the concept of “self-development” and “endogenous development” (bottom-up approach) promoted in different States and Regions even if these perspectives also raise issues of multisectoral integration of public and private interventions (agriculture, tourism, services, accessibility issues, natural resources and landscapes, training / research);
- the multiplication of local initiatives, a consequence on the one hand of the arrival of new populations seeking to settle in the mountains (“amenity migration”), even with the effects of current systemic crises, but also on the other hand, the networking of economic players, valued know-how, new links between public intervention (regional, national or European for example) and private innovation.

For example, the mountains of the large Mediterranean islands have long been considered as places of refuge, places of identity but also isolated from the coast which has concentrated activities - especially tourism - and populations. They are now becoming leaders in offering alternative, more sustainable development models, based on the development of their territorial resources, and on new forms of cooperation and coordination of territorial actors. While retaining tourism strengths, mountains therefore regain a certain attractiveness from an economic point of view because they constitute:

- alternative recreational and tourist places;
- places of environmental and landscape biodiversity (forest, natural meadows); these habitats and species are often threatened by depopulation or by changes in land use;
- territories with a rich cultural heritage and identity that can be enhanced through commercial goods, “specific assets”, mountain products and services;
- reservoirs of water and renewable energy, reiterating that the energy transition cannot be accomplished without the support of territories and in particular mountain territories, as the COP 21 discussions have shown;
- specific resources, both old and renewed by adapting to new (highly) innovative uses.

#### **A socio-diversity to be taken into account**

However, it should be emphasized that the mountain ranges remain extremely diverse, which raises the questions of how to take this “socio-diversity” into account, or of the forms of governance adapted to each situation. Without going into detail, we can just mention a few “archetypes” by differentiating between:

- multifunctional mountains combining several economic activities (agriculture, industry, tourism and services), which allow them to maintain resident populations and jobs. This type of mountain range can also benefit from positive “border effects” or from the proximity of towns (either mountain or peripheral) with peri-urban residences and labour migration. We often observe that collective initiatives and support for public policies precede, but these attractive mountains are also subject to environmental pressure and the challenges of preserving resources, agricultural, forest and “natural” “islands”, or controlling flows (transport, tourism);
- mountains more specialized in agriculture or industry, and which must seek economic added value and adapt to global changes, while preserving jobs, spaces and environments.
- “fragile” mountains. Often rural and agricultural, with sparse aging populations, they face the risks of socioeconomic decline, difficulties in accessing services, but also competition in the use of space.

#### ***The combination of development models***

We can start from four socio-economic development methods in mountains which are frequently combined and are more or less adapted to this socio-diversity.

### **Boosting « the territorial economy»**

It entails basing activities on the specificity of the mountain and the recognition of local assets. The mountain range must be able to rely on this "local base" and on specific, non-"relocatable", revealed or "invented" resources, like high-quality mountain products (with labelling, including participatory labelling); the growth in demand for so-called "specific" products and services then makes it possible to generate revenue, especially if we manage to associate them in a complementary manner (idea of the "basket of goods and services"), as well as to characterise and professionalise mountain value chains. In this approach, much depends on the organisational capacity of the actors; it is essential to achieve their coordination, a vertical and horizontal cooperation. But mountains also offer many opportunities by taking advantage of proximity between local actors and a strong territorial identity.

### **Taking advantage of proximity to cities and coastlines**

It is therefore a question of benefiting from the complementarities and reciprocities between metropolitan / coastal dynamics and amenities of the "hinterlands", making it possible to increase the creation of wealth. To benefit from the effects of polarisation, we can therefore seek to move closer to metropolises or border areas, with major challenges in terms of mobility, access to high speed broadband, public transport and the sustainable management of land and housing.

### **Strengthening residential attractiveness and creativity**

Attractiveness also depends on more local qualitative factors, such as the creative climate, residential quality, the relationship between actors and social ties. We therefore try to strengthen the attractiveness and policies for welcoming newcomers to "remote" mountains by emphasising residential or environmental amenities, "territorial marketing" or new uses of digital technology ("smart local development" strategies). With for example the "smart villages" movement) ... This type of economy is based on a territorial offer of a residential nature but which is articulated and interacts with the other productive economic bases, public or social, by triggering an influx of entrepreneurs and "creators" of new production activities or services (including teleworking).

### **Relying on social innovation and gaining autonomy**

In a context of transitions / global change, another path aims at autonomy and forms of circular economy: territorialised exchange circuits - energy, eco-construction, food, etc., localised services, industrial ecology, more "frugal" integrated solutions and creating positive environmental and social resources. This model also aims to reduce the "operating costs of the territory" (real estate, travel, local public expenditure) and to develop local common goods. In this process, two levers seem essential: support for training, improvement of professional skills (idea of a "learning territory") and the establishment of shared governance, for example to build a close partnership with local authorities, whose assistance is essential both in order to organise the sharing of space and to manage local networks, including in tourist resorts.

## ***The main questions under debate***

### **Territorial equity to reduce handicaps or rather enhance resources**

Added value in mountains, based on resources derived from the highlands, too often leaves the area without directly benefiting it. How can systems to compensate mountain populations and use these compensations for local development be set up? How can contradictory / complementary policies be envisaged to aim for synergies? At the same time, how can assets and needs be recognized according to each territory / mountain range, with specific strategies and public actions? The links and complementarities between coastline / lowlands / large agglomerations and mountains also lead to governance issues at several levels and to physical, economic, human and natural links between mountains and plains or coastlines.

### **The question of innovation and coordination methods**

Developing mountains sustainably and creating new practices raises the question of modifying the relationship of local populations (and visitors) to the mountain environment, and its impact on local cultures. How can the system of standards be adapted to mountain specificity? What place does experimentation occupy? How can essential innovation needs in mountains be met through a:

- need for an efficient training and information system, and local scientific and technical support;
- need to mobilize digital technology uses, relying instead on social innovation strategies;

- need to strengthen the inclusion and participation of the mountain population. How can we also involve those who live part of the year outside the mountains (diaspora, secondary residents)?
- need for coordination and networking between private and public actors, citizens and local authorities;
- need to promote the development of a strategic and forward-looking vision.

#### **Methods of implementation: the 5 “elements” of mountain resilience**

Mountains are fragile environments, and it is therefore important to design new strategies to strengthen their resilience and adaptive transformation; this requirement involves the systematic combination of five elements: accessibility (including digital), arrival (of new populations with an “integrated” territorial offer, enhancing heritage and environmental performance, brand image and attractiveness), animation (local engineering / collaborative approaches / new methodologies), ownership of the change process by mountain populations, and social and environmental acceptability (not neglecting emerging conflicts).

### **Conclusion**

Mountains have many opportunities, economically, on condition that specific attention is paid to it in the name of a form of "spatial justice", to make the best use of its specific resources, to focus on the provision of public goods and common goods, to build projects shared and led by the mountain populations themselves.

### **References**

1. Brunet R., Ferras R., Thery H. (1992). *Les mots de la géographie*. Paris (France). Reclus - La Documentation française. 470 p.
2. Pecqueur B. (2006). Le tournant territorial de l'économie globale. In: *Espaces et sociétés*, n° 124-125. p. 17-32.
3. Rieutort L. (2004). Les populations de montagne : dynamiques spatiales et systèmes de peuplement, Cracovie. In: *Prace Geograficzne*, n° 113. p. 171-184.

---

### **Laurent Rieutort**

#### **Activities, research themes and areas of interest:**

Professor of geography at Clermont-Auvergne University, Laurent Rieutort is Director of the Auvergne-Rhône-Alpes Institute for Regional Development, a Public Interest Group bringing together local authorities and higher education establishments. Within UMR Territoires (Clermont Auvergne University, AgroParisTech, INRAE, VetAgro Sup), his work focuses on new rural areas and the territorialization of economic activities and public policies.

#### **Indicative author bibliography :**

1. Rieutort L. (2017). Montagne. In : *Dictionnaire encyclopédique de la décentralisation*, Berger-Levrault. p. 705-710.
2. Rieutort L., Jean Y. (coord.) (2018). *Les Espaces ruraux en France*. Paris (France). A. Colin, Horizon, 512 p.
3. Rieutort L., Goussios D. (2018). Politiques d'accueil de nouvelles populations et dynamiques collectives dans les territoires ruraux de montagne en Grèce. In : *Les campagnes européennes : espaces d'innovations dans un monde urbain*, Presses universitaires du Midi, Toulouse (France). p. 183-196.

# The French Mountain Law: its pioneering character and its current impact

---

**René Souchon**

Former Minister of Agriculture and Food of France

---

## **Introduction**

To present to you the French policy for mountain areas, which is based on a long history, I will speak in three parts: the preparation of the Law, its philosophy, and the specific institutions.

### **The preparation of the Law: a long maturation**

In France, mountains represent nearly 25% of the territory and are divided into nine mountain ranges: six in mainland France and three Overseas. The consideration, in policies, of mountain specificity has been done gradually.

The starting point is a speech by the President of the Republic, Valéry Giscard-d'Estaing, in the Alps, in 1977. On this occasion, he launched a debate on what a policy for mountain development could be, beyond the few technical measures that already existed. The aim was to lead to a directive for the spatial planning of mountain areas. However, this directive, which did not go as far as the presidential speech and was quite disappointing, kept all the mountain people who had mobilized for the debate engaged.

The election of President François Mitterrand in 1981 changed the situation because the presidential program included the drafting of a Law regarding mountains. As soon as the new National Assembly was established in June 1981, it created a parliamentary committee of inquiry "on the situation of agriculture and the rural economy in mountain areas". I was elected chairman of this commission. After six months of reflection, discussions and visits to French and foreign mountain ranges (Switzerland and Austria), this commission made 200 proposals to the Government and in particular reaffirmed the interests of preparing a Law, defining a planning and development policy for mountains, as well as the means to implement it. In 1984, having returned to Government the previous year as Secretary of State for Agriculture and Forestry, I was instructed by the President of the Republic to prepare and pass this Law.

The lengthy task of preparation started in 1977, which is to say for seven years, made the development quite easy and the political impetus given by the President of the Republic was decisive in going beyond simply technical issues. In addition, the mobilisation during these seven years of all the mountain actors (elected officials, economic agents, farmers, unions, protectors of nature, ...) had made it possible to identify a common vision, going beyond political divisions.

Thus, after six months of debate, the Law was voted unanimously and promulgated on January 9, 1985. 30 years later, it was updated - without touching the fundamentals - at the end of 2016.

This history was necessary and explains the force of this Law, driven by a political will at the highest level of the State and a strong mobilisation of local actors organised, since 1984, in a lobbying association: the **National Association of Elected Representatives from Mountain Areas**, which still exerts strong pressure on Governments.

### **A real land use planning law**

**Definition:** the initial law of 1985 (followed by that of 2016) defines what mountain areas are, characterized by a criterion of altitude and slope. In the mountain ranges of Réunion, Guadeloupe and Martinique, these criteria are modulated and slope takes precedence over altitude.

However what is crucial is the **two pillars on which mountain policy rests, defined by the Law**. Firstly, the right to be different, which means that mountain areas can benefit from specific measures. Then, self-development, that is to say that it is up to mountain populations to design and manage their development, using the means of national and European solidarity.

**Article 1 of the Law**, the most essential, reflects all this philosophy (slightly modified version of 2016):

*« The French Republic recognizes mountains as a set of territories whose equitable and sustainable development constitutes an objective of national interest because of their economic, social, environmental, landscape, health and cultural role. Mountains are a source of heritage, environmental, economic and societal amenities.*

*Fair and sustainable mountain development is understood as a dynamic for progress initiated, driven and controlled by mountain populations with national support, in a self-development approach, which should allow these territories to access living standards and conditions, social protection and employment comparable to those of other regions and to offer society high quality services, products, spaces and natural resources. This dynamic should also allow mountain societies to evolve without a sudden break with the past and traditions by preserving, renewing and enhancing their culture and identity. Finally, it must respond to the challenges of climate change, allow the reclaiming of biodiversity and preserve nature and landscapes.*

*The State, local authorities and their groups, within the framework of their respective competences, implement public policies articulated within a national policy responding to the specificities of equitable and sustainable mountain development, in particular to issues related to climate change, the reclaiming of biodiversity and the preservation of nature and landscapes as well as aquatic environments, and the needs of permanent and seasonal mountain populations, taking into account the cross-border issues linked to these territories.»*

The wording of **Title II of the Law** is just as telling: *“the right to take differences into account and to the necessary application of national solidarity”*.

**Article 8** very clearly specifies that this right to be different applies to all fields; I quote: "The general provisions as well as the public policies and the measures taken for their application, relating, in particular to digital technology and mobile telephony, to construction and town planning, to education, to learning and vocational training, health, transport, economic, social and cultural development, tourism development, agriculture, the environment as well as the protection of mountains are, possibly, after experimentation, adapted to the specific nature of the mountain or to the particular situation of each massif or part of a massif ”.

**Article 8 bis** extends it by identifying Corsica as a special case; I quote: “The specificity of Corsica, a mountainous and insular territory with the characteristics of an “island-mountain”, thus subject to a plurality of constraints, is taken into consideration in accordance with article 174 of the treaty on the functioning of the European Union. The State and the regional authorities of Corsica, in consultation with the local authorities and public establishments of the island, jointly ensure the implementation in Corsica of article 8 of this Law ”.

### **A specific administrative organisation**

Without political leadership at the highest level of the state, the organisation could not have been established.

**1) The law creates the National Mountain Council** chaired by the Prime Minister and which brings together, through their representatives, all mountain stakeholders (representatives of mountain ranges, socio-professionals, associations); it has **58 members**. It meets once a year and plays both a monitoring role and as a source of proposals to define the objectives of development, planning and protection of the French mountains. It has a permanent committee which operates in working groups on an almost permanent basis and is chaired by an elected representative. This National Mountain Council is present in each massif.

#### **2) The Massif Committees**

Indeed, each of the massifs, with the exception of Corsica which has its specificity, has a planning and development committee, whose composition is modelled on that of the National Mountain Council. This committee is co-chaired by the Prefect representing the State in the region, and the President of a Region located in the Massif. Its role concerns firstly reflection and proposals. As such, it draws up the interregional massif plan, which is a guidance document that defines the medium-term challenges for the massif. Its period of validity is modelled on European programming, i.e. 6 years.

The Massif Committee regularly proposes adjustments to national policies and measures to be taken for the specific nature of the mountain range. It also undertakes the evaluation of the objectives of the national policy for mountains. The Massif Committees, generally consisting of 50 to 60 members, also have a permanent committee with fewer members; chaired by an elected official, it meets 3 to 4 times a year. For the implementation of the guidelines and priorities in the Massif, it can rely on a very operational tool:

### 3) The Massif interregional convention

This is a contract between the regions of a mountain range, the departments of these regions and the State. It provides for specific financial resources, provided by the state, regions and departments. These are articulated with the European Operational Program dedicated to mountains, which mobilises ERDF funds. These substantial financial resources help achieve the objectives of the Massif Committee (144 million euros for the Massif Central, for example, over the 2014-2020 period).

We therefore have: (a) a national policy defined by the National Mountain Council; (b) variation and adaptation at the scale of each mountain range; (c) an operational tool which mobilises all the funds available from Europe to the State, including the departments and regions.

We are well within the implementation of differentiated policies for mountain areas, as defined by article 1 of the Law.

#### **What conclusions can we draw from the application of the two laws?**

A precise assessment is difficult because the development and management of mountains based on self-development, concerns all sectors, from agriculture to education, health, culture, digital technology, etc. (Law mobilizing 17 ministries). Nevertheless, the Senate has just undertaken an assessment.

Personally, having been a member of the National Mountain Council, having co-chaired the Massif Central Committee for 10 years, I can say that these Laws have made it possible to initiate or support innovative and effective local development initiatives. There is however a major difficulty: the reluctance of the French administration to take specific measures and to allow exceptions to the common rules, but this is due to French centralism!

However, the existence of specific very active institutions, the very well organised lobbying of the National Association of Elected Representatives from Mountain Areas (ANEM) mean that derogatory measures are regularly taken and will be more and more, because their principle has been included in several Laws. Very High Speed Internet coverage in mountain areas is one of the examples of this struggle between mountain populations and the administration!

#### **Conclusion**

To conclude, I would say that the Mountain Law of 1985, updated in 2016, is the first and, for the moment, the only major spatial planning and development law based on the need for policies differentiated according to territorial constraints.

#### **References**

1. Jacquet-Monsarrat H. (2002). *La Montagne*. DATAR, Paris (France). La Documentation française, 95 p.
2. Laclais B., Genevard A. (2015). *Un acte II de la loi Montagne pour un pacte renouvelé de la nation avec les territoires de montagne*, Rapport remis au Premier ministre, 364 p.
3. Rieutort L. (2017). Montagne. In: *Dictionnaire encyclopédique de la décentralisation*, Berger-Levrault. p. 705-710.

---

### **René Souchon**

#### **Activities, research themes and areas of interest:**

René Souchon has exceptional experience in rural areas thanks to his professional activities (Inspector General of Agriculture), elected representative (general councillor of Cantal, mayor of Aurillac, deputy of Cantal, president of the regional council of Auvergne) or his appointments (Secretary of State then Minister Delegate in charge of agriculture and forestry).

#### **Indicative author bibliography :**

1. Souchon R. (2017). *Ruralité : quel avenir ? Citadins, cela vous concerne aussi !* Éditions de l'Aube, 224 p.
2. Souchon R. (1988). *Le projet rural*. Éditions de L'Harmattan, 238 p.
3. Souchon R. (1985). *Le défi rural*. Éditions Agri Nathan international, 167 p.

# Regional perspective of mountain policy

## Lessons from implementation in Austria

---

**Thomas Dax**

Federal Institute of Agricultural Economics, Rural and Mountain Research (BAB)  
([https://www.researchgate.net/profile/Thomas\\_Dax](https://www.researchgate.net/profile/Thomas_Dax))

---

### **Introduction**

Mountain areas are the predominant topographical feature of large parts of Austria (about 70% of total area). The cultural landscapes resulting from settlement and land management activities have gained iconic relevance and instigated tourism development throughout these mountain regions. With rising ecological concerns and threats of land abandonment due to very limited productivity of mountain farming, support for agricultural activities under these conditions has gained national recognition. Hence a wide set of policy measures to support farming and its integration in the local economy, to enhance social development and preserve ecological quality in mountain regions has been elaborated since the 1970s.

### **Early focus on local development**

#### **National framing of mountain perspective**

The specific accentuation of mountain focus in Austria's policy discourse is primarily due to its topography. The scattered settlement structure within the mountain valleys made it amenable to frame a self-image of a highly intact ecological area, visualized through typical cultural landscapes that have been shaped over centuries. This perspective can be seen as favorable for a strong local involvement in tourism development harnessing the natural assets and elaborating nature protection in remote places. While tourism attractiveness was enhanced by depicting the mountains' unspoiled nature, the Alpine range was perceived as a « marginal/peripheral » space in the center of Europe.

The threats for future economic development, and particularly land management, within those mountain regions led to the elaboration of place-specific policies in agriculture and regional development. These reflected the strong tensions experienced for the mountain areas in many sectors, revealing the uneven spatial development process. In particular challenges from transit-transport routes, « hot-spot » tourism places, pressures on environmental quality, cultural standardization, and population decline and peripherization underscored the demand for comprehensive, alternative policy pathways.

#### **Endogenous development approach**

The increased apprehension of land abandonment and the concern for socio-economic integration of the mountain regions inspired the establishment of a "Special Support Program for Mountain Areas" in agricultural policy which aimed at providing basic infrastructures beyond agriculture in the 1970s. It was accompanied by a regional development program entitled « support action of endogenous development » installing a pilot action using the « bottom-up approach » of local development in the most peripheral mountain locations of Austria. This shift towards decentralized action engaged in a « holistic » concept to address basic needs and elements of attractiveness (« rural amenities »), which were later taken up as core ingredients for rural policy, in particular with a focus on local development initiatives. It was particularly important to shape activities due to mountain specificities, relating to aspects of accessibility, basic services, natural resources, landscapes, and skill and knowledge development.

### **Establishing mountain policy action**

#### **Acknowledging multifunctionality and public goods**

The "Special Support Program for Mountain Areas" provided a substantial financial support for mountain farmers during the 1970s and 1980s, considering the specific infrastructural and skills needs due to the spatial constraints of the mountain context. The Less-Favored Areas (LFA) scheme was developed at that period, and interestingly

this happened at the same time as similar developments took place in Switzerland, Norway and the European Union. The background was the emerging recognition of the multifunctionality of agricultural (and forestry) land management which should be secured by remunerating farmers for providing the multiple functions linked to the agricultural production (OECD 1998). With EU-integration and starting EU-policy elaboration on Common Agricultural Policy (CAP) seeking to integrate « rural development » concerns this discourse was reflected at European level and incorporated further dimensions. In particular, agri-environmental performance should be targeted more directly through appropriate schemes, the mountain value-chains aimed at professionalization, including a concern for diversification of production and quality development, and the effects on the provision of public goods through specific land management systems widely adopted in mountain regions were increasingly addressed.

**Local needs and social innovation**

Also since 1980 support for remote mountain areas started through a regional policy program, applying the endogenous development approach. It enabled raising awareness and community capacity and built on the assessment of local needs. Enhancing social networks as primary driver, it aimed to achieve new perspectives and innovative ideas to tackle challenges specific to the mountain area. Thus, projects developed comprised the elaboration of new social services, education, knowledge creation and the enhancement of professional skills, alternative strategies and concepts for energy use, largely based on local resources, like wood products and renewable energy, and activities to communicate nature protection benefits and synergies of cultural landscapes development. More recently the adapted use of new communication technologies and the focus on the provision of basic broadband accessibility became priorities. The comprehensive view of all activities building on local assets was summarized in the concept of « smart development strategy ». While it requires checking all potential contributions, knowledge development and trans-regional exchange, it is decisive to start the elaboration process for strategy building from a thorough appraisal of social needs and wide-ranging involvement of diverse social groups in the region.

**The mountain policy framework**

These two national programs for mountain development were supplemented by diverse other policy schemes influencing mountain areas performance (Dax and Hovorka 2004). Given the national commitment to underscore mountain specificity and support need in many different policy fields, the Austrian Spatial Development Concept (ÖREK) highlight the particular role of mountain regions in its spatial priority considerations.

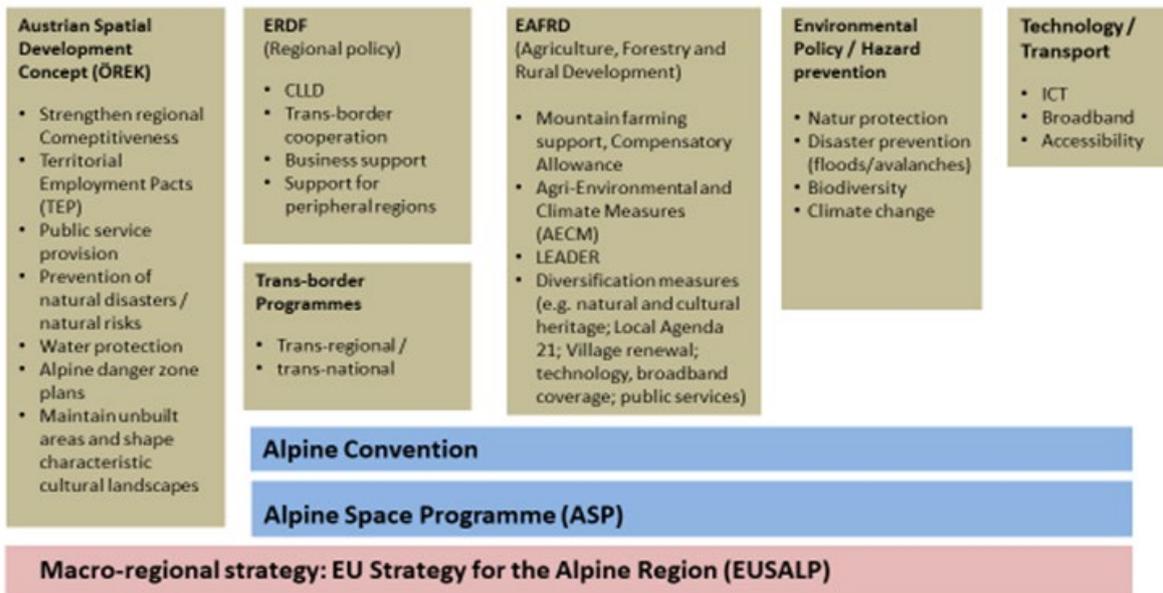


Figure 1: Policy measures for mountain regions of Austria

This figure underscores the framework of that concept for elaborating « mountain-influential » policies in various domains. Beyond regional and agricultural policy, these extend particularly to aspects of local development in the Rural Development Program, environmental policy and hazard prevention, and the spatial dimensions in technology and transport support. As mountains often extend across borders, the participation in EU trans-border programs and in the collaborative activities of the Alpine range (in the Alpine Convention, the EU Alpine

Space Program and the Macro-Regional Strategy EUSALP) are an important source of inspiration and point of departure for trans-regional learning processes.

### **Lessons for policy transfer**

#### **Trans-national cooperation**

Following the practice of trans-regional cooperation of mountain areas, the linkage to adjacent areas is crucial to address the context's spatial interrelations. Austria has acquired substantial activity within the Alpine collaboration, and has been referred to repeatedly as « model » for mountain policy and local development activities. Trans-national cooperation seeks to explore therefore transfer aspects that go beyond contiguous areas and draw on generic findings of implementation and governance organization. Exchange with different mountain ranges across the world is hence a highly valuable means to reflect and review long-established programs (e.g. Oedl-Wieser and Dax 2017).

#### **Generalizing lessons learned**

The long-term application of specific measures in mountain regions of Austria led to some specific conclusions of general concern which can be summarized as follows:

- Assess challenges and opportunities of mountain regions at appropriate levels
- Consider cultural legacies and divergent (often contradictory) views
- Elaborate narratives for alternative pathways and support by national frame / institution building process
- Open up the discourse to include a wide range of actors, inspiration, cross-sectoral interaction and programmes tackling socio-economic needs
- Treat different contexts differently, thus considering carefully „spatial justice“ aspects
- Apply balanced and coordinated perspectives on Social-Ecological Systems (SES)
- Monitor and report on internal and external effects (mountain-lowland interaction).

This list highlights that mountain regions are not any more perceived exclusively as « problem areas » but increasingly as places of considerable assets and opportunities. Many activities are shaped according to place-sensitive requirements and deploy substantial effects on other actor groups within and outside the mountain areas (Nigmann et al. 2018).

### **Conclusion**

The implementation of mountain policies is a complex interaction of diverse sectors and policy domains. Its effectiveness rests on the early investigation of the comprehensive societal needs and a shift towards local involvement. This made it possible to include, to some extent, alternative visions and strategies, and provide a space of experimentation. In this process « ownership » of local people is crucial and decisive to retain trust, cooperation willingness and place-based positive expectations for mountain development. Shaping development trajectories tends to favour the supporting views and contributions. However, in the long run this is only possible if emerging conflicts are not neglected and all contributing aspects are acknowledged. In particular, challenges arise from including discussions on uneven spatial trends, environmental pressures and balanced participation.

### **References**

1. Dax T., Hovorka G. (2004). Integrated rural development in mountain areas. In: Brouwer F. (ed.). *Sustaining Agriculture and the Rural Environment: Governance, Policy and Multifunctionality*, chapitre 7, Advances in Ecological Economics. Cheltenham (United Kingdom): Edward Elgar. p. 124-143.
2. Nigmann T., Dax T., Hovorka G. (2018). Applying a social-ecological approach to enhancing provision of public goods through agriculture and forestry activities across the European Union. In: *Studies in Agricultural Economics* 120(1). p. 1-7. <https://doi.org/10.7896/j.1721>
3. OECD - Organisation for Economic Co-operation and Development (1998). *Rural Amenity in Austria, A Case Study of Cultural Landscape*, Group of the Council on Rural Development, C/RUR (98)4, Paris (France).
4. Oedl-Wieser T., Dax T., Fischer M. (2017). A new approach for participative rural development in Georgia – reflecting transfer of knowledge and enhancing innovation in a non-European Union context. In: *Studies in Agricultural Economics*, 119(1), p. 48-54. <https://doi.org/10.7896/j.1012>

## **Thomas Dax**

### **Activities, research topics and interests:**

Thomas Dax is deputy director of BAB, Vienna, Austria and has collaborated in European and international research on mountain development research and rural policy assessment since the 1990s. His research themes focus on the analysis of the territorial dimension of structural changes in mountain agriculture and an integrated perspective of regional economy in mountain regions. Beyond many EU-projects on these topics, he is member in numerous international working groups (including the OECD Working Party on Rural Policy) and served as international expert for mountain policy in several countries.

### **Indicative author bibliography:**

1. Dax T. (2001). Endogenous Development in Austria's Mountain Regions, From a Source of Irritation to a Mainstream Movement. In: *Mountain Research and Development*, 21(3). p. 231-235. [https://doi.org/10.1659/0276-4741\(2001\)021\[0231:EDIAMR\]2.0.CO;2](https://doi.org/10.1659/0276-4741(2001)021[0231:EDIAMR]2.0.CO;2)
2. Dax T. (2017). *Mountain development in Europe: Research Priorities and Trends*, Doctoral Thesis. University of Natural Resources and Life Sciences Vienna, Department of Economics and Social Sciences, Vienne (Autriche). [https://zidapps.boku.ac.at/abstracts/download.php?dataset\\_id=9914&property\\_id=107&role\\_id=NONE](https://zidapps.boku.ac.at/abstracts/download.php?dataset_id=9914&property_id=107&role_id=NONE)
3. Dax T. (2020). Neoendogenous Rural development in Mountain Areas. In: Cejudo, E., Navarro, F. (eds.). *Neoendogenous Development in European Rural Areas*. Cham (Suizerland) : Springer. p. 3-19. [https://doi.org/10.1007/978-3-030-33463-5\\_1](https://doi.org/10.1007/978-3-030-33463-5_1)

# The regional dimension of Spanish mountain policy

## The case of Galicia

---

Rubén Camilo Lois-González <sup>1</sup>, Valerià Paül-Carril <sup>1</sup>, Luis Martín Agrelo-Janza <sup>1</sup>

<sup>1</sup> Department of Geography, University of Santiago de Compostela ([rubencamilo.lois@usc.es](mailto:rubencamilo.lois@usc.es), [v.paul.carril@usc.es](mailto:v.paul.carril@usc.es), [agrelomartin@gmail.com](mailto:agrelomartin@gmail.com))

---

### **Introduction**

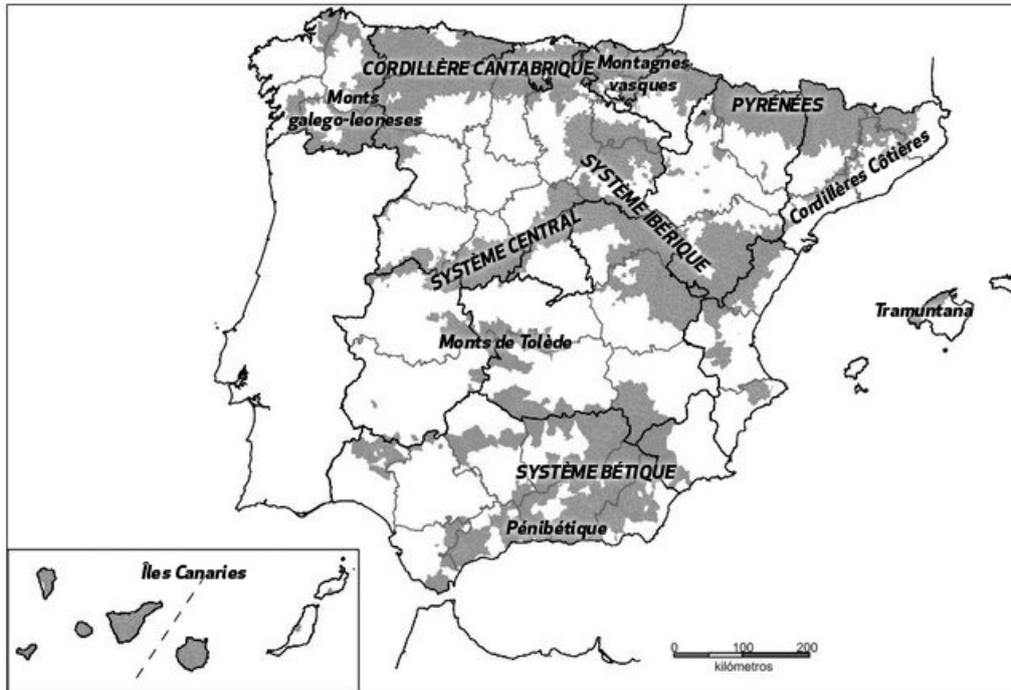
Spain is a truly mountainous European country. In addition to the high peaks of the Pyrenees and the Sierra Nevada, a set of mountain ranges and chains border the central plateau (Cantabrian Mountains, Iberian System, Betic Ranges, etc.) and produce marked altitudes (in Soria, Teruel, Ourense, Palencia, etc.). Therefore, mountains are a very important element in understanding the geography of Spain, with its accompanying problems of economic and demographic decline in rural areas. However, since the 1980s, Spanish public policies have ignored the mountain dimension and replaced it with a different territorialisation based on obtaining European funds. This short paper aims to firstly present the limited role of mountains in the spatial planning of the country and, in the second section, the case of Galicia, a region located in the far north-west of Spain, characterized by its Atlantic location and its succession of more or less isolated mountain ranges.

### **Spatial planning and regional development in the Spanish mountains**

#### **The importance of mountains in Spain**

When we studied at school, we were always told that Spain is the second country in Europe, just behind Switzerland, in terms of average altitude. Spain has a high plain in its centre (the central Meseta), divided in the interior by two mountain ranges (the Central System and the Montes de Toledo). The entire circumference of the Meseta is occupied by mountain chains, the result of the uplifting of ancient materials from the primary or secondary eras by the Alpine orogeny. Thus, the Cantabrian Mountains, the Basque Mountains, the Iberian System, the Betic System and the Galician-Leonian Mountains stretch from north to east and south. The most important mountain ranges are outside the plateau, with peaks exceeding 3000 meters: the Pyrenees and the Penibetic Cordillera (with the Sierra Nevada). The other mountain units are: the Catalan Coastal Cordillera; in the Balearics, the Sierra de la Tramuntana in Mallorca; and the Canary Islands which are clearly volcanic. Thus, as in Mediterranean Europe, we find ourselves in front of a very rugged, mountainous or hilly terrain over a large part of its area.

The indisputable mountainous character of the country has been constantly analysed by geography, and has also acquired a certain symbolic role in national histories and encouraged certain public policies which have proved to be rather ephemeral. In history it is worth recalling that the myth of the Christian recovery of Spain (the Reconquista), in the Middle Ages, was born in the Covadonga mountain, in the middle of the Cantabrian mountains. For their part, Catalan and Basque nationalisms exalted mythical mountains such as Canigó and Aralar, and encouraged the creation of important hiking societies in their territories for more than a century. However, in order for mountains to become a subject of regional planning in the country, they would have to wait until the eve of integration into the European Economic Community (EEC), and the definition, in 1985, by the government of Madrid, of the mountain farming areas.



*Figure 1 : The main mountainous regions of Spain*

### **Forget mountains as a territory for public intervention and land use planning**

In 1985, Law 25/1985 was approved before European integration in 1986 and it seemed then that mountains were going to be a privileged space with public intervention for local development. However, this hope was dashed when the arrival of Structural and Cohesion Funds from Brussels required that they be allocated either to large infrastructure and connection equipment, or to rural areas of intervention (in the LEADER \*, ProDER \*\* or Interreg programmes), which seek to identify functional regions and forget the geographic specificities of the territory. Some of these programmes (the Montaña Palentina, the Maestrazgo, etc.) took altitude as a reference and worked very well, but the usual practice has been to integrate mountain areas into larger units in which mountains have almost always disappeared as a specific objective in development planning.

### ***The mountains of Galicia: importance in the regional geography and contempt of the public authorities for its specificities***

#### **The mountainous and hilly character of Galicia**

As in other territories of European Atlantic Finistère, Galicia is a green country, dominated by the alternation of small steep mountains and wide river valleys. The age of the substrate materials and the erosion systems based on ice and water explain this configuration of the northwest corner of the Iberian Peninsula. Although this is applying to the whole territory of Galicia, there are also vast mountainous sectors, running from north to south, at the eastern end of the region (bordering with Castile), in the centre and near the northernmost coast. In these regions, there are high mountains (with altitudes above 1,200 m and marked isolation) and medium mountains (from 800 to 1,100 m.). These mountain territories represent a third of the total surface of Galicia.

#### **Rural development regions opposing mountain areas**

Despite its autonomous character, Galicia has chosen to implement the LEADER and ProDER programmes based on agricultural intensity. This decision resulted in the marginalisation and significant decline of the high plateaux, which have difficulty competing with regions heavily dependent on the agricultural sector, due to limited resources and economic opportunities. The absence of a specific mountain policy has resulted in the direct association between the high eastern mountains and the less populated areas of the whole region. These are the territories most affected by forest fires which only find economic opportunities in new extensive agricultural uses (arboriculture, native pigs and cattle, etc.) or in mining activities with a high environmental impact.

## Conclusion

Spain in general and the Autonomous Community of Galicia in particular are therefore examples of the negative effects of ignoring mountains in rural development policies. A disregard which surprisingly occurred in generally mountainous territories which had been studied and identified as such by many authors, in particular by geographers. These choices in terms of public policy for the rural environment have resulted in the formation of an “empty” (uninhabited) Spain (including Galicia) with the abandonment of economic activities and the aging of the population. This “empty” Spain extends beyond mountain areas, but almost all mountain areas are included in this category which has become common in the political and social debate of the country. In Spain and Galicia, a new period of active intervention and development policies for mountains is needed, to correct a deficient occupation of a varied and rich country due to its geographical diversity.

## Notes

1. Links between rural economy development actions
2. Renewable Energy Development Program

## References

1. CIMA (2005). *Las montañas españolas: conceptos y vocabulario*. Madrid (Espagne) : Enitinema, 98 p.
2. García Álvarez J. (2013). Paisaje, memoria histórica e identidad nacional en los inicios de la política de conservación de la naturaleza en España: de Covadonga a San Juan de la Peña. In: *Hispania: Revista Española de Historia*, 73 (244). p. 409-438.
3. Torres M<sup>a</sup>. P de, Lois-González R. C., Pérez Alberti A. (1993). *A montaña galega. O home e o medio*. Saint Jacques de Compostelle (Espagne) : Universidade de Santiago.

---

## Rubén Camilo Lois-González

### **Activities, research themes and areas of interest:**

Professor of geography and vice-president of the International Geographical Union. He has led or participated in more than 60 competitive research projects, focused on territorial analysis. He joined a team from several universities for the study of mountains in Spain and, with Valerià Paül, is currently participating in a European RISE (Research and Innovation Staff Exchange) project, entitled “Highlands”, which brings together around 100 researchers from more than 20 countries. The three authors are members of the Research Group of Excellence ANTE (Territorial Analysis) of the Galician university system.

### **Indicative author bibliography:**

1. Lois-González R. C. et al. (2008). Dinámica territorial y sociodemográfica de la montaña gallega. In: *Polígonos, Revista de Geografía*, N° 18, Segunda época. p. 13-37.
2. Lois-González R. C., Paül-Carril V. (2016). La mutante lectura geográfica de las montañas gallegas: de su dificultad de estudio a periferia en muy acusada crisis (en collaboration avec V. Paül). In: Vera J. F., Olcina J., Hernández M. (Eds.). *Paisaje, Cultura Territorial y Vivencia de la Geografía. Libro homenaje al profesor Alfredo Morales Gil*. p. 213-249. Alicante (Espagne) : Universidad de Alicante.
3. Paül-Carril V. (2016). A Serra da Raia Seca nas geografias regionais galegas, españolas e ibéricas de começos do século XX: entre montanha inventada e fronteira natural. In: Tillo J., Pires I. (Eds.). *Fronteras em la investigación peninsular: temáticas y enfoques contemporáneos*. p. 197-215. Saint Jacques de Compostelle (Espagne) : Universidade de Saniago de Compostela.

# Cooperation in mountain areas

## Cross-border cooperation in the Pyrenees

---

### Jean-Louis Valls

Director of the Pyrenees Working Community (CTP)

---

#### Introduction

Mountain towns and villages are often characterised by isolation that is to say by the considerable distance which separates them from urban or peri-urban spaces. In fact, services (education, health) and economic and cultural opportunities are more difficult to access. This is not always a handicap when there is sufficient economic activity (especially in the tourism and agriculture sectors) and when it makes it possible to maintain the population in mountain areas. However, it is clear that a number of towns and villages are suffering from a decline in population, a brain drain, and an aging of the resident population, which create a vicious circle leading to a decrease in the provision of services. The Pyrenees are no exception. They are a natural border of 656 km which separate three states: France, Spain and Andorra. The Franco-Spanish-Andorran border is one of the thirty-eight internal land borders of the European Union, with fifteen million inhabitants, or 10% of the border population of the European Union. It must therefore occupy a preponderant place in the cross-border cooperation policy within the European Union and through its cross-border actors such as Euroregions, EGTCs and the Pyrenees Working Community which has put in place an adapted Strategy.

#### The Spain-France-Andorra cross-border cooperation program - POCTEFA

##### An ERDF budget of € 189 million to develop regional projects

The aim of the European Union's cohesion policy is to ensure that everyone has access to the same opportunities (jobs, services, transport, etc.), wherever they are. European and national funding is helping to improve living conditions in areas that would otherwise have been abandoned. For the Pyrenees and for the period 2014-2020, five priority axes, defined in accordance with those of the 2020 agenda, have seen the development of more than 170 projects from the region and led by a cross-border partnership. The areas with the most demand were of course those with the most financial resources, more precisely and in order of importance: the Innovation axis with a clever mix of public and private partnerships (companies collaborating with research centres), the protection of cultural and natural heritage axis (with its 50,000 km<sup>2</sup> of forests and 3000 historical monuments on both sides of the massif), and the axis dedicated to risk prevention and adaptation to climate change which offers environmental, social and economic opportunities, all of which affect the four other priority areas. The POCTEFA programme partnership is made up of the three States (Spain-France-Andorra), the four Spanish Autonomous Communities (Euskadi, Navarra, Aragón and Catalunya), the two French regions (Nouvelle Aquitaine and Occitanie) and the five French border departments (PyrénéesAtlantiques, HautesPyrénées, Haute Garonne, Ariège, PyrénéesOrientales). The Pyrenees Working Community is the Managing Authority of POCTEFA.

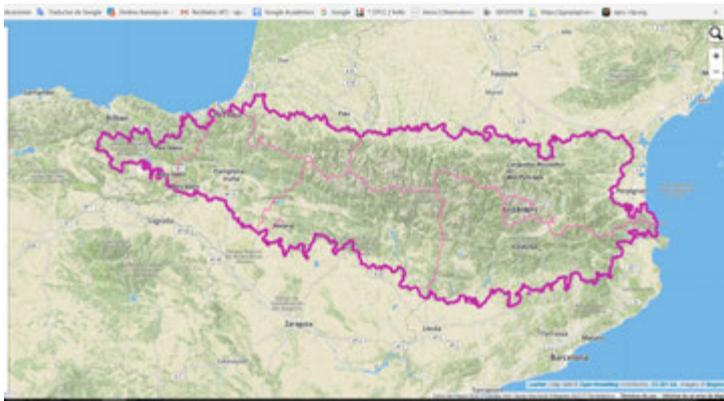


Figure 1 : The Pyrenees

## The Pyrenees Working Community

### A European pioneer in cross-border cooperation

The Pyrenees Working Community (CTP) was created in 1983 under the aegis of the Council of Europe, by the desire of the Spanish and French regions and of the Principality of Andorra to collaborate with each other. 1983 is 3 years before the entry of Spain into the European Economic Community, 7 years before the first Interreg programmes. In this sense, this initiative was not only pioneering but also made it possible to debate and build future projects that emerged over the following decades. On the strength of its experience, the CTP logically became, for the first time in 2005, the Managing Authority of the POCTEFA 2007-2013 programme, a trust once again placed in it for the period 2014-2020. In addition to managing the cross-border cooperation programme, it also develops its own initiatives that we will briefly outline in the following paragraphs: the Pyrenean Climate Change Observatory, the Pyrenean Strategy and the "When Medical Emergencies Erase Borders" project. Its members are the four Spanish Autonomous Communities (Euskadi, Navarra, Aragón and Catalunya), the two French regions (Nouvelle Aquitaine and Occitanie) and the Andorran Organisation for Territorial Cooperation.

### The Pyrenean Climate Change Observatory (OPCC)

The OPCC is an initiative of the CTP created in 2010. The Observatory is coordinated by the CTP and brings together experts on adaptation to climate change appointed by each of the members of the CTP. The OPCC has a clear added value, having created a multi-stakeholder working group (by strengthening the points of convergence between regional adaptation policies and national adaptation strategies of Spain, France and Andorra). The strategic vision for the future of the PCC is precisely to take advantage of this privileged situation in order to 1) identify common cross-border adaptation needs, 2) pursue common objectives obtained precisely at the intersection of all these adaptation policies and 3) catalyse key adaptation actions for issues and problems specific to mountain areas. Its report published at the end of 2018 «*Climate change in the Pyrenees: impacts, vulnerabilities and adaptation*» was presented at the UN headquarters in March 2019 and included in the UN Secretary General's report «*Sustainable development in mountainous regions*».

### The Pyrenean Strategy

The members of the CTP, eager to stand out from the management of the POCTEFA programme, wished rediscover the original spirit and their ability to revive the construction of projects. They therefore undertook the drafting of a 2018-2024 Strategy in order to optimize the OPCC governance model applied to other contexts, to take advantage of the window of opportunity presented by two overlapping cohesion policy programming periods. Also, to tackle the problems of mountain areas already mentioned in the introduction through the implementation of concrete actions and tackle the obstacles to cross-border cooperation (in its communication of 2017, the EC reported that a 20% reduction in obstacles would allow an 2% increase in the GDP of each of the border regions). Forwarded to the Commissioner of DG REGIO, the CTP Strategy was mentioned in the document "Border Orientation Paper" of the European Commission.

### When emergency medical services erase borders

One of the obstacles identified in the framework of the Pyrenean Strategy concerns cross-border health, more precisely the impossibility for Spanish or French emergency intervention ambulances to cross the border, even if for example a Spanish ambulance is closest to the place of intervention on the French side. For the simple reason that the emergency doctor with the intervention team is not registered with the Medical Council in the neighbouring country. A shame when we know that the Franco-Spanish border can boast of having the only Cross-border Hospital in Europe. The CTP has therefore brought together all the multi-scalar skills to carry out this project and lead to the signing of intervention agreements in the context of emergencies.

## Conclusion

Cooperation in mountain areas is not recent; stories of cooperation between Pyrenean neighbours have existed for hundreds of years. It is necessary to revive this historical, and therefore solid, base to ensure that young people come to settle in these fabulous settings. It is possible that the impacts of the Covid-19 health crisis in metropolitan areas highlight more relocation projects. Our mission through cooperation projects is to prepare the territories for them.

---

## Jean-Louis Valls

### Activities, research themes and areas of interest:

Jean-Louis Valls is director of the Consorcio of the Pyrenees Working Community, Managing Authority of the Spain-France-Andorra cross-border cooperation program (2014-2020).

# The Euromontana network and its strategy: what interests for mountain dwellers to collaborate?

Marie Clotteau <sup>1</sup>, Juanan Gutierrez <sup>1</sup>

<sup>1</sup> Euromontana (www.euromontana.org )

## Introduction

Often isolated from the centres of power, mountain territories and their inhabitants too often remain on the margins and do not figure enough in national and European political agendas. It is therefore necessary to come together, including at European level, in order to make a united voice heard for mountain stakeholders and for their specificities to be better taken into account in decisions, plans and public policies. This is the goal of Euromontana, the European association of mountain areas, which defends the interests of mountains before the European institutions.

## What is Euromontana?

### A multisectoral European network

Euromontana is the European multisectoral association for cooperation and development of mountain areas. For around 24 years, it has brought together 65 organizations from 15 European countries, within and outside the EU, representing mountain people: regional and local authorities, regional development agencies, chambers of commerce and industry, agricultural organisations, environmental organisations, universities, research centres, training institutes. This diversity in members makes it possible to have a good representativeness of mountain people and to present balanced positions to the European authorities.



Figure 1 : The Euromontana network in Europe

## A network for the defence of living mountains

### Mountains, opportunities

Although we recognize the challenges and difficulties faced by the inhabitants of mountain areas, such as remoteness and accessibility, the scarcity of businesses and population, sensitivity to climate change ... We are convinced that our mountains are territories with a future and opportunities for Europe: a very rich culture, traditions and heritage; the quality of life of mountain populations; scarce, preserved and renewable resources;

the production of quality goods and services; and modern and often dynamic governance. This is the reason why Euromontana defends a vision of living mountains and asks that public policies take into account these specific peculiarities.

### **What advantages of coming together in a European association?**

#### **The need for collective influence and the representation of mountain communities at European level**

In order to have your voice heard at the European and international level, Euromontana engages in dialogues with the European Commission, in particular with expert groups (Civil Dialogue Groups on the CAP, rural development or Quality and Promotion of Products); supports the intergroup in the European Parliament RUMRA & Smart Villages on rural, mountain and remote areas; has an observer seat in the Alpine Convention and the Carpathian Convention; is part of the Steering Group of the Global Mountain Partnership (United Nations) where it represents civil society in Europe. This lobbying force made it possible in particular to obtain specific legislation for an optional quality label for mountain products.

#### **The need to collaborate: to get to know each other, exchange views and share knowledge**

In order to encourage innovation and knowledge exchange between mountain dwellers, Euromontana establishes numerous sources of information: news, articles, information on calls for projects. This information exchange covers many topics such as the CAP, mountain products, cohesion policy, climate change, services of general interest, tourism, the Green Pact, or even mobility.

Euromontana also organizes many events, in particular high level events such as the European Mountain Conventions every two years, European conferences and information sessions for members.

#### **The need to collaborate: developing projects together**

Euromontana is also a large, multisectoral and diverse network of organisations actively involved in mountain development, which makes it possible to develop many European projects together, notably through our project incubation platform. Some recent examples include the SIMRA research project on social innovation in marginalised areas, OREKA MENDIAN on permanent pastures or SILVER SMEs on saving money.

#### **Carrying out studies**

Studies and projects provide more material and arguments to develop our lobbying. For example, we have carried out studies on forestry and the circular economy, tourism, the implementation of legislation on mountain products and are currently conducting one on permanent pastures.

We always undertake these studies in close collaboration with our members who are in the field and can provide us with concrete examples and excellent experts (in particular researchers from NEMOR).

### **Conclusion**

Together, mountain people go further. It is urgent to continue to come together in order to be able to influence the European institutions collectively. This is all the more important in a world of complex governance with cross-cutting influences where collaboration becomes fundamental. Euromontana therefore calls on all relevant organisations to join its network in order to be able to even better defend European public policies adapted to mountain territories. Euromontana also invites all mountain dwellers to the Sila Natural Park in Italy in September 2021, in order to participate in the XII European Mountain Convention on "Smart Mountains" in order to reflect together on our mountains looking ahead to 2050.

### **References**

**The SIMRA project** (for Social Innovation in Marginalised Rural Areas) is funded by the European Union's Horizon 2020 programme (2016-2020). It aims to better understand social and governance innovations in agriculture, forestry and rural development, seeking to boost these innovations in marginalized rural areas in Europe and the Mediterranean basin, including in non-EU countries.  
<http://www.simra-h2020.eu/>

**The OREKA MENDIAN project**, funded by the European Union's LIFE program (2017-2021), aims to achieve a sustainable balance combining conservation and socio-economic use of permanent mountain pastures, especially in the Basque country.  
<http://www.lifeorekamendian.eu/fr/>

**The SILVER SMEs project**, funded by the European Union's INTERREG EUROPE programme (2018-2022) aims to improve the implementation of regional policies for the competitiveness of SMEs by making better use of the opportunities offered by the cash economy

<https://www.interregeurope.eu/silversmes/>

---

### **Marie Clotteau**

Director of Euromontana. After studies in political sciences and European affairs, Marie Clotteau worked with the management authorities in charge of structural and investment funds, then within a *Tech Transfer Office* to manage European research projects. For seven years at Euromontana, the European association of mountain areas, she has been leading this European network, with its President Juanan Gutierrez, representing it before European bodies (in particular the *RUMRA & Smart Villages* intergroup in the European Parliament) and supervising thematic work for mountain areas as well as communication.

### **Juanan Gutierrez**

President of Euromontana. A geographer, Juanan Gutierrez has been working at HAZI (a public company funded by the Department of Agriculture, Fisheries and Food Policy of the Basque Government and founding member of Euromontana) since 1989. He is currently responsible for the "Prospective and European Relations" Department. He has been President of Euromontana, the European association of mountain areas, since 2012. With his Director Marie Clotteau, he leads this European network, represents it before European bodies (in particular the *RUMRA & Smart Villages* intergroup in the European Parliament) and oversees thematic work for mountain areas.

# Territorial resources

## An opportunity for local development

---

### Bernard Pecqueur

Professor at the University of Grenoble-Alpes ([www.univ-grenoble-alpes.fr](http://www.univ-grenoble-alpes.fr))

---

#### *Introduction*

The revelation of territorial resources (TR) offers unexpected opportunities to producers in the territories and an interesting outcome for the development of peripheral rural areas or those of old-era industrialisation.

#### *Defining territorial resources*

A TR can be defined by its characteristics. A resource is described in the beautiful phrase of A. Frémont: "the resource, etymologically, is what emerges, it is the water that springs from the earth, it is the most precious good offered to life. And, by extension, as the dictionary says, it is wealth"<sup>1</sup>. We mean here a resource not only as a factor of production with which a territory would be endowed (or not), but as a result of a construction / combination derived from human will.

If we add the adjective "territorial" to resource, we touch on the first characteristic, which is specificity. This means that the geographical environment in the strongest sense of a place of history and culture will interfere with the value of what is produced. In terms of production of agricultural goods and services, we immediately think of the "terroir", shaped over the long term by the climate, geological events, but also human action, cultivation practices, soil amendments, etc. The terroir creates a distinction between one place and another in the sense that two terroirs, even geographically close, will never be identical. This resource specificity contrasts with the genericity that is typical of Fordist production where spatial differences have been erased in favour of uniformity.

The second characteristic of a TR is its nature of **potentiality**. A TR does not exist as a deposit, it must undergo a "metamorphosis" to become an asset that can be valorised. This means that before valorising a resource through "metamorphosis", it must be defined and therefore revealed. A collective resource not formulated by anyone would not exist. It is therefore necessary that a group of stakeholders be able to come together and reveal the common problem to be solved or the common resource to be developed. This calls into question the usual diagnostic procedures which generally mishandle diagnosis.

*The third characteristic stems from the second one.* It concerns the **hidden nature** of the resource. Usually, it is not what seems obvious that is the right resource. Rather, it is what proves to be strongly linked to the place after a thorough diagnosis and which can create a niche, a distinction. Thus, the democratic dialogue which determines the common problem to be solved, making it possible to define the appropriate territory, is at the basis of the emergence of a territory's resources.

#### *The renewability of territorial resources and their deployment as a basket of goods and services*

A territorial resource is a compound of will, creative imagination and innovation process. In this sense, it is a priori "inexhaustible" (compared to what natural resources are for example), however the processes which allow it to exist may weaken and even disappear; then the territorial resource also disappears (even if the TR attributes persist). A territorial resource can therefore become commonplace. **A territorial resource is not "exploited" (as with natural resources), it is activated ...** it is therefore not exhaustible, because it does not pre-exist the processes that allow its activation. It is not exhaustible because it renews itself through use! A TR is therefore structurally in the area of patrimonialisation. The question then arises of its sustainability. This requires a profound renewal of public policy through the will of elected officials, of local authorities who must overcome the crisis they are experiencing by opting for TR but also by accepting real coordination with the driving forces of collective action by citizens, associations, etc<sup>2</sup>.

Finally, several goods and services can be combined to form a “basket” which is valued globally. Such a basket consists of a leading good (for example quality agricultural or agrifood products and services contributing to the valorisation of this good (for example tourism). Other goods can be associated with it (other products: for example, livestock farming in the mountains of the Mediterranean islands can be combined with olive oil and / or wine or even tourist services.

The basket makes it possible to consider a specific site offer constituting a territorialised production model.

### **The model of territorialised production**

The characteristics of the territorialised production model imply the establishment of a renewed local / global relationship around the complex articulation between the anchoring and the a-spatiality of production. In other words, the territory becomes a central space for coordination between actors seeking to solve unprecedented production problems. We are then in the presence of a double combination between anchored activity and nomadic activity of firms.

Thus, when organised proximity is associated with geographical proximity, the relationships between the different economic agents can be analysed through the notion of LPS (Localised Production System) or more generally of localisation economies. Such a situation emerges locally when there are complementary relationships between economic agents to create effective relationships that can be considered as assets specific to the territory considered<sup>3</sup>.

There are therefore two embedded production models that appear and coexist depending on the type of combination established between organisational proximity and geographical proximity, thus showing the clear emergence of the territorial variable in the organisation of contemporary capitalism.

### **References**

1. Frémont A. (2007). A propos de la notion de ressource territoriale. Une histoire normande. In: Gumuchian H., Pecqueur B. *La ressource territoriale*, Economica, Paris (France), p. 19.
2. Pecqueur B. (2016). Le Développement territorial, une voie de sortie de crise pour les collectivités locales ? In: Klein J. L., Pecqueur B., Koop K., Soussi A. *L'innovation locale à l'épreuve du global, un défi pour les acteurs*. Presses Universitaires du Québec, Montréal (Canada). p. 15-25.
3. Colletis G., Pecqueur B. (1993). Intégration des espaces et quasi-intégration des firmes : vers de nouvelles rencontres productives? In: *Revue d'Economie Régionale et Urbaine*, n°3. p. 489-508.

---

### **Bernard Pecqueur**

#### **Activities, research themes and areas of interest:**

Professor emeritus at Grenoble Alpes University, I am a researcher at UMR PACTE in economic geography. I specialize in the analysis of territorial economic dynamics, particularly in rural areas. I have carried out numerous missions and conferences in various countries (Canada, Brazil, Mexico, Morocco, Senegal, Niger in particular) in order to popularise the methods for revealing and valorising territorial resources. I have taught as a visiting professor in the universities of Campinas, Montreal, Louvain, Fez.

#### **Indicative author bibliography:**

1. Pecqueur B. (2001). Qualité et développement territorial : l'hypothèse du panier de biens et de services territorialisés. In: *Économie rurale*, 261(1). p. 37-49.
2. Gumuchian H., Pecqueur B. (2007). *La ressource territoriale*, Economica, Paris (France).
3. Campagne P., Pecqueur B. (2014). *Le développement territorial : une réponse émergente à la mondialisation*. Vol. 204. Editions Charles Léopold Mayer, Paris (France).

# Development and spatial and environmental planning of mountainous regions in the Mediterranean

Mountains, between insularity and altitude

---

**Elias Beriatos**

University of Thessaly, Greece ([beriatos@uth.gr](mailto:beriatos@uth.gr), [beriatos@otenet.gr](mailto:beriatos@otenet.gr))

---

## **Introduction**

Island mountains, located near the sea, are in a perpetual relationship with the maritime element which, in most cases, results in a harmonious link between the two main elements of the Mediterranean: islands and mountains. This relationship has a very particular history in the Mediterranean. Indeed, the mountainous regions communicated with each other through the sea. In the past, sea lanes served as communication corridors for different worlds isolated from each other. Today the situation has changed a lot. At the dawn of the new information society, mountains must find their destiny using the tools of 21st century technology. Hence the need for another policy and another planning model capable of adapting to contemporary conditions. In the following paragraphs, we attempt to present some thoughts on the issue of mountain planning that is suited to our times.

## **The characteristics of mountainous territories of Mediterranean islands**

The Mediterranean mountainous regions play a very important role because they have precious natural resources. Indeed, mountainous regions have an ecological and biodiversity value of exceptional importance - rare and endangered species and varieties of fauna and flora, geomorphological formations of great aesthetic value, as well as important forest and meadow ecosystems. These ecosystems constitute a heritage while providing products and goods: wood, water, etc. Several mountain regions also have suitable agricultural areas for terroir and organic farming - which often remain otherwise unexploited.

The mountains have also always been centres of intense cultural activity. In particular, during Antiquity, they were places of religious activity, the remains of which are today among the most spectacular archaeological sites. The Middle Ages and modern times have also left important cultural and monumental or vernacular traces. Of note is the particular aesthetic dimension of traditional settlements: numerous masterpieces of popular mountain architecture - the result of special climatic conditions and the cultural tradition of mountain societies.

## **Threats and prospects for mountains**

In recent decades, mountain areas have experienced a demographic decline (in relative as well as absolute terms) at times extremely rapid. However, mountainous regions were not always demographically declining regions. The current low density, however, is not a historical rule and during certain periods it was on the contrary very high - as for example during the Ottoman rule due to particular political, economic and social conditions and exceptional circumstances. We can also undoubtedly wonder if climate change, through the greenhouse effect or desertification of certain areas, will not be a factor in the re-settlement of mountains - by "climate refugees" this time... new conquerors of the mountains, not for skiing and hiking but to find acceptable climatic living conditions.

The demographic threat is not the only one. As for tertiary activities, tourism is undoubtedly the most serious threat for the future. After coastal regions, the tourist industry began to conquer mountains as well, through the construction of ski resorts and other winter sports equipment and infrastructure. This is a real "mountain urbanisation" which has emerged over the past decades and which today has a serious impact on the management of mountain space and the environment. Tourism has a tendency towards intensification and overburden, while sustainable development presupposes the incorporation of the environmental dimension and

therefore wishes to promote a tourism industry characterised by "codes of respect for the environment" as local cultural particularities. This raises the question of the conditions for the possibility of developing an alternative tourist activity specific to mountainous regions.

Another threat to mountainous regions comes from the creation of infrastructure (especially road networks) under the pretext of opening up. Contacts are undoubtedly a real necessity but at the same time a real threat since the isolation of mountains constitutes a brake on their development but on the other hand strongly contributes to the maintenance of a precious, and so far largely intact, natural environment. We must therefore ask ourselves whether the construction of new roads (in an uncontrolled way) to and within the mountainous regions, contributes not only to the increase of the movement of goods and travelers but also to the degradation of the natural environment which is its most important comparative advantage. The example of logging roads is highly characteristic: the road network not only facilitates the protection and the exploitation of forests but it also "opens" the way to anyone who would like to damage mountain nature (arsonists and others "destroyers").

The mentioned threats facing mountainous regions are partially offset by new prospects directly linked to the processes of their incorporation into current socio-economic, technological and environmental developments. However, the adoption of a comprehensive strategy and a relevant policy (within the framework of the principles of sustainable development) is essential to facing the pressures and dangers of the present and future. We must seriously consider whether efforts towards the integration of mountainous regions should be focused only on the creation of "heavy" equipment and infrastructure, or also on using new technological tools, such as telematics (tele-education, telemedicine and especially telework), whose social impacts should not, however, escape our attention.

### **Guiding principles of a spatial planning policy for mountainous regions.**

On the basis of these elements of analysis, an integrated, comprehensive and scientifically documented spatial planning policy for mountain regions should be developed in the years to come. Such a policy, which must rely on coordination and consultation procedures between the actors involved, must be based on the following axes:

- geographic and sectoral integration as well as coordination of sectoral and spatial policies,
- modernisation of research and documentation resources using existing structures,
- effective coordination (horizontal and vertical) of action programmes and actors involved in the management and planning of mountain areas,
- rational development of financial resources,
- establishment of a partnership between public or private development organisations and companies as well as NGOs,
- creation and proper functioning of networks made up of the managing authorities of mountain territories at national and international level (within the framework of Euromontana or other associations),
- better distribution of competencies between central government and local and regional authorities. The objective must therefore be the concentration of the strategy in a "staff" and at the same time the decentralisation of management, that is to say to combine unity and diversity of actions,
- use of relevant technology and especially the development and dissemination of telematics which, despite all reservations, will contribute to the dissemination of modern services to the inhabitants of mountainous regions, as well as to a new perception of planning (e-government, e-participation).

To apply the above principles, it is useful to develop a typology of mountainous regions based on the policies applied and the following criteria:

1. categories of mountainous regions based on the human intervention criterion, i.e. the degree of intensity of land use,
2. categories of mountainous regions based on the criteria of accessibility and means of mobility to, from and through these regions,
3. categories of mountainous regions based on the criterion of environmental situation (degree of environmental degradation).

## Conclusion

With a view to the sustainable development of mountainous regions, the objective of all our efforts must be the appropriate management of the human and natural elements of mountains and consequently the restoration of damaged ecosystems, in connection with the existing production system. Furthermore, it is widely accepted that careful management of ecosystems is in fact their best protection. At the same time, it will be necessary to analyse with scepticism the points of view of environmental extremists, as well as the perceptions aiming at a total separation between man and nature.

## References

1. Beriatos E. (2012). Greek Landscape: Problems, Policies, Perspectives. In: Papayannis T., Howard P. (eds.). *Reclaiming the Greek Landscape*, Athènes (Grèce) : Med-INA. p. 123-132.
2. Goussios D., Beriatos E. (2008). *Aménagement de l'espace rural : Outil d'enseignement dans le cadre de la coopération universitaire en Méditerranée*. FORMder.
3. Beriatos E. (2005). L'approche spatiale et environnementale pour l'espace montagneux. In: *L'espace montagneux : Environnement, société, développement*. Editions universitaires de Thessalie. p. 25-32 (en grec).

---

## Elias Beriatos

### **Activities, research themes and areas of interest:**

Emeritus Professor of Spatial-Environmental Planning and Geography at the University of Thessaly. His research focuses on spatial development in general and in particular the planning of maritime space, the coastal zone, mountains as well as protected areas, the landscape and the built heritage. He has also directed research on restructuring and administrative and territorial organisation.

### **Indicative author bibliography:**

1. Beriatos E. (2016). Entre la terre et la mer : Une approche critique de l'aménagement de l'espace maritime et littoral. In: *Questions maritimes/dimension maritime de la cohésion, croissance durable bleue*, Athènes (Grèce) : Editions Kritiki. p. 63-76 (en grec).
1. Beriatos E. (2013). Maritime and Coastal Spatial Planning: Greece in Mediterranean and Southern Europe. In: *A Centenary of Spatial planning in Europe*, ECTP-CEU/ Editions OUTRE TERRE, Bruxelles (Belgique). p. 31-41.
2. Beriatos E. (ed.) (2005). *L'espace montagneux : Environnement, société, développement*. Volos (Grèce) : Editions universitaires de Thessalie, 175 p. (en grec).

# Anchoring mountain tourism and integration into international networks

---

**Mari Oiry Varacca**

Gustave Eiffel University, Comparative Analysis of Powers Laboratory (ACP), France  
(<http://acp.u-pem.fr/equipe/mari-oiry-varacca/>)

---

## **Introduction**

The objective of this paper is to show how, in marginalised mountain regions, tourism development projects are implemented to curb marginalisation and also to study the articulation of scales, from local to international, in these projects.

We will reflect on several mountain regions located in western Europe (Ubaye valley, in the southern French Alps, on the border with Italy; the Isle of Skye, at the northwest end of the Highlands in Scotland) and in the north of Africa, in Morocco (western and central High Atlas, Anti Atlas). These are spaces removed from the major centres of national and global economies, in which agro-sylvo-pastoral systems are experiencing or have experienced a crisis, and in which emigration (with permanent departures and increasingly distant destinations) has been or remains important. They have been marginalised at different times and to different degrees: in the Highlands, emigration began in the middle of the 18th century and the migratory balances were only reversed in some places at the end of the 20th century. In the southern Alps, it began at the beginning of the 19th century. The situation changed starting in the 1980s, which saw new arrivals settle. As for the Moroccan mountains, they are currently experiencing many more socioeconomic difficulties and, although emigration began later, especially under French colonisation, at the beginning of the 20th century, exile remains relevant in a much more massive way than since the Highlands and the Alps. There is nevertheless a similarity in the factors of marginalisation: development of the capitalist system and colonisation will make mountains simple purveyors of resources. In the Highlands, for example, tenant farmers were driven off their land by large landowners who instead developed commercial sheep farming to meet a growing demand for wool from the military as part of the expansion of the colonial empire. In addition, the creation of nation states has gone hand in hand with the production of stigmatizing images of mountain people. Thus, the constitution adopted after independence in Morocco qualifies the Moroccan identity as Arab-Muslim, erasing the Berber specificity. In all three cases, the so-called modernisation policies (such as that of large dams) were not designed for the benefit of the local populations, and the development measures intended for the mountains were belated (in the years 1970-1980). Finally, more recently, economic globalization has continued to favor coastal and metropolitan areas to the detriment of mountain areas.

This paper will focus on the solutions provided by actors to these situations of marginalisation by analysing diaspora tourism, a unique and recent type of tourism offer, which relies on local anchoring and integration into networks of international actors. Therefore, we can ask ourselves:

- To what extent do the players in these regions, far from only inflicting globalization, strive to make it a resource in their own strategies, by joining international associative networks? How do they articulate anchoring in local territories and insertion into international networks?
- How can tourism be a means of turning the margin into an asset? What are the economic, but also social and political effects of the projects? Do they benefit the most marginalised social groups?

The following points are the result of qualitative surveys carried out over the past ten years in Morocco and over the past five years in the Highlands and in the southern Alps.

*A specific type of tourism is developing in the mountain regions that I have studied: diaspora tourism, that is to say the arrival, for holidays, of emigrants or descendants of emigrants who come to discover or rediscover their family's region of origin. This type of tourism (also sometimes called "roots tourism" or "memory tourism") is interesting because it can constitute a new economic niche and spans sensitive social and political issues, and because it tells us interesting things about the involvement of diasporas in the development of mountain regions.*

### **Roots tourism on the Isle of Skye**

First, there is the case of visits to the Isle of Skye by American and Canadian travelers in particular, of Scottish origin. Several tourist places welcome them specifically: castles have been restored and offer exhibitions on the history of the clan. They attract clan members from all over the world. Two ecomuseums evoke life on the island before the visitors' ancestors had left and retrace their departures. On this island, linked by a bridge several years ago (where tourism is the main activity, in a context of crisis in the agricultural and fishing sectors), roots tourism is the most profitable tourist activity. The most important tourist places of the island in terms of visitor numbers and employment are the two castles of the main clans of the island. In addition, this tourism contributes to the dynamism of the Gaelic culture and language: a Gaelic Studies Centre attracts members of the Scottish diaspora who participate in traditional music and Gaelic language workshops in the summer or even come to lead workshops. This root tourism also has a politically subversive dimension: discourses on emigration and its causes are not the same in clan castles and in ecomuseums. The castle exhibits highlight the role of the clans in local and Scottish history and absolve the chieftains of that time of responsibility for the evictions of peasants. In the ecomuseums, the discourse is quite different: they promote popular memories and relay the point of view of peasants. They show the role the clan leaders played in the departures. They publicise the peasant revolts that sought to oppose the evictions. This discourse resonates with sensitive contemporary situations: land ownership is still very concentrated in the Highlands. The ecomuseums indirectly denounce the role still played by large landowners in the local economy and the accompanying social inequalities.

### **Memory tourism for cousins from America in Ubaye**

In Ubaye, the Valley Museum in Barcelonnette, a municipal institution housed in a villa built by an emigrant who left for Mexico and returned to his valley, constitutes the backbone of the tourism offer developed for "cousins from America", Mexicans who visit their ancestors' valley. The museum helps them find their ancestors' graves and house. Part of the permanent exhibition focuses on emigration and features items donated by emigrants and their descendants. In addition, the town hall has supported a Mexican folk music festival every summer since the 1980s. A few gîtes and shops promote the valley's historic links with Mexico. For this former small garrison town which has developed a modest tourist activity of hiking in summer and skiing in winter, memory tourism contributes to the diversification of tourist activities throughout the year. Beyond the economic issues and effects, these stays and the work carried out locally around the heritage of emigration to Mexico contribute to the creation of a collective memory, shared by the inhabitants of Ubaye and by the descendants of the original emigrants of the valley. The creation of this memory, however, raises social issues: for the moment, the museum displays the memory of "migrant builders" in particular, those who succeeded, created department stores and industrial companies in Mexico, and built villas in Ubaye. There are plans, in the coming years, to create a new exhibition room, dedicated to the ordinary history of more modest families, as their descendants, in Mexico and Ubaye did not consider themselves represented at the museum.

### **Diaspora tourism in the places of significance to Judaism in the Atlas**

In the Atlas Mountains, a specific tourism is also developing, discreetly, that of the Jewish "diaspora" of Moroccan origin. In Morocco, there are hardly any Jews left in the mountains: after a thousand-year-old presence of Jews who spoke Berber dialects, most of them left with the creation of Israel towards Israel mainly but also, to a lesser extent, towards France or Canada. There remains a Jewish community of around 3,000 people based in the large cities and in particular in Marrakech. In the mountains, the only remnants of their presence are synagogues, mausoleums in which saints are celebrated, often ruined, cemeteries. In recent years, actors have taken an interest in this heritage: a number of Jewish cemeteries have been surrounded by walls, thanks to funding granted by the King. Some synagogues and mausoleums have been restored and enlarged by the Jewish community, with donations from visitors (ie mainly members of the Moroccan Jewish community and Jewish visitors of Moroccan origin passing through, especially during pilgrimages). Local actors, associative actors and non-Jewish tourism actors are working to compile the local memory of the past presence of Jews and to valorise their know-how. Thus, ecomuseums devote part of the permanent exhibition to the place that Jews held in daily life, exhibiting objects that belonged to them and photographs that bear witness to their activities. Here, the economic effects are reduced: often, visitors from the Judeo-Moroccan diaspora do nothing but pass, they visit the places of significance to Judaism but rarely stay several days in each place. Their arrival raises above all political issues. It asks the question of the reasons for the departure of the Jews (did the public authorities, in the 1960s, encourage the departures?). There are geopolitical questions: Morocco officially supports the Palestinian cause. The support given by the authorities to cultural projects which promote religious diversity must remain discreet so as not to be accused of being "pro-Zionist".

## Conclusion

At the end of this paper, we can therefore underline several points.

- Tourism, because it constitutes a means of promoting local singularities, is increasingly used as a strategy for a good life in the mountains. It can even make it possible to symbolically revalue what was the mark of decline: exile.
- The success of projects depends a lot on the ability of their leaders to fit into international networks. In the case of diaspora tourism, visitors contribute to the success of projects, by donating objects or money.
- The stakes are economic: even a type of tourism which may at first glance seem anecdotal such as diaspora tourism can constitute a windfall in the mountains. Most often, it is more of a complementary tourist activity, contributing to the diversification of the mountain tourism offer.
- Finally, re-valourising local singularities reactivates questions on the place of each group in society, now and in the past. In this, diaspora tourism spans important social and political issues, raising the question of the very possibility of a subordinate memory, and what remains of it in the official memory. It is undoubtedly from this point of view that this form of tourism is the most subversive.

---

## Mari Oiry Varacca

### **Activities, research themes and areas of interest:**

After a thesis carried out at the University of Geneva and a year at the Centre for Mountain Studies (Perth, Scotland), I have continued my research as a lecturer in social and political geography at the University Gustave Eiffel since September 2016. I am interested in questions of social marginality, of articulation between local dynamics and international networks, of singularisation of territories via the dynamics of patrimonialisation, which I work on particularly in mountain regions.

### **Indicative author bibliography:**

1. Debarbieux B., Oiry Varacca M., Rudaz G., Maselli D., Kohler T., Jurek M. (eds.) (2014). *Tourism in mountain regions: hopes, fears and realities*. Genève (Suisse) : SDC, 108 p.
2. Oiry Varacca M. (2019). *Montagnards dans la mondialisation. Réseaux diasporiques et mobilisations sociales dans l'Atlas (Maroc), les Highlands (Écosse) et les Alpes françaises*. Fontaine (France) : Presses universitaires de Grenoble, 240 p.

# Making mountains matter

## Signs of quality and internalization of product value

---

### Geneviève Teil

Paris Saclay University, France  
National Research Institute for Agriculture, Food and the Environment (INRAE)  
Agroparistech UMR Sciences for Action and Development Activity Products Territory (SADAPT)  
(<https://www6.versailles-grignon.inrae.fr/sadapt>)

---

### Introduction

There are countless examples of gradually marginalised production, which seems doomed to elimination. «Natural» phenomenon? Lack of competitiveness? Producers have put forward another diagnosis. The market does not allow them to promote the qualities of their products. They seized on an invention, the quality marks, of which they more or less happily developed a variety of versions, interpretations, implementations, in order to make the product characteristics that they considered important count. In doing so, they have helped to "internalise" 1, in other words to include these characteristics in the economic process of development. However, these quality indicators have raised lively debates.

Since the 1990s, they have divided economists into opponents and advocates of quality marks. The former underlined the monopoly effects associated with these marks, which furthermore limited the capacity for producer innovation; the latter, on the contrary, saw it as an important instrument in the fight against unfair competition. Quality marks allowed the recognition and protection of know-how collectively refined over the centuries, and recently threatened by the industrialisation of production methods. However, surprisingly, they have also given rise to, sometimes very sharp, conflicts between the very users of these quality marks, with the question of the "standardisation" of quality at the heart of the debate. The explanation of quality, a concept at the very centre of the economic system of quality signs, was called into question, denounced as harmful. However, this time it was not opponents of the "barriers" to freedom of trade and industry making their arguments but, on the contrary, the users of quality marks themselves. What happened? Why have the attacks on quality signs and their promotion of the qualities of goods been levelled by their users?

This article proposes to examine this question in the light of three recent cases of internal conflicts among users of quality signs: wines of designated origin, the Organic Farming label and cheeses of designated origin. Each time, "deviations" are pointed out that call into question the ability of quality signs to protect the enhancement of the products they are supposed to protect. Each of these cases sheds a particular light on the quality and the way in which it can or must be framed to matter.

### Conflicts and signs of quality

#### Identity of means or result in wine PDOs

The 1935 French law on the Designations of Origin restricts the use of a denomination to production means certified compliant with specifications by a third party. It thus attempted to provide a quality guarantee. However, this quality guaranteed by the designation remained unclear and the PDOs subject to accusations that questioned their existence; that the quality was "factitious" and ultimately a "simple market barrier". An ECC Regulation (1970) instantly responded by introducing mandatory approval tasting for PDOs and adding a guarantee of the output to that of means, but without assuaging criticism. In 2008, a reform revised designation authorisations with a requirement for detailed justification of the "link to the terroir", establishing the specific quality of PDOs and a more precise explanation of the resulting typicity of wine.

A lively debate arises on the subject of the definition of typicity or quality of taste. Should Alsace wine be dry, sharp and fresh, for example? For some, quality is a promise made to the consumer which must be made explicit and respected in order to foster confidence. But this interpretation is accused of inducing a production "standardisation" of PDOs which must, according to opponents, defend a "superior quality" of wines. As good quality cannot be predetermined, they ask that typicity instead be a flexible notion. They put forward a

commercial strategy that emphasises variability as a sign of superior "artisanal" wine quality and criticises its opposite, "standardised" "industrial" quality ».

### **Organic in action or as a goal**

The creation of the Organic Farming label in 1991 also gave rise to sharp conflicts within the community of organic farmers (Teil, 2012).

The Organic label consists of a specification of practices. As with the PDOs, they can be checked by an independent third party. But some criticise these specifications for being both incomplete and rigid, for not preventing undesirable interpretations of organic, such as so-called "intensive" organic farming, for not adapting to the variety of agricultural situations. Two associations supporting agroecology, Nature et Progrès ("Nature and Progress") and D  m  ter, therefore refuse to join the Organic label. They insist in particular on the "goal" of organic farming: to avoid the "deviations" of conventional agriculture, with their multiple more or less identified causes. These alternative labels highlight the necessary respect for the "spirit" of organic farming: in addition to the Organic label specifications, they are gradually adding ethical, economic and social constraints, including on working conditions (rejection of mass distribution, undeclared work, water management, etc.) to fight more broadly against these "causes" of the abuses of conventional agriculture. With them, organic farming and its specifications are constantly being developed thanks to a broad and continuous critical reflection on what organic farming is, its practices and more generally the threats to sustainable agricultural production. For monitoring purposes, they invented participatory guarantee systems (PGS), discussion groups and internal control of practices. A very sharp conflict opposes these two interpretations which accuse one side of "laxity" because of the absence of external "objective" checks and the other of a rigid and reductive vision which allows, according to them, unwanted organic applications to thrive, among other things .. They underline the inability of the organic farming specifications and pre-established practices, to prevent perverse interpretations leading to the exhaustion of all the resources that are not explicitly mentioned therein.

### **Who makes cheese?**

Cheese production provides another illustration of the difficulties posed by variability in quality. Who makes cheese? The microbes in milk of course, but some cheese makers consider them threatened. Milk can contain pathogens that good hygienic practices should strive to eliminate; but they do so indiscriminately towards the rest of the native flora. Heat treatments, with pasteurization in mind, destroy most of the dairy microflora. However, even in the case of cheese made from raw milk, and therefore unheated, the health standards are so strict that they lead to a considerable depletion of cheese flora. In all cases, raw or heated milk, it is therefore necessary to re-inoculate the milk with standardised industrial ferments, often very poor compared to indigenous microbial ecosystems.

In cheese of designated origin, a clash has thus gradually intensified between the defenders of a continuous tightening of hygiene standards to better prevent possible health crises, and the supporters of the development of indigenous terroir microflora, the only ones capable of making authentic local cheeses, but also the best aids in the fight against pathogens. They thus denounce the loss of quality and the "standardisation" of cheeses imposed by unnecessary or even harmful health standards. To preserve the microflora essential to "real good cheeses", they require a more targeted fight against pathogens, greater respect for indigenous microflora and traditional techniques and materials, which they consider the best allies in preventing health risks. Once again the demand for a variable artisanal quality emerges based on the enhancement of the work of local microflora which contrasts a more uniform, "industrial" quality, based on the re-composition of dairy flora from selected commercial ferments.

### ***" Conquest " quality and defending a set of resources***

For some producers using the designation, making a good wine, organic farming, a local cheese, is the object and the result of a search for what is good wine, organic, local cheese. In the three cases that we have just covered, quality is the result of a quest, something that is not already given, neither a recipe, nor a criterion... Quality, whether it refers to taste, the environment or authenticity must, continuously, be critically examined and researched. As the result of a quest, quality is asserted as a plural and variable notion. This interpretation may give a particular tone to the recent opposition between artisanal production and industry, beyond the size of production units. It structures the opposition between the quest for quality associated with artisanal activity, and so-called "industrial" quality based on a more rigid objectification of quality. But above all, the notion of quality as the result of a quest leads actors to re-examine and discuss the resources necessary to obtain good quality (organic or PDO) products: taste, terroirs, soils, the environment, local know-how, indigenous microbes, biodiversity, ethics... These necessary resources must therefore be respected, protected and taken into account:

cheeses must pay attention to local microflora; good wines, to the terroir and then to the environment; agroecologies, to soil, microbes, social aspects, the economy. The quest for quality is therefore both selective, not all resources are good to use, and integrative. It gradually broadens the specifications of what must be taken into account in order to achieve quality and give value to the product.

### **Conclusion: Quality marks as instruments of "internalisation"**

Finally, the functioning of quality marks is perhaps more complex than expected and we must undoubtedly take more seriously these "troublemaker" producers that we have often too quickly ignored. The conflicts that we have just reviewed point less to dysfunctions in the regulation of quality marks than to divergent interpretations of the idea of quality. The alternative interpretation of quality as a "conquest" (result of a quest) has gradually asserted itself against the conception of quality as a pre-established definition of a product. It has the merit of introducing a critical reflection on what production should be as well as a process of continuous enrichment of the range of things or beings to be respected and taken into account in the value of the products. Through this interpretation, quality marks can become instruments of continuous internalisation of the elements which should count in the value of the products. Quality marks bring together two relatively contradictory but also complementary processes which contribute to this internalisation: the defining specifications which initiate internalisation on pre-identified elements, taste, the environment, terroir, etc.; the qualitative quest which makes it a continuous deepening: microbes, the economy, ethics.

At a time when we are seeking to make the economy ever more resilient and respectful of ecosystems, quality marks therefore appear as proven internalisation tools that are more effective than at first glance. Certainly, the "conquest quality" internalises these new beings in the mode of conflict and always in dissent and alleviation of the obligation to objectify the quality under quality marks. But it is nevertheless a "soft" internalisation, more progressive, less forced than environmental accounting (Richard, 2012), for example. It is also an alternative to the impossible generalisation of the legal status of non-human beings, rivers, trees, birds, microbes ... (Stone, 1972; McCloskey, 1975; Varner, 1987). Finally, in the conflict, the two interpretations of quality which clash among the users of quality marks both achieve a result: *to be something*, to have an identity AND to be able to adapt to a world in perpetual change, a definition of sustainability in a way.

### **Notes**

1. This word echoes that of externality, these "free" resources: air, water, microbes ... used without any consideration.

### **References**

1. CEE. (1970). Règlement (CEE) n° 817/70 du Conseil du 28 avril 1970, établissant des dispositions particulières relatives aux vins de qualité produits dans des régions déterminées. In: *Journal officiel des Communautés européennes*, 817/70, CEE.
2. McCloskey H. J. (1975). The Right to Life. In: *Mind*, 84 (335). p. 403-425.
3. Richard J. (2012). *Comptabilité Développement Durable*. Paris (France) : Economica.
4. Stone C. D. (1972). Should trees have standing? Towards legal rights for natural objects. In: *Southern California Law Review*, n° 45. p. 450-501.
5. Teil G. (2012). Le bio s'use-t-il? Analyse du débat autour de la conventionalisation du label bio. In: *Economie rurale*, n° 332. p. 102-118.
6. Varner G. E. (1987). Do Species Have Standing? In: *Environmental Ethics* 9, 1, Spring 1987. p. 57-72.

### **Geneviève Teil**

#### **Activities, research themes and areas of interest:**

Geneviève Teil travaille comme chercheur en sciences sociales à l'INRA (Institut National de la Recherche Agronomique – France). Ses recherches portent sur la qualité, le goût, la perception et plus généralement sur les différentes qualifications, les dispositifs d'évaluation et processus - à partir d'une longue expérience sur le vin et les produits de terroir. Cette expérience de terrain a nourri un travail théorique sur l'expérience et la variété ontologique des objets matériels.

**Indicative author bibliography:**

1. Teil G., Barrey S., Floux P., Hennion A. (2011). *Le vin et l'environnement : faire compter la différence*. Paris (France) : Presses de l'Ecole des Mines, 327 p.
2. Teil G. (2014). Nature, the co-author of its products? An analysis of the recent controversy over "rejected" AOC wines in France. In: *Journal of World Intellectual Property*, 17. p. 96-113.
3. *On Cheeses, microbes and humans*. 52'26' Video documentary' (2018). Directed by Teil G., Montel M.-C. DOI10.15454/1.523260920749224E12 (Version française: DOI 10.15454/1.5232590558167976E12).

# Land issues in the Mediterranean island mountains

Jean Christophe Paoli

INRAE, Livestock Development Research Laboratory (LRDE), Corsica, France  
(<http://www.corte.inra.fr/lrde2/index.php> )

## Introduction

The mountains of the large Mediterranean islands exhibit land use characteristics that stem from the history of their agrarian systems. The purpose here is to show that these correspond to a general, admittedly bygone pattern, characterised by the old complementarity of *ecological zones*, but which still imprints a land context, discernible in the topology of the spaces. We mainly base our reasoning on research carried out in Corsica and Sardinia. Including the cases of other Mediterranean islands would make it possible to propose a broader problematisation - but always differentiated according to mountain zones.

## Legacy tiered agrarian systems

### A division between spaces, dominated by the central mountain

The agrarian history of the small regions of Corsica or Sardinia show an organisation of mountains based on a division into three areas: a high-mountain agro-pastoral area where the main activity is reverse transhumance livestock breeding; a non-transhumant agro-pastoral intermediate area, characterised by small family farming; finally, a piedmont area dedicated to cereals, also receiving transhumant herds in winter. The importance of mountains in the morphology of the large Mediterranean islands means that pastoralists might have land rights on this piedmont and on the adjacent plains (as is the case in Corsica in part) or even claim them (as has been the case for several decades in Sardinia).

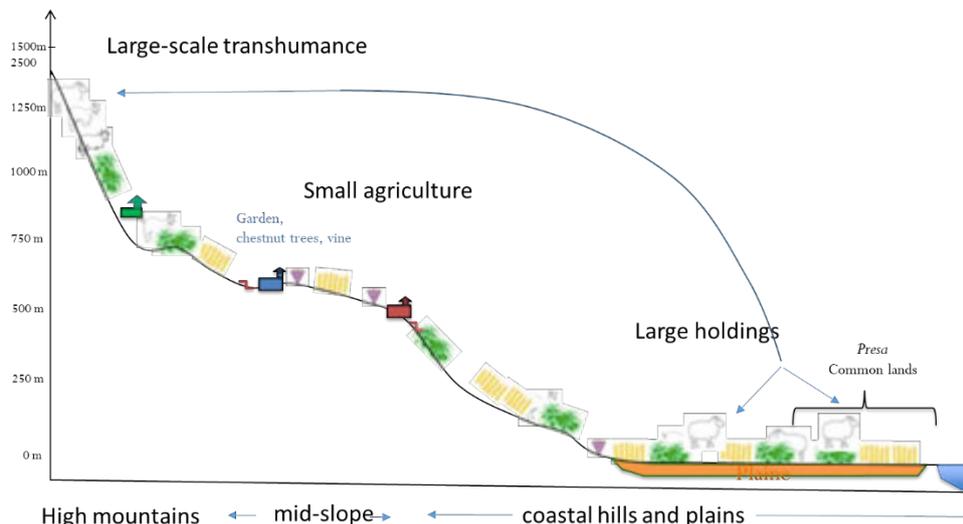


Figure 1: Organisational diagram of the 3 mountain agrarian systems (case of Corsica)

### Contrasts inherited from land structures.

Nowadays, this specialisation of zones and especially the ecological complementarities between zones, exploited by transhumance or the terracing of crops, are largely over. General trends have led to a decline in small-scale intensive agriculture, to a specialisation of the highest areas towards extensive livestock farming, and finally to an intensification in the use of the plain and the foothills (for cultivation, and / or livestock breeding). However, the structures and parcellation remain marked by this recent history: the piedmont and plain land structures are still characterised by large property, the high mountain areas (the old summer pastures) by collective property and the intermediate parts by small plots and a very strong decline.

## A diversity of issues depending on the land context

### Collective mountain areas: opportunity and challenges.

Collective mountain areas, formerly dedicated to livestock farming, are no longer used by breeders alone, but by a number of actors and activities. Forestry is one, which has become *common* because it was encouraged early on by the public authorities, until it became a direct competitor of livestock farming (the case of Sardinia and apparently Cyprus). Leisure activities also modify the use and identity of these places, sometimes reducing pastoralism to a residual activity or even an alibi (the tourist "hot spots" of the Corsican mountains). Collective ownership of spaces, when local uses are weakened, is not necessarily a protection against sudden changes in use. However, livestock farming in these collective spaces remains very important in terms of animals present and the numbers of breeders (this is particularly true in Sardinia) and this activity is strongly encouraged by the so-called surface area aid regime offered by the European Union (see, for example, the increase in surface areas declared in these areas in Corsica over the last decade, or the increase in cattle numbers in Sardinia).

### Mid-slope areas, still marked by traditional activities of "small" agriculture.

The intermediate zones, often located on the slopes of mountains, have still, relatively, escaped specialisation towards livestock farming and are marked by smaller farms, more fragmented plots, and greater difficulty in establishing large farms in the region due to difficulties in access to stable land and physical barriers to development. These intermediate areas still bear the mark of ancient agricultural activities characterised by a very great diversity of production, widespread use of short supply circuits and on-farm processing of products (this is particularly true in Corsica). However, farmers in these areas have to face the dilemma of stable access to land (both due to "land ownership disorder" and development cost issues) which pushes them to invest in the downstream part of their activities (marketing and processing) to the detriment of the production part, which is less profitable.

## Conclusion

It therefore seems that mountain decision-makers have to face specific land dynamics according to their "portions" of mountain: the management of public goods and the conflicts surrounding them at altitude, the management of abandonment and fragmentation in intermediate zones. The tools available to manage these dynamics certainly exist, depending on the context, such as pastoral land associations, collective development operations. However, it seems that certain sectoral public policies can also exacerbate potential conflicts over land (the case for example of surface area declarations by pastoralists). The challenge would then be to manage potential conflicts between the very diverse mountain users, who do not carry the same legitimacy: "agricultural workers" - "inhabitants" - "non-resident right holders" - "outsiders" ...

---

## Jean Christophe Paoli

### Activities, research themes and areas of interest:

Agroeconomist, works on the evolution of agrarian structures in Mediterranean areas with strong constraints (mountain areas and semi-arid areas). In his work, he is interested in the dynamics of land use and the relationships between livestock farmers and landowners.

### Indicative author bibliography:

1. Paoli J.-C., Vianey G., Anthopoulou T., Elloumi M., Napoleone C., Bergeret P., Bensaad A. (2017). *La petite exploitation agricole méditerranéenne, une réponse en temps de crise*. Options Méditerranéennes. Série A : Séminaires Méditerranéens, A 117 (978-2-85352-562-7). Montpellier (France) : CIHEAM - Centre International de Hautes Etudes Agronomiques Méditerranéennes, 328 p.  
<https://prodinra.inra.fr/record/420769>
2. Paoli J.-C. (2018). *Printzipales e pastori sardi*. Cagliari (Italie) : Condaghes, 382 p.  
<https://prodinra.inra.fr/record/474568>
3. Requier-Desjardins M., Melot R., Paoli J.-C., Rodrigues O., Riaux J. (2019). Le foncier en Méditerranée : une dichotomie entre Nord et Sud ? In: *Développement durable et territoires*. Vol. 10, n°3.  
<http://journals.openedition.org/developpementdurable/16341>

# Social and Solidarity Economy (SSE) and the socio-economic cohesion of mountain communities

---

**Anthopoulos Theodosia**

Social and Solidarity Economy (SSE) and the socio-economic cohesion of mountain communities  
(<http://socialpolicy.panteion.gr/en/>)

---

## **Introduction**

Mediterranean mountainous areas subject natural constraints face serious obstacles to their development in the globalized economic environment (fragmented agricultural land and low fertility, aging rural population, remoteness and high transport costs etc.). Their inhabitants are among the poorest social groups of their home country, usually lacking access to basic services as health and education. Even though mountains boast scarce natural resource reservoirs (water, biodiversity, forests), let alone a treasure trove of local cultures, mountain development has not received significant attention in the political agenda. Yet, mountain communities need to be empowered and their livelihoods improved, as to enable them to take initiatives for a sustainable utilization of their territorial resources. They are called upon to find new ways to (re) activate social and cultural assets through diversification and strategic investment in quality, location and innovation. In this context, the main question is how mountain communities could regain community cohesion and socioeconomic dynamism in a high fragmented and adverse environment to unlock local productive potential and foster social progress through collective action.

Drawing on the community economy theory (Gibson-Graham 2008; Gibson-Graham et al. 2017) subscribed to the principles of social and solidarity economy, the paper advocates a community-driven approach to sustainable mountain development by recognizing and activating diverse community economies including intangible and non-monetized territorial assets. Thus, linking different territorial actors (individuals, associations, and local public authorities) inspired by a common vision for social development and welfare is a prerequisite to forge territorial cohesion and sustainability. Finally, the paper suggests a methodological approach to building community economies through an alternative assets-based strategy for territorial development and people well-being.

## **Social and Solidarity Economy as an alternative path to activate community diverse economies and economic development in mountainous areas**

Social and solidarity economy (SSE) encompasses not-for-profit organizations and community-led initiatives to locally create social benefits and re-invest in community welfare by prioritizing social surplus over private profit and blind growth (business as usual). As the international network RIPESS (2015) highlights, SSE is an alternative ethical and values-based path to economic development that cultivates solidarity and justice, where people play an active role in shaping all dimensions of human life: production, distribution, consumption, finance, governance. This means that people are gradually transformed from passive consumers and recipients of financial aid offered by the welfare state (as in the case of mountainous areas) to active citizens engaged in the local community (Utting 2015).



**Figure 1 : The Diverse Economy Iceberg (Gibson-Graham, 2006)**

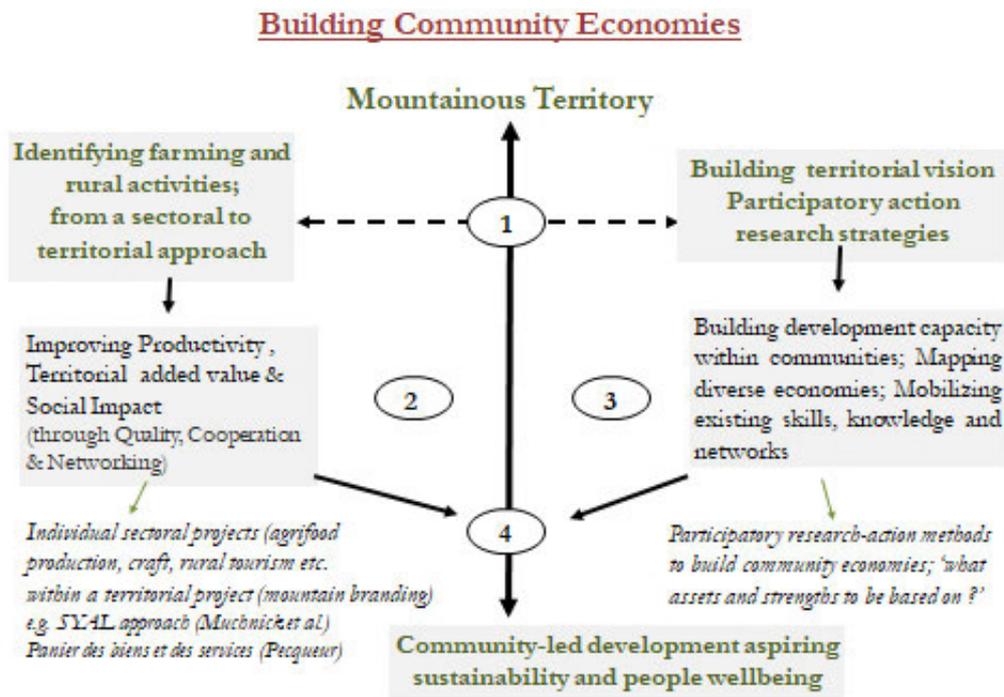
Community economy theory serves as a framework for recognizing and understanding diverse economic activities including invisible, non-market, and/or non-monetized ones at both global and local scale (e.g. volunteer work, bartering, knowledge sharing, self-provisioning, family and locals' diaspora networks, neighborhood initiatives, community supported agriculture and fair trade) and therefore excluded from capitalist statistics on economic development (e.g. Gross National Product). Yet, these SSE activities (the invisible part underneath the tip of the so-called Diverse Economy Iceberg, Gibson-Graham 2006) contribute to the activation of territorial assets, the creation of economic value and livelihood, and the strengthening of social bonds within the community at the same time that the welfare systems and the private sector cannot provide solutions to fulfil substantial needs. In this diverse economies' approach, what is important is to identify and bring diverse economic practices into visibility making them accessible as a precious assets and strengths to be mobilized by the community members, the policy makers and local development practitioners.

Drawing on the Asset Based Community Development approach (ABCD) rooted in the community economy theory, the paper suggests an alternative path to sustainable development and the strengthening of socio-economic cohesion in mountainous areas. The ABCD approach puts forth a community capacities, abilities and assets instead of cataloguing their problems and weaknesses. In fact, although mainstream capitalist development approaches are focusing on communities' needs and problems underlying their weaknesses and deficiencies (and thus dead ends) within a technocratic SWOT analysis, ABCD strategy focuses on assets, social innovation and collective wisdom, which do exist even in the most declined, poor or remote rural areas (Kretzmann and McKnight 1993). That means that, instead of pursuing needs-driven path requiring knowledge, technical support and financial aid outside the community, an alternative path relied upon internal assets, skills and a capacity building strategy would prove more effective and resilient ("from the inside out development"). Thus, the mapping of assets and strengths of local communities, including productive skills and knowledge of people, associations, formal and non-formal networks, public and nonprofit institutions, as well as physical characteristics and terroirs, serves as a cardinal guide to community-driven sustainable development. Considering that all communities dispose of assets, skills, capacities and networks, the identification and the valorization of them as well as building relationships within communities, enable the achievement of the community development vision to meet its substantial needs. Territorially rooted social and cooperative enterprises, associations and networks are assumed to be the source of constructive energy in the community by cross-linking the global and the local into community's knowledge and abilities (Kunnen et al. 2014; Cameron and Gibson 2005; Gibson-Graham and Roelvink 2009).

### **Strengthening the socio-economic cohesion of mountain areas; An Asset Based Community Development approach**

In this theoretical framework, the key questions are: How to move from the current state of wilting and depopulation of mountainous areas [1] to socio-productive revival and community welfare as to fulfil substantial

needs of local communities? [4]. How to mobilize and empower mountainous residents and local actors so that they activate territorial assets for sustainable livelihoods and community development?



**Figure 2 : Building Community economies (élaboration de l'auteure)**

On the one hand, we have to work at a sectoral level [2] by identifying and qualifying mountainous agro-sylvo-pastoral systems and the related rural activities within a diverse economies contextualization. Relying on a territorial development approach, the main objective is to improve the effectiveness and the social impact of each individual sector (agricultural and livestock production, artisanal food processing, eco/agri-tourism and outdoor recreation, mountainous ecosystemic services) and all together in a synergy process through place-based quality, cooperation and networking. More precisely, and as an abundant international literature states, strategic planning should aim at: i) improving local agrifood production (good farming practices, organic, local seeds and animal breeds, transhumance milk and dairy foodsheds, local systems of pasture management, etc.) and marketing targeting and techniques to enhance the added value on local production; i.e. stress on origin-rooted specific quality and the low environmental footprint of mountain extensive systems, while encouraging producers' cooperation, alternative food networks and faire trade, etc., ii) supporting collective action as to develop social entrepreneurship, territorial participatory guarantee systems (mountain branding), a territorial development project, etc., iii) highlighting culture and heritage-rooted goods and services provided in mountainous areas (natural and rural landscapes, transhumance traditions, gastronomy, local history and ethnocultural diversity, etc.), iv) improving agro/eco-tourism sector relying on a consistent local storytelling. Tourism has a significant role in unlocking local potential as it embraces a wide range of activities, enables farm diversification and provides additional incomes to local households while mobilizing a community's natural and cultural assets; therefore, tourism should be conceived as part of a territorial assets-based project (e.g. the "Basket of goods and services" model, Pecqueur 2001; the "Localised Agrifood Systems-SYAL" approach, Muchnik et al. 2018).

On the other hand, we need to act through a territorial approach [3] to build the community vision for sustainable livelihoods and social wellbeing within mountainous "diverse economies"; especially by mobilizing local population amidst a highly fragmented and adverse context (both physically and socially). Effective community-driven development relies on identifying community assets (abundantly existing but often unrecognized), building relationships with and within communities (including formal and informal associations, networks, and family and diaspora ties), and the utilization of these assets and relationships in achieving the vision emerging from the process itself. As the Asset Based Community Development approach emphasizes, effective and sustainable community-driven development requires residents to commit to investing themselves in the effort instead of waiting outside solutions as helpless, incompetent or excluded (Kretzmann and McKnight op.cit). Participatory action research is a key theoretical and methodological framework to involve both field researchers

and local people (the subjects) engaged in the community vision, not only in data collection (the assets mapping procedure) and knowledge production but also in setting the research framework and alternative paths in order to perform diverse economies and build community economies and wellbeing (Gibson-Graham and Roelvink op.cit.; Kunnen et al. op.cit.). In fact, participatory methods and practices through community workshops, focus groups discussions and personal narratives induce: the empowerment of marginalized social groups; confidence and relationships building while fostering socioeconomic cohesion in fragmented mountainous areas; encouraging the community capacity building through collective action while aspiring social transformation. That is, the community is forged as a learning community contributing to the sustainability of the assets- based development process.

## Conclusion

The paper proposes an alternative path to the development of mountainous areas by focusing on a community' assets and skills (rather than on deficiencies and problems as the conventional development model does) aspiring to meet residents' substantial needs and well-being. As mountain communities suffer from remoteness, fragmentation and neglect by public policies, empowering local communities through participatory action research to build common development vision enables confidence creation, capacity building and cooperation while mobilizing residents to take initiatives and act in common for their future. Recognizing and valorizing tangible and intangible assets within diverse community economies unlocks inherent constructive energy for sustainable internally-focused community development.

## References

1. Cameron J., Gibson K. (2005). Building community economies: a pathway to alternative 'economic' development in marginalised areas. In: Smyth P., Reddel T., Jones A. (eds.). *Community and Local Governance in Australia* (p.172-191). Kensington (United Kingdom): UNSW Press.
2. Gibson-Graham J. K., the Community Economies Collective (2017). *Cultivating Community Economies*. <https://thenextsystem.org/cultivating-community-economies> (consulted on 23.5.2020).
3. Gibson-Graham J. K., Roelvink G. (2009). Social innovation for Community Economies. In: MacCallum D., Moolaert F., Hillier J., Haddock S. (eds.). *Social Innovation and Territorial Development*. p. 25-37. Farnham (United Kingdom): Ashgate.
4. Gibson-Graham J. K. (2008). Diverse Economies: Performative Practices for 'Other Worlds'. In: *Human Geography*, Vol. 32, n° 5. p. 613-632.
5. Gibson-Graham J. K. (2006). *A post capitalist politics*. Minneapolis (USA): University of Minnesota Press.
6. Kretzmann J. P., McKnight J. L. (1993). *Building communities from the inside out: a path toward finding and mobilizing a community's assets*. p. 1-11. Evanston (USA): Institute for Policy Research.
7. Kunnen N., MacCallum D., Young S. (2014). Research strategies for assets and strengths based community development. In: Moolaert F., MacCallum D., Mehmood A., Hamdouch A. (eds). *The International Handbook on Social Innovation: Collective Action, Social Learning and Transdisciplinary Research*. p. 285-298. Edward Elgar Pub.
8. Muchnik J., Canada J., Salcido G. T. (2008). Systèmes agroalimentaires localisés : état des recherches et perspectives. In: *Cahiers Agricultures*, Vol. 17, n° 6. p. 513-519.
9. Pecqueur B. (2001). Qualité et développement territorial : l'hypothèse du panier de biens et de services territorialisés. In: *Économie rurale*, 261. p. 37-49.
10. RIPESS (2015). *The Global Vision for a Social Solidarity Economy: Convergences and Differences in Concepts, Definitions and Frameworks*. <http://www.riposs.org/what-is-sse/what-is-social-solidarity-economy/?lang=en> (Consulted on 23.5.2020).
11. Utting P. (2015). *Social and Solidarity Economy. Beyond the Fringe*. United Kingdom: Zed Books.

## **Theodosia Anthopoulos**

### **Activities, research topics and interests:**

Professor of Social and Rural Geography at the Department of Social Policy, Panteion University of Social and Political Sciences, and Head of the Laboratory of Social Policy (Athens). Her research interests fall within rural restructuring and multi-functionality, family farming and localized agrifood systems, community-driven development, and social and solidarity initiatives in the rural. Recently, she specializes in alternative food networks and emerging solidarity rural- urban partnerships as well as the experience of crisis in rural areas, hidden aspects of poverty and households' survival strategies.

### **Indicative author bibliography:**

1. Partalidou M., Anthopoulos T. (2019). *Social economy and the Foodshed in Greece: local pathways and constraints through the lens of SDGs*. Paper prepared for the United Nations Inter-Agency Task Force on Social and Solidarity Economy (UNTFSE). Implementing the Sustainable Development Goals: What Role for Social and Solidarity Economy? Genève (Switzerland), 25-26 June 2019, 13 p. <http://unsse.org/knowledge-hub/social-economy-and-the-foodshed-in-greece-local-pathways-and-constraints-through-the-lens-of-sdgs/>
2. Anthopoulos T., Goussios D., (2019). Re-embedding Greek Feta in localities: Cooperation of small dairies as a territorial development strategy. In: Kalfagianni A., Skordili S. (eds.). *Localizing Global Food Short Food Supply Chains as Responses to Agri-Food System Challenges*, pp.121-138. London (United Kingdom): Routledge.
3. Anthopoulos T., (ed.) (2013). *Food origin and specificities. A territorial approach to rural development*. Athens (Greece) : Papazisi Publisher, 329 p. (in greek).

# Effectively managed Natura 2000 areas: a tool for sustainable development of mountainous areas

---

## Fotios Papoulias

Commission Européenne. DG Environnement, Unité D. 3 « Protection de la Nature »  
([https://ec.europa.eu/environment/nature/index\\_en.htm](https://ec.europa.eu/environment/nature/index_en.htm))

---

It is commonly acknowledged that mountainous areas of large Mediterranean islands host a very rich biodiversity, reflected in their significant number of nature conservation sites designated for protection under the European Natura 2000 network. In addition to vulnerable, rare and often endemic habitats and species, these areas also support several human socio-economic activities and are associated with an important, tangible and intangible, cultural heritage. Furthermore, the insular nature of those mountainous areas involves a close link with coastal and marine ecosystems and related activities and pressures.

In that context the effective management of protected sites represents both a challenge and an opportunity and requires a holistic approach that takes into account the conservation needs of protected species and habitats, the socio-economic fabric of the mountainous areas and rural communities, the inter-dependence of ecosystems in a wider scale and the pressures thereon, as well as the socio-economic benefits that can arise, locally and beyond, from healthy ecosystems, including for tackling climate change. Key for a successful implementation of these principles is the genuine integration of the various instruments underpinning the protected sites (e.g. legal designation acts, management plans, conservation objectives and measures, governance structures, financing means) with local or broader territorial tools and measures (e.g. spatial/land-use plans, forest or rural plans, agri-environment measures, maritime spatial plans) and related funds.

The Natura 2000 scheme can thus, and should, be a key tool to support the sustainable development of mountainous regions in big islands: it draws on strong EU legislation on nature conservation providing for targeted conservation measures and for measures to prevent damaging activities on protected features; it promotes a participatory process with full stakeholder involvement; it requires the integration with various policies affecting nature conservation, land-use and spatial planning; it operates through constant knowledge-sharing among Member States and regions; it can facilitate access to relevant EU funds. Significant experience exists across big (and smaller) Mediterranean islands, inter alia through LIFE projects, from implementing targeted conservation action. Furthermore, over the last few years a successful process has been put in place with Commission support to share expert knowledge and identify management solutions for the Natura 2000 features at a Biogeographical level, by means of regional seminars and thematic workshops and events; as a process driven by actual needs and initiatives of various stakeholders, it can also be usefully applied to the mountain areas of large Mediterranean islands taking into account the latest data on conservation status and trends of their protected species and habitats.

At a broader policy level, the key role of protected areas for delivering on EU and global biodiversity objectives, as well as for contributing to climate change mitigation and adaptation, is highlighted in the European Green Deal and the new EU Biodiversity strategy. Against that context the Commission and Member States are currently engaged in further defining and specifying the criteria and conditions for the effective management of protected areas, building on Natura 2000. The various authorities and actors concerned by the sustainable development of mountain areas of large Mediterranean islands can greatly benefit from the outputs of that process so that they can better orientate their action and make more efficient use of available resources.

## **Fotios Papoulias**

### **Activities, research themes and areas of interest:**

Mining engineer diploma, Polytechnic of Athens. DEA "Geography and Planning", Paris IV and "Techniques and management of the environment", National School of Bridges and Roads. Since 1990, civil servant at the European Commission. Currently (January 2020) principal administrator - team leader at DG Environment, "nature protection" unit. Main tasks: management of Natura 2000 sites, implementation in the marine environment, implementation in Greece and Cyprus, mining and biodiversity.

# Evolution of the agriculture / environment interface

For the construction of Mediterranean territorial strategic issues

---

François Lerin <sup>1</sup>, Claire Bernard-Mongin <sup>2,3</sup>

<sup>1</sup> International Association for the Development of Agri-Environment (AIDA), France (<http://www.courrierdelaplanete.org/>)

<sup>2</sup> CIRAD, UMR INNOVATION, University of Montpellier, CIRAD, INRAE, Institut Agro, Montpellier, France

<sup>3</sup> University of Montpellier, Montpellier Research in Management, Montpellier Management (MOMA), France

---

## Introduction

The purpose of this paper is obviously not to deal in detail with the relations between agriculture and the environment, but to propose a sort of very schematic periodisation of their interface in order to shed light on today's strategic opportunities.

The public image as well as the actual situation of agriculture with regard to environmental issues is twofold. On one hand, agriculture is identified as a major polluter, a massive emitter of greenhouse gases (GHGs) and one of the main causes of biodiversity loss<sup>1,2</sup>. On the other hand, it is also, as evidenced by its long history, a sustainable user of natural resources and protector-producer of semi-natural biodiversity and ecological landscapes<sup>3</sup>. This duality is particularly marked in the Mediterranean where agriculture has been and still constitutes one of the dominant modes of land use, and which is also identified as one of the 34 biodiversity "hotspots" on a global scale. Many of its territories present important issues of resilience and adaptation to climate change.

We will consider more particularly the territories of the Northern Mediterranean coast and its large islands which represent, on a European scale, an area particularly rich in biodiversity which is expressed through an immense cultural, material and agro-biodiversity heritage, distributed over a considerable number of more or less isolated terroirs, through insularity, and over mountain valleys and plateaus, hills and fragmented and complex hydrographic networks.

## A conflicting interface

The so-called process of agricultural "modernisation" over the medium period - but with radicalisation since the 1950s - has created a situation of a **conflicting** interface between agriculture and the environment. This tendential disarticulation between agriculture and the environment has supplanted in many territories the consubstantial relationship between agricultural practices and systems and the "milieu" (environment, resources today). This relationship characterised rural-agricultural activity over a long period - without however excluding phenomena of tension or even localised collapses. It even lasted during the period of pre-industrialisation and increased productivity in the first modernity.

The fact remains that agriculture experienced, post-war, a modernisation movement which greatly limited and even destroyed its positive externalities and, at the same time, massively increased its negative externalities: pollution, resource degradation (water, soil), loss of biodiversity... This process was simultaneously brutal, multifaceted and rapid. Agriculture has intensified through specialisation (agriculture / livestock separation, reduction in rotations, simplification of crop associations, irrigation, etc.), industrialisation and chemicalisation (mineral fertilisers, phytosanitary products). The removal of hedges and all obstacles to an increasingly powerful mechanisation has led to the destruction and simplification of landscapes and the loss of ecological functions. The size of farms and plots has considerably and continuously increased, rural employment and the number of farms have dropped drastically.

Mediterranean agriculture has certainly retained a somewhat special status due to the importance and specificity of family farming (more than 80% of Mediterranean farms are smaller than 10 ha). But part of this agriculture - competitive, intensified, intended for export in particular - has been massively integrated upstream by the supply

of mechanical and chemical industrial goods and downstream by a rapidly expanding agro-food industrial sector - itself in line with large whole trade and logistics and retail systems.

The demand for animal protein has jumped dramatically, leading to an ever greater specialisation of animal husbandry and the creation of increasingly large production units. The food supply of these farms then relies on massive imports of protein from major world exporters. This dual trend of specialisation-intensification of agricultural production and transformation of food consumption has led to a considerable increase in the GHGs of the food system - a major point of reflection on climate change mitigation strategies.

It should be noted that during this period of industrialisation of agriculture, for its part, the protection of the "environment" was first focused on the creation of protected natural areas, of territories for the conservation of remarkable biodiversity, for which the optimum was to limit all human intervention as much as possible. This "preservationist" conception - imbued by the Anglo-Saxon debate on political philosophy - institutes a radical break between protected areas and anthropised areas.

### **An extended interface**

Modernisation-intensification defines a narrow and conflicting interface between agriculture and the environment. But this conflictuality is only tendential, because while contained in the very mechanics of the intensification-specialisation process, it has not been deployed in a homogeneous manner. In addition, since the late 1970s, the problems caused by intensification have been identified and an interface "**extended**" by a fresh look and agro-environmental practices in agriculture is emerging.

As, on the one hand, there is still non-intensified agriculture - often because it is practiced in non-intensive areas. This is particularly true in the Mediterranean and mountainous regions, which concentrate a very large part of the so-called High Nature Value (HNV) agriculture on a European scale, that is to say forms of agriculture whose practices share the preservation of ecological wealth: low use of inputs, high diversity of plant cover and a high proportion of semi-natural vegetation<sup>4</sup>.

On the other hand, since the 1970s, first in a very marginal way and then in a more marked way, the environmental question was gradually taken into account in the regulation of the agricultural sector, in the form of environmental standards, public support to encourage good practices, even Pigouvian taxes on pollution. Indeed, the diagnosis of a global environmental crisis continues to progress nationally and internationally since the Stockholm Conference of 1972, but especially since the Rio Earth Summit, twenty years later, in 1992. Despite procrastination, avoidance measures, lobbying strategies, the agricultural sector is forced to a certain "greening". This is the term chosen by the European Union to introduce environmental measures in the implementation of the Common Agricultural Policy (CAP). Thirty years after its creation in 1962, a first greening was imposed in the early 1990s, and the "second pillar" (of so-called rural development) was introduced in 1999. Later, a complex system of eco-conditionality of direct aid was put in place - the effectiveness of which is however questioned by most evaluation reports.

Furthermore, the management systems for natural spaces integrated anthropogenic practices. National territories were covered with zones at various levels and methods of protection - with in particular the Natura 2000 zones created in 1992 in Europe, but also in France and with equivalents in many countries: the Znieff (Natural Areas of ecological, faunistic and floristic Interest) in 1983, the green and blue belts (2007), regional natural parks (RNP), etc. These territorial management instruments attempt to limit or at least contain the destructive effects of the artificialisation of environments and intensive agriculture.

In addition, the environmental movement has found a base of support among farmers and "organic" agriculture has developed, marginally at first and then over the past decade - thanks to sustained consumer demand - more significantly to the point of representing a substantial percentage of the European agricultural "mix" (7.5% of the European UAA in 2018). In this same agricultural mix, so-called "High Nature Value" (HNV) agriculture has been recognized (at least partially) in the management of the CAP, and several incentive measures make it possible to support farming practices and models favouring biodiversity (mixed farming-livestock farming, pastoral systems, etc.).

The interface between agriculture and the environment, which tends towards conflict in the intensification process, is therefore widening into an area of compromise and contention. The latter is due to the extension of territorial mechanisms for the protection of spaces, resources, biodiversity and landscapes, to the establishment of increasingly strict and restrictive environmental standards and to the environmental conditions imposed for the allocation of aid to a largely subsidized sector in Europe. But this extended interface is far from responding substantially to the challenges it aims to meet.

## A strategic interface

Depletion and degradation of natural resources, the sixth extinction of biodiversity and climate change are the three main components of this major and decisive global environmental crisis which is now documented in a consolidated and indisputable manner<sup>1,2</sup>. In the Anthropocene, the agriculture-environment interface appears to be "**strategic**" in the sense that the transition to modes of food production and consumption is presented in an urgent and compelling manner, as a major element of the environmental transition. In other words: will agriculture be able to drastically reform in order to deconstruct entire areas of its industrialised functioning and take advantage of a strategic window to develop its High Natural Value operations and implement climate, energy and environmental transitions that have become necessary and urgent?

The transitions and transformation strategies will obviously be different for the different components of the Mediterranean agricultural "mix" in which very intensive systems, partially intensified systems and also High Natural Value agriculture coexist. It is undoubtedly more through a territorial approach to agrarian systems and modes of production - taking into account socio-economic issues, resources and the possibilities of the environment - than through an approach by sector that these transitions are benefited and can be accelerated. Likewise, more than through a soilless, capital-intensive innovation dynamic, it is through the fine application of agroecological strategies that ecological intensification and the integration of innovations can take place. It is therefore not a question of decline for these terroirs, but of an intensive transition in knowledge and know-how, for food production that respects human and animal health and the environment

## Conclusion

The mountains, islands and sparsely populated areas of the Mediterranean - on the northern coast in particular - formerly abandoned and marginalised for being unsuitable for the introduction of modern techniques of agricultural intensification, today have a window of opportunity to redeploy or at the very least to preserve and use High Natural Value agrarian systems which have endured, but also to initiate agroecological transitions in intensive production systems (huertas and irrigated plains, wine-growing, arboreal terroirs, monospecific forestry, etc.) or strategies for the agricultural reclamation of food-producing areas, which are today abandoned wasteland.

It is not only a question of revitalizing marginalised territories through the strengthening of more sustainable localised food systems, but also of using this heritage agriculture capable of ecological intensification and innovation, as a tool for preserving "hot spots" of biodiversity, linked to the social, cultural and economic functions of these territories.

## References

1. IPBES (2019). Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Brondizio E. S., Settele J., Díaz S., Ngo H. T. (eds.). IPBES secretariat, Bonn (Allemagne).
2. Arneeth A., Denton F., Agus F., Elbehri A., Erb K., Osman Elasha B., Rahimi M., Rounsevell M., Spence A., Valentini R. (2019). Framing and Context. In: *Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems*. Shukla P. R., Skea J., Calvo Buendia E., Masson-Delmotte V., Pörtner H.-O., Roberts D. C., Zhai P., Slade R., Connors S., van Diemen R., Ferrat M., Haughey E., Luz S., Neogi S., Pathak M., Petzold J., Portugal Pereira J., Vyas P., Huntley E., Kissick K., Belkacemi M., Malley J., (eds.). In press.
3. Médail F., Quézel P. (1999). Biodiversity Hotspots in the Mediterranean Basin: Setting Global Conservation Priorities. In: *Conservation Biology*, 13. p. 1510–1513.
4. Andersen E., Baldock D., Brouwer F. M., Elbersen B. S., Godeschalk, F. E., Nieuwenhuizen, W., Hennekens, S. M. (2004). *Developing a high nature value farming area indicator*. p. 75.

## François Lerin

### **Activities, research themes and areas of interest:**

François Lerin, social sciences. Member of AIDA (International Association for the Development of Agri-Environment). Senior researcher on environmental and agri-environmental challenges and methodological issues in social sciences (the issue of scales and transdisciplinarity). As scientific administrator in an international Mediterranean organisation for a number of years, he coordinated numerous network “embedded” research programmes (French and European). His work is currently focused on the Western Balkans, member countries and candidate countries based on the relationship between environmental regimes and local situations and mechanisms.

### **Indicative author bibliography:**

1. Lerin F. (2015). The Scale Issue in Global International Environment Governance: For a Transdisciplinary Perspective. In: Chagnoz O., Diaz Pedregal V., Kolata A. L. (Eds.). *Local Politics, Global Impacts. Steps to a Multi-disciplinary Analysis of Scales*. p. 39-66. Surrey (Royaume Uni), Burlington (Etats Unis) : Ashgate Publishing Limited.
2. Lerin F., Tubiana L. (2020). Climate Change: Anticipated Risk or Heralded Catastrophe? Questions from a thwarted Public Enquiry. In: Jodelet D., Vala J., Drozda-Senkowska E. (Eds.). *Society Under Stress: A Pluridisciplinary Approach*. Springer Publishing. p. 161-176.

## Claire Bernard-Mongin

### **Activities, research themes and areas of interest:**

Claire Bernard-Mongin works to support environmental transitions at the interface between scientific research, collective action and the making of public policies. A political scientist by training, she specialised in the challenges of natural resource management. With a doctorate in management science, she is particularly interested in the construction of collective strategies for environmental purposes and their instrumentation. Since 2012, she has been working on agri-environmental issues in the Euro-Mediterranean area, in France and internationally, at the Mediterranean Agronomic Institute of Montpellier (2012-2017), at the Ministry of Agriculture and Food (2018-2020), and today at the Centre for International Cooperation in Agricultural Research for Development (CIRAD - UMR Innovation).

### **Indicative author bibliography:**

1. Bernard-Mongin C., Hoxha V., Lerin, F. (2021). From total state to anarchic market: management of medicinal and aromatic plants in Albania. In: *Regional Environmental Change*, 21(1), 5. Doi:10.1007/s10113-020-01727-1
2. Bernard-Mongin C., Lerin F. (2017). L'Albanie, une agriculture sans dualisme ? In: Paoli J.-C. (ed.), Anthopoulou T. (ed.), Ben Saad A. (ed.), Bergeret P. (ed.), Elloumi M. (ed.), Napoleone C. (ed.), Vianey G. (ed.). *La petite exploitation agricole méditerranéenne, une réponse en temps de crise*. Options Méditerranéennes : Série A. Séminaires Méditerranéens, n° 117. Montpellier (France) : CIHEAM-IAMM. p. 19-38.  
<http://om.ciheam.org/option.php?IDOM=1032>
3. Poux X., Bernard-Mongin C. et al., (à paraître). Mobilising a strategic approach for engaging a brokering innovation process in High Nature Value areas. In: *Ecology and Society*.

# Climate trends, variability and extremes in the Mediterranean region

---

**Monia Santini**

Fondation Centre euro-méditerranéen sur le changement climatique (CMCC), Italie  
([www.cmcc.it](http://www.cmcc.it))

---

## **Introduction**

The Assessment Report 5 of the Intergovernmental Panel on Climate Change (IPCC) confirms the Mediterranean basin as a hotspots of climate change. In fact, there is strong agreement among models in projecting, especially under the most pessimistic scenario of greenhouse gas concentration, an increase in temperature up to more than 3°C for the end of the Century and a general decrease in precipitation (IPCC, 2014). Moreover, most of the climate models suggest more frequent, prolonged, and intense either hot or dry events for the future and, despite the general drop in annual precipitation amount, also more intense rainfall episodes are expected.

All that, looking at terrestrial ecosystems, reflects in reduced vegetation regeneration and growth, decrease of leaf life span in evergreen species and increase in length of growing period in deciduous species (Kellomaki and Leinonen, 2005), forcing the species to prefer and shift towards new habitats. Moreover, it was observed and it is projected an increase in fire risk and water stress (Santini et al., 2014) so that, with a decline of the soil water content, the soil organic matter decomposition rates would decrease (Kellomaki and Leinonen, 2005). Finally, the higher vulnerability of ecosystem components (i.e., interacting air, plants, water and soil) could exacerbate the damages caused by insects and pathogens (Kellomaki and Leinonen, 2005).

In this short contribution, the observed and projected climate regimes in the Mediterranean region are reviewed, and potential impacts on terrestrial ecosystem components are summarized.

## **Climate trends in the Mediterranean Area**

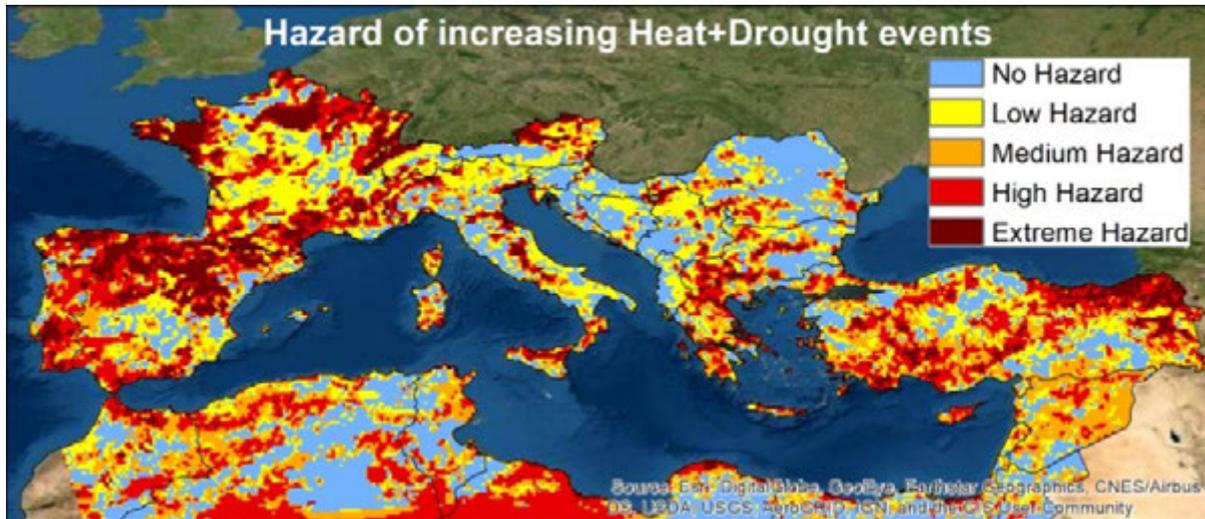
The Mediterranean Sea and the complex geomorphological settings of its surrounding lands, with mountain belts often located in the proximity of the coastline as well as gulfs, peninsulas and large islands, strongly influence the atmospheric circulation and consequently the regional to local climate. According to the consolidated Köppen-Geiger classification (Kottek et al., 2006) the Mediterranean climate is defined as a mid-latitude temperate one with a dry summer season, which can be either warm or hot. Furthermore, the halfway location between subtropical and mid-latitude makes the precipitation seasonality of the Mediterranean region very strong. Especially in summer, the precipitation is irregularly distributed with considerable differences between the peninsulas (Iberian, Italian, Greek and Anatolian) and the Northernmost continental portion. Not less important, Mediterranean climate is characterized by significant inter-annual variability (Lionello et al., 2012). Concerning extreme events, since the 1960s the mean heat wave intensity, length and number have increased by a factor of 5 or more over the eastern Mediterranean region (Ulbrich et al., 2012).

Analyses conducted by the Foundation euro-Mediterranean Center on Climate Change (CMCC) using the Climate Research Unit observation dataset (<https://crudata.uea.ac.uk/cru/data/hrg/>) show that along the decade 1995-2014 the global warming proceeded at 0.026°C/year, while in the Mediterranean Europe it was around 0.042°C/year (Santini et al., 2018).

For the future, Alessandri et al. (2014) suggest that the typical Mediterranean climate is expected to move Northward under the IPCC-AR5 intermediate emission scenario (namely Representative Concentration Pathway - RCP 4.5), while in the Southernmost portion more arid conditions could take place (see also Santini and di Paola, 2015). Projections about the future global climate agree in identifying the Mediterranean area as a hot spot of climate change (Giorgi, 2006; Diffenbaugh and Giorgi, 2012; IPCC, 2014), i.e. models have a strong agreement in projecting higher and higher temperatures, with warming in summer proceeding 40% faster than for the globe under the most pessimistic (RCP 8.5) scenario (Santini et al., 2018). Moreover, lower precipitation than today is expected in summer, while equal or slightly higher precipitation in winter especially over the Alpine region (Bucchignani et al., 2017). The overall annual decrease in precipitation (from 2 to 7% in the short- and medium-term, 2025 and 2050 respectively) contrasts the global increase comprised between 1 and 4% (Santini et al.,

2018). In this context, the Mediterranean area is expected to suffer from extreme events (Garcia-Herrera et al., 2014) and from strong negative climate-related impacts over the mid- to long-term (Santini et al., 2014; Saadi et al., 2015).

According to CMCC analyses conducted from projections over the Mediterranean area with the Regional Climate Model (RCM) COSMO-CLM (Bucchignani et al., 2014), the heat and drought hazards will potentially continue to raise in the future (both over mid- and long-term projections) (Figure 1).

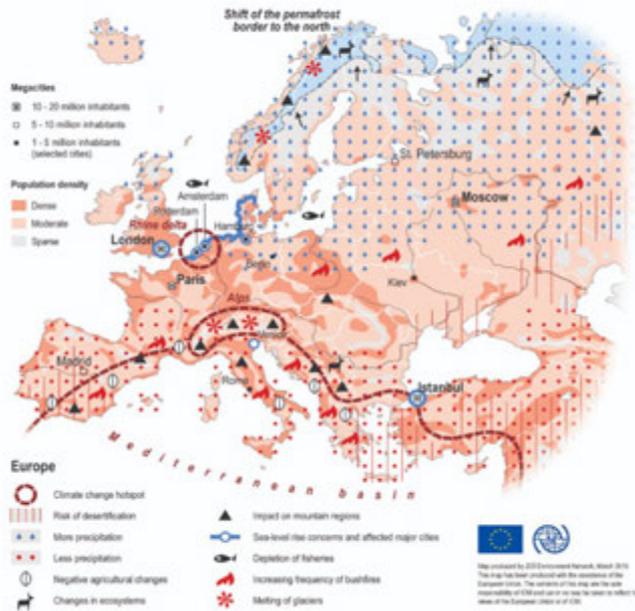


**Figure 1: Heat and Droughts increasing hazard, 2030 projections. Source: elaborations by authors from data in Bucchignani et al. (2014)**

### **Climate Impacts for terrestrial ecosystems**

The Mediterranean region is among the most vulnerable areas under a multitude of threats (Figure 2). According to data from the European Environment Agency (EEA), approximately one-third of the Mediterranean population is concentrated along coastal zones, and in the Southern portion of the Mediterranean Europe 65% of the population lives in coastal hydrographic basins, with consequently very strong environmental pressures. The rough amount of 450 million of people inhabiting all the Mediterranean countries increases considerably in summer because of tourism, and recently also due to human migration dynamics (EEA, 2012; Livi Bacci, 2018). Under increasing population density and expanding urban areas, the cause-effect relationships between these dynamics and plants and animals already at risk are evident. Underwood et al. (2009) findings demonstrate that threatened plant and mammal species increased as the size of the urban footprint and population density grew, suggesting the urgency to accelerate conservation strategies.

High population density, heavy concentration of human activities and the fragility of ecosystems are factors predisposing to further degradation of the natural environment leading to desertification. This phenomenon is often related to inadequate agricultural practices with consequent soil erosion, loss of organic matter and salinization effects (Santini et al., 2010), so that soils gradually lose their capacity to sustain crop production and other services. Overall, around 30% of farmlands and pastures in the Northern Mediterranean are affected by desertification (Zdruli, 2001), with the Southernmost territories of Spain, Italy and Greece having a moderate risk of desertification mainly due to their frequent aridity conditions (EEA, 2012).



**Figure 2: Main threats affecting Europe, showing the fragile conditions of the Mediterranean region (Source: <https://environmentalmigration.iom.int/maps>)**

However, soil degradation processes accelerate if combined with both climate-related hazards as droughts, floods, forest fires and increasing human exploitation of lands. These hazards affect several basic ecosystem services for humans such as: provisioning (renewable natural resources such as pastures, food, medicines or consumer products such as timber); environmental (biodiversity, conservation of soils and maintenance of water or carbon storage etc.); and social (recreational, educational, tourism) (Peñuelas et al., 2017).

Climate is, definitely in this area, the limiting factors for the growth and distribution of vegetation especially through the combination of temperature and rainfall in the summer (June-July-August) season. For Mariotti et al. (2015) and Santini et al. (2014), the Mediterranean water cycle is particularly at risk as the 21st Century global climate gets warmer and precipitation patterns are altered in particular across the Southern drier portion of the domain. In a changing context, the current forest species distribution is constantly evolving and now, also as a consequence of climate change, it is modifying faster and faster. Zimmermann et al. (2013) and Noce et al., (2017) show that, for example, in the medium (2050) and long (2070) term scenarios, the potential distribution ranges of the thermophilous oaks (typical of the Southern side of domain) will expand northwards and a strong reduction of habitat suitability for the more mesophilous species (Sessile and English oaks) is expected, likely due to a projected increase in temperatures not balanced by an increase in precipitation. In this transition, Alpine area is projected to become a refuge for shifting species (Noce et al., 2017). Further studies confirm that some shrub species highly resistant to drought could gain a competitive advantage over Holm oak, currently one of the most widespread species (Ogaya et al., 2014).

Strictly linked to climate is the hazard of fires. The countries most affected by this threat are Spain, Portugal, Greece and Italy, secondly France especially in the Southern coastal regions and Corsica, causing severe economic and environmental damages, including the loss of ecosystem services such as carbon sequestration and forest products, increase of runoff generation due to post-fire water repellency of soils (Rulli et al., 2013) and, last but not least, injuries or deaths for humans when burning occurs close to rural-urban interfaces or touristic areas (Modugno et al., 2016), as happened during summer 2018 in Greece.

Climate also impacts invasive species that, often, have capacity for growth and colonization far superior than native species and, given the vulnerability of the Mediterranean system, it is clear that biological invasions can have widespread effects on biodiversity and in many cases they can cause significant economic losses (Enescu and Dănescu, 2013; Schmid et al., 2014).

### **Conclusions and way forwards**

Climate change and its cascading impacts (e.g., fires, vegetation and soil degradation, water resource depletion) are unequivocal in the Mediterranean region. Many international initiatives on open data can be considered a

key source of information to be exploited, as well as research projects represent good examples to be expanded towards more in-depth assessment of hazards and risks for Mediterranean area comprising specific territories like mountains and islands thanks to increasing spatial detail of available datasets. As example, the Copernicus Climate Change Service (C3S), part of the Copernicus Programme on Earth Observation, is remarkable as it makes progressively available an increasing quantity and improved quality of authoritative data for the assessment of climate and its impacts across Europe and the globe (<https://climate.copernicus.eu/sectoral-impacts>). Among research projects, worthy to mention is SOCLIMPACT (<https://soclimpact.net/>), which aims at modelling downscaled climate change effects and their socioeconomic impacts for 2030-2100 in European islands, including Mediterranean ones like Cyprus, Malta, Sicily, Sardinia, Corsica, Crete and Canary.

## References

1. Alessandri A. et al. (2014). *Robust assessment of the expansion and retreat of Mediterranean climate in the 21st century*. Scientific Reports, 4, 7211.
2. Bucchignani E. et al. (2017). *Numerical Simulation of the Period 1971-2100 over the Mediterranean Area with a Regional Model, Scenario SRES-A1B*. Sustainability, 9(12), 2192.
3. Bucchignani E. et al. (2014). Regional climate simulations with COSMO-CLM over the Mediterranean area. In: *SISC Second Annual Conference*. p. 338-351. Venice (Italy).
4. Diffenbaugh N. S., Giorgi F. (2012). *Climate change hotspots in the CMIP5 global climate model ensemble*. Climatic Change, 114(3-4). p. 813-822.
5. Enescu C. M., Dănescu A. (2013). *Black locust (Robinia pseudoacacia L.) - an invasive neophyte in the conventional land reclamation flora in Romania*. Bulletin of the Transilvania University of Brasov, Series II: Forestry, Wood Industry, Agricultural Food Engineering, 6(2). p. 23-30.
6. European Environment Agency (2012). *The impacts of invasive alien species in Europe*. Vol. 16.
7. Garcia-Herrera R. F. et al. (2014). Preface: Understanding dynamics and current developments of climate extremes in the Mediterranean region. In: *Natural Hazards and Earth System Sciences*, 14(2). p. 309-316.
8. Giorgi F. (2006). *Climate change hot-spots*. Geophysical Research Letters, 33(8). p. 1-4.
9. Kellomaki S., Leinonen S. (2005). *Management of European Forests Under Changing Climatic Conditions: Final Report of the Project "Silvicultural Response Strategies to Climatic Change in Management of European Forests"*. Technical report, University of Joensuu.
10. Kottek M. et al. (2006). *World map of the Köppen-Geiger climate classification updated*. Meteorologische Zeitschrift, 15(3). p. 259-263.
11. IPCC (2014). *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge (Royaume Uni), New York (USA) : Cambridge University Press.
12. Lionello P. et al. (2012). Introduction: Mediterranean Climate - Background Information. In: *The Climate of the Mediterranean Region*. p 35–90. Elsevier.
13. Livi Bacci M. (2018). Future demographic trends and scenarios. In: *Food & Migrations. Understanding the geopolitical nexus in the Euro-Mediterranean*. p 19-28. MacroGeo, Barilla Center for Food & Nutrition.
14. Modugno S. et al. (2016). *Mapping regional patterns of large forest fires in Wildland-Urban Interface areas in Europe*. Journal of Environmental Management, 172. p. 112-126.
15. Mariotti A. et al. (2015). *Long-term climate change in the Mediterranean region in the midst of decadal variability*. Climate Dynamics, 44(5-6). p. 1437-1456.
16. Noce S. et al. (2017). *Likelihood of changes in forest species suitability, distribution, and diversity under future climate: The case of Southern Europe*. Ecology and Evolution, 7(22). p. 9358-9375.
17. Ogaya R. et al. (2014). *Foliar CO<sub>2</sub> in a holm oak forest subjected to 15 years of climate change simulation*. Plant Science, 226. p. 101-107.
18. Peñuelas J. et al. (2017). *Impacts of global change on Mediterranean forests and their services*. Forests, 8(12). p. 1-37.
19. Rulli M. C. et al. (2013). *Modeling post-fire water erosion mitigation strategies*. Hydrology and Earth System Sciences, 17(6). p. 2323-2337.
20. Saadi S. et al. (2015). *Climate change and Mediterranean agriculture: Impacts on winter wheat and tomato crop evapotranspiration, irrigation requirements and yield*. Agricultural Water Management, 147. p. 103-115.

21. Santini M. et al. (2010). *A multi-component GIS framework for desertification risk assessment by an integrated index*. Applied Geography, 30(3). p. 394-415.
22. Santini M. et al. (2018). Climate Change and Human Migrations. In: *Food & Migrations. Understanding the geopolitical nexus in the Euro-Mediterranean*. p29-38. MacroGeo, Barilla Center for Food & Nutrition.
23. Santini M. et al. (2014). *Climate change impacts on vegetation and water cycle in the Euro-Mediterranean region, studied by a likelihood approach*. Regional Environmental Change, 14(4). p. 1405-1418.
24. Santini M., di Paola A. (2015). *Changes in the world rivers' discharge projected from an updated high resolution dataset of current and future climate zones*. Journal of Hydrology, 531. p. 768-780.
25. Schmid M. et al. (2014). *Ecological consequences of Douglas fir (Pseu- dotsuga menziesii) cultivation in Europe*. European Journal of Forest Research, 133(1). p. 13–29.
26. Ulbrich U. et al. (2012). Climate of the Mediterranean. In: *The Climate of the Mediterranean Region*. p 301-346. Elsevier.
27. Underwood E. C. et al. (2009). *Threats and biodiversity in the mediterranean biome*. Diversity and Distributions, 15(2). p. 188-197.
28. Zdruli P. (2001). *Desertification in the Mediterranean*. Technical report.
29. Zimmerman N. E. et al. (2013). Chapter III: Future ranges in European tree species. In: Fitzgerald J. B., Lindner M. (Eds.). *Adapting to climate change in European forests - Results of the MOTIVE project*, p. 108. Pensoft Publishers.

---

## Monia Santini

### **Activities, research topics and interests:**

Monia Santini is the Director of the Division “Impacts on Agriculture, Forests and Ecosystem Services” (IAFES) at the Foundation Euro-Mediterranean Center on Climate Change (CMCC). Since more than 13 years, she is involved in CMCC scientific and project management activities as expert on water cycle and land use change evaluations under climate change and variability, including indicators of slow-onset extreme episodes like hydrological droughts and various attributes of low inflow periods.

### **Indicative author bibliography:**

1. Noce S., Collalti A., Santini M. (2017). *Likelihood of changes in forest species suitability, distribution and diversity under future climate: the case of Southern Europe*. Ecology and Evolutions, 7(22). p. 9358-9375. Doi: 10.1002/ece3.3427.
2. Noce S., Collalti A., Valentini R., Santini M. (2016). *Hot Spot maps of forest presence in the Mediterranean Basin*. Iforest, 9. p. 766-774. Doi: 10.3832/ifor1802-009.
3. Santini M., Collalti A., Valentini R. (2014). *Climate change impacts on vegetation and water cycle in the Euro-Mediterranean region, studied by a likelihood approach*. Regional Environmental Change, 14(4). p. 1405-1418. Doi: 10.1007/s10113-013-0582-8.

# Ecolabelling: idea and praxis

## Samaria National Park (Crete)

---

### Petros Lymberakis

Chair of the Board of Samaria National Park-West Crete ([info@samaria.gr](mailto:info@samaria.gr))  
<https://www.samaria.gr>

---

### *Sdamaria National Park – a quick overview*

The Lefka Ori is most extensive mountain range of Crete. It has an intense geomorphology with more than 50 peaks over 2000m (max 2453m) a plethora of gorges (the biggest and most famous of which is the Samaria Gorge, hence the name of the protected area Samaria National Park - SNP) and more than 2000 karstic formations (caves, poljes, dolines).

On the biodiversity level, it hosts approximately 1000 plant taxa which contain 50% of Crete's endemic plants: 70 endemics, 24 of which are stenoendemics, i.e. found only on the Lefka Ori. The faunal endemism is high as well, including additionally unique features e.g. the Lammergeyer, the Wild goat, the Cretan shrew, the Monk seal and the Sperm whale.

At the cultural level Lefka Ori are the cradle of traditions and myths and have a rich history of more than 4000 years. The former has infused a high symbolic value in the collective fantasy of locals. The area as a whole is of great aesthetic value.

### *Reconciliation of humans with nature*

The approach of the SNP Managing Body has this notion of reconciliation as a central theme in its approach and activities for managing the area. Nevertheless, reconciliation is a complex, non-straightforward, as well as counter intuitive message, as it counters the notion of "protection". The latter, to us, represents an arrogant, anti-Darwinian approach, as if we are the species which dominates and not parts of Nature.

We pursue this approach at various levels:

- **At a theoretical level:** Actively abandon, or at least discuss, cultural and religious traditions which regard humans as separate from nature (e.g. humans as the culmination of evolution; humans' domination over, or taming nature; unjustified trust on technological solutions - especially regarding climate change).
- **At a practical level:** We strive to promote UN 17 goals for sustainable development, in all applicable ways, as a good proxy for initializing and getting familiar with "reconciliation".
- **In crude terms:** We need to understand that humans need Nature and not vice-versa.

There are several problems regarding this approach, some related to the newly introduced notion, e.g. it is out of central administration's scopes and priorities and there is no theoretical or legal framework to refer to. These are in addition to already extant problems, some of which are more or less common to protected areas as e.g. the high number of infrastructures and pressure for new ones, in a BaU model for tourism. Another problem, rather particular to Greek protected areas is that we operate under an unstable institutional framework.

On a different line, due to our market dominated economies as well as lack of proper promotion, there is an unappreciated quality and value of local products and services. This situation makes stakeholders more cautious to novel approaches.

Following the reasoning above there is a couple of fundamental needs that we have to address, namely:

- Enhance public consultation at all levels. Establish trust, and self-confidence vs expectations for top bottom solutions;
- Disentangle nature and cultural values from market values. Promote the former within a market-based framework.

## Ecolabelling for Businesses : a simple idea

The SNP ecolabel is based on a system that includes: Reciprocal self-commitment with no legal bounds (based on word of honour: NH-ZA translates to “by Zeus” an ancient shepherd’s oath, which survived till our days). There are five sets of criteria (per business type) all of which ultimately regard the business’s relation with the environment. Three different labels depending on the number of criteria fulfilled: Green=excellent, Yellow=good, White=adequate; we deliberately avoided Gold, Silver, Bronze which adhere to market values. There is a continuous follow-up both for controlling, as well as working with businesses towards achieving a higher level of labelling (i.e. fulfilling more criteria).



### ...but a difficult praxis

Only 15 of ~140 businesses complying till now due to several problems as. Lack of institutional stability and out of scope of the central administration. Difficulty on building trust and establishing the value of the award, to both businesses and the community. Difficulty of setting criteria regarding primary production (milk, honey).

Nevertheless, we trust the power of the idea and continue pursuing it both downwards, by continuous effort on building trust with locals, and upwards by insisting on demonstrating the utility of eco-labelling. In addition, we plan various activities promoting both the idea and the businesses and products, and try to better define and refine criteria for primary production.

At the same time, we seek partnerships and consultation

- at both a **bottom up approach**: locals involved in primary production and tourism, local authorities and civil services, Regional authorities, State...
- as well as a **top down one**: International experts at various levels and themes, as to import (and locally adjust) best practices: UNESCO, CoE, Medpan, Eurosite, WWF, IUCN.

We are fully aware that the whole idea is a Sisyphean task, but we do not perceive it in the sense of “in vain”. We rather see it as a need for ceaseless, continuous effort.

## References

1. *The Economics of Climate Change: The Stern Review*. (2006). [https://en.wikipedia.org/wiki/Stern\\_Review](https://en.wikipedia.org/wiki/Stern_Review)
2. *Transforming our world: the 2030 Agenda for Sustainable Development*. Resolution adopted by the General Assembly on 25 September 2015. <https://sustainabledevelopment.un.org/post2015/transformingourworld>

## Petros Lymberakis

### Activities, research topics and interests:

Petros Lymberakis received his PhD (Univ. of Athens) in 2003. He is the curator of the Vertebrates in the Natural History Museum of Crete – University of Crete. His research focuses on issues of Ecology, Island Biogeography, Evolution and Systematics of small vertebrates of the eastern Mediterranean area. He is actively engaged in nature protection and management. Since 2010 he is the head of the board of the management Body of Samaria National Park.

### Indicative author bibliography:

1. Lymberakis P., Poulakakis N. (2010). Three Continents claiming an Archipelago: The evolution of Aegean’s Herpetological Diversity. In: *Diversity*, 2. p. 233-255.
2. Lymberakis P., Pafilis P., Poulakakis N., Sotiropoulos K., Valakos E. D. (2018). Amphibians and Reptiles of the Aegean Sea. In: Sfenthourakis et al. (Eds). *Biogeography and Biodiversity of the Aegean. In honour of Prof. Mosis Mylonas*. Nicosia (Chypre) : Broken Hill Publishers Ltd. p. 169-189.
3. Speybroeck J., Beukema W., Dufresnes C., Fritz U., Jablonski D., Lymberakis P., Martínez-Solano I., Razzetti E., Vamberger M., Vences M., Vörös J., Crochet P. A. (2020). Species list of the European herpetofauna – 2020 update by the Taxonomic Committee of the Societas Europaea Herpetologica. In: *Amphibia-Reptilia*, 41 (2020). p 139-189.

# Territorial engineering and governance

## Mountain territories of the large Mediterranean islands

---

**Sylvie Lardon**

INRAE, AgroParisTech, UMR Territoires, Clermont-Ferrand, France (<https://umr-territoires.fr>)

---

### **Introduction**

How do we support change in the mountain territories of the large Mediterranean islands? We propose a multi-actor, multi-scale and multi-model approach to identify the challenges to the territories, and project ourselves into the future and to design “living territories to transform the world” (Caron et al., 2017).

From a territorial development perspective (Deffontaines, Marcelpoil and Moquay, 2001), where the actors give themselves the capacity to control the processes that concern them, we are interested in the project territories that respond to political incentives and rely on local initiatives to invent new development models for the territories, in an interactive and creative partnership between researchers and actors, at different scales. We are developing the new territorial project models (Debarbieux and Lardon, 2003).

In the first part, we present the conceptual framework of an approach to building living territories which is based on recent reflections on territorial engineering (Lardon, 2020). It aims to provide some answers to guide public policies and territorial development. To avoid choosing between the local and the global, each of which leads to identity or globalising deviations, Latour (2017) suggests a third pole, which he calls the terrestrial: “It is because the terrestrial is linked to the earth and the soil, but it is also global, in the sense that it has no borders, that it goes beyond all identities. » (P.72). We call this “territory of life”. In the second part, we use the example of an action research project, the INVENTER project (<https://www6.inrae.fr/psdr-inventer/>) – “Let's invent our territories of tomorrow”, to show how current territorial transitions are renewing territorial engineering.

### **The 3 elements of a new territorial engineering: wanting, living, seeing**

In a context of territorial transition, territories are the place of articulation between actors, activities and spaces. There are many actors and they have different issues. The spaces are differentiated and articulated at different scales. Actors, scales, issues must be integrated.

Three processes need to be articulated: inter-territoriality, territorial integration and territorial innovation (Figure 1):

- (1) Inter-territoriality: If the territorial project remains in place, the links with neighbouring territories, the interweaving into larger scales, the recognition of territorial differentiations, are all interactions to be taken into account, so as not to restrict a territory to its borders, but to open it up to the world.
- (2) Territorial integration: Local public action is called upon to implement initiatives itself that permeate the territories and give new strength to territorial action and confer legitimacy in the eyes of the institutions. This change in the forms of public action takes on its full meaning at present in territorial food projects, which are widely implemented at the local level.
- (3) Territorial innovation: The creations of civil society go beyond predictions and invent new visions of the future with a “bottom-up” approach. Local actors no longer hesitate to undertake territorial issues in order to act in the name of the “common good” and universal values. New methods of collective action mobilise the capacities of all actors to develop daring ideas for the territory.

Without erasing the pre-existing dynamics, three new requirements appear to support territorial development (Figure 1). Assuming that the territory is a territory of life, accepting to make it livable for all, to make it thrive for current and future generations. Driving action, wanting it, in a shared vision of issues, both local and global, individual and collective. Giving meaning to action, building a representation of a common world, seeking universal values and discussing them.

This does not erase conflicts, hierarchies, powers, it does not stop wars, natural disasters or epidemics, but it makes us responsible for the future of our planet.

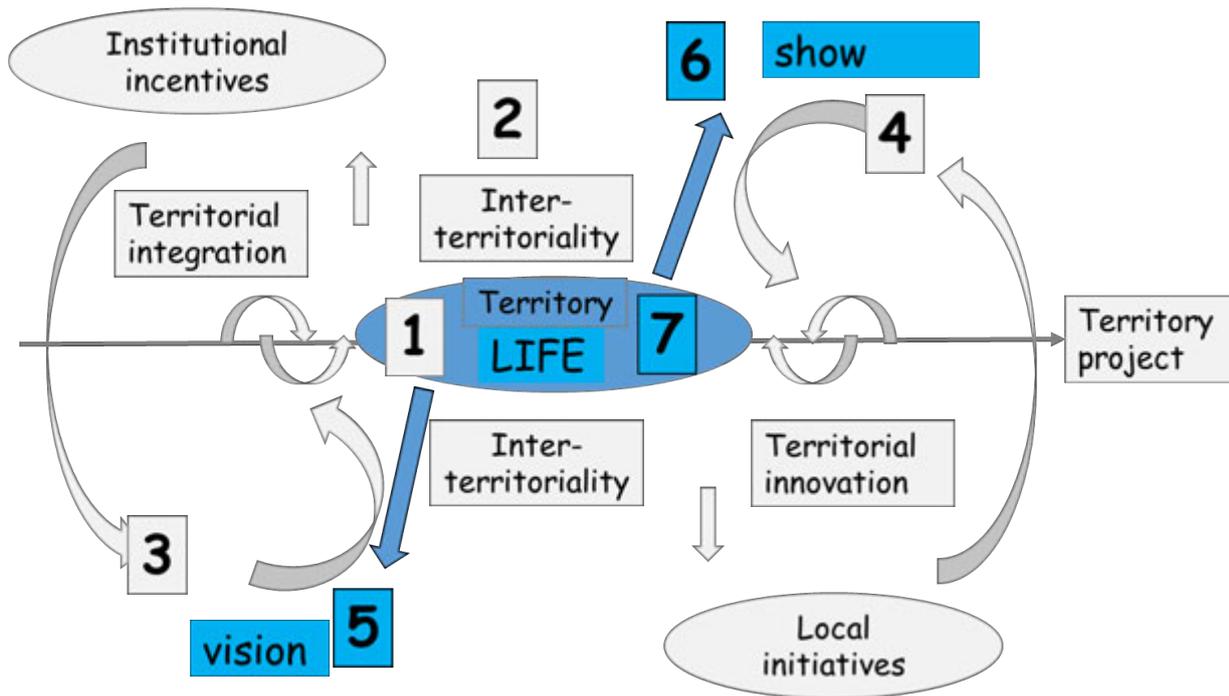


Figure 1 : Co-constructing "territories of life" (Lardon, 2020)

This requires co-building, with all the relevant stakeholders "territories of life.

### Towards new models of regional development

In the PSDR INVENTER – "Let's invent our territories of tomorrow", project in partnership with the Grand Clermont and the PNR Livradois-Forez, we participate in the Territorial Food Project (TFP) (<http://www.legrandclermont.com/projet-alimentaire-territorial>):

- by being the initiators of a reflection on food as a lever for territorial development, which led the actors to submit a TFP for national funding,
- by carrying out a critical and reflective analysis on the constitution of the action plan by the TFP agents and the mandated Design Office (in particular on the participation of actors and the forms of governance),
- by coordinating the scientific committee integrated into the TFP, to continue this critical analysis and co-construct, among researchers and actors, the territorial project.

This requires coordinating actors, activities and spaces in order to energise the territory (Figure 2).

Thus, the TFP governance, for its implementation, is inclusive, it integrates the diversity of actors in territorial food governance (public actors, market actors and civil society actors). It is organised around project-groups, co-ordinated by local actors, promoters of TFP actions.

The TFP's area of action is a diversified territory, combining the urban and the rural, but not in a unidirectional relationship of the city as a consumption basin served by the peripheral production basins, but rather as a hybrid territory, connected and enhancing its local resources and networks of actors and incorporating the relocation of agriculture into local circuits throughout the territory, whether urban or rural.

This has led us, for example, to initiate a TFP action: "Increase the food autonomy of inhabitants with vegetable gardens in the territory of Billom Community". We created a network of gardeners in 2019. In 2020, we are expanding the network of amateur gardeners to include professional market gardeners, relying on gardens as places for the exchange of practices and experiments and as places of collective learning.

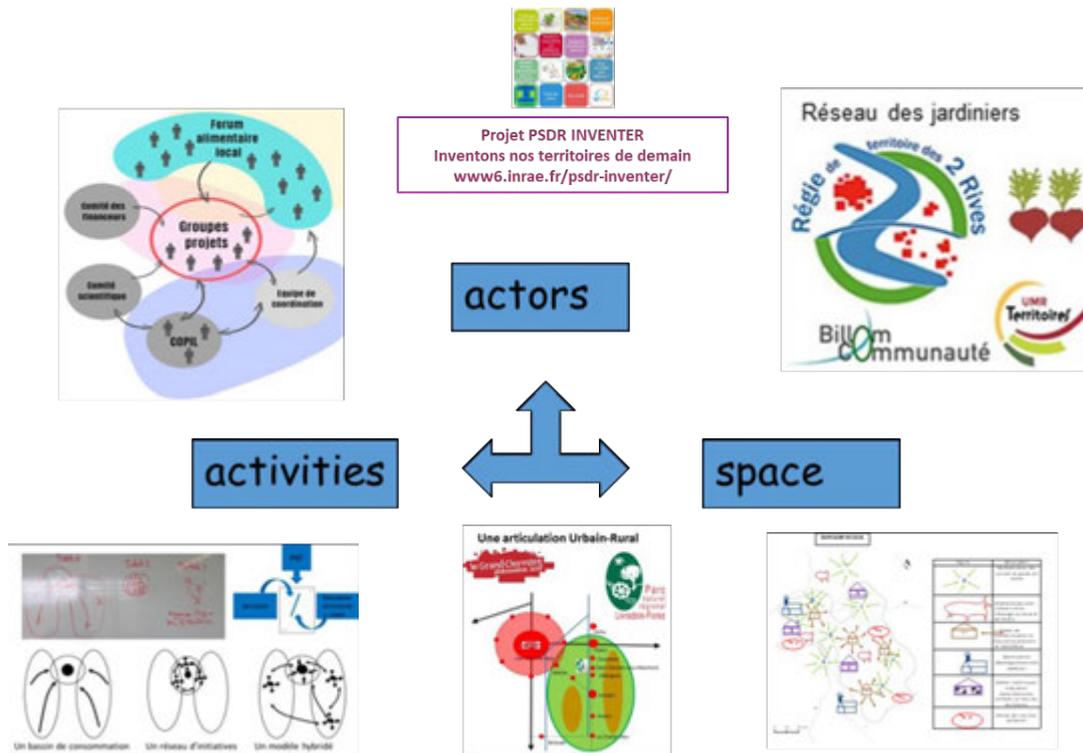


Figure 2 : : Inventing our territories of tomorrow

In this territorial engineering, researchers have a role to play in tirelessly understanding, explaining and interpreting the dynamics, visible or invisible, of territories, whether rural or urban.

### Conclusion

This calls for new skills, to co-construct “territories of life” and implement collective actions, which we can build together for the development of mountain areas of the large Mediterranean islands (Figure 3), by relying on other experience, internationally.



Figure 3 : The large Mediterranean islands

## References

1. Caron P., Valette É., Wassenaar T., Coppens d'Eeckenbrugge G. et Papazian V. (dir.) (2017). *Des territoires vivants pour transformer le monde*. Versailles (France) : Quæ, 279 p.
2. Debarbieux B. et Lardon S. (dir.). (2003). *Les figures du projet de territoire*. La Tour-d'Aigues (France) : Éditions de l'Aube.
3. Deffontaines J.-P., Marcelpoil E., Moquay P. (2001). Le développement territorial : une diversité d'interprétations. In: Lardon S., Maurel P., Piveteau V. (dir.). *Représentations spatiales et développement territorial*. Paris, (France) : Hermès. p. 39-56.
4. Lardon S. (2020). Les trois vis-à-vis des territoires ruraux : voyage en France ou ailleurs. In: *Organisations & Territoires*, Vol. 29, n° 1. p. 149-163.
5. Latour B. (2017). *Où atterrir ? Comment s'orienter en politique*. Paris (France) : La Découverte.

---

## Sylvie Lardon

### **Activities, research themes and areas of interest:**

Research Director at INRAE-ACT ([www.sad.inrae.fr/](http://www.sad.inrae.fr/)) and Professor at AgroParisTech ([www.agroparistech.fr/](http://www.agroparistech.fr/)) in Clermont-Ferrand, I teach the methods and tools of spatial analysis for participatory approaches to territorial projects on the ACTERRA Specialized Master at AgroParisTech and the GTDL Master of Geography in Clermont-Ferrand. A specialist in prospective participatory diagnosis, I develop concepts, methods and tools to facilitate the construction of a shared vision of project areas. I pursue collaborations in the Mediterranean, Argentina and Brazil on the transformations of territories and forms of territorial food organisations.

### **Indicative author bibliography:**

1. Iceri V., Lardon S. (2018). L'organisation socio spatiale, un commun pour le développement territorial. Le cas d'une communauté au Brésil. In: Kebir L., Nahrath S., Wallet F. (dir), *Espaces et Sociétés*, N° spécial : Biens communs et territoires, 2018/4 n° 175. p. 87 - 104.
2. Lardon S. (2013). Le « jeu de territoire », un outil de coordination des acteurs locaux. In: *FaçSADe*, Résultats de recherches du département Inra-Sad, 38, 4 p.
3. Lardon S., Moquay P., Poss Y. (dir.) (2007). *Développement territorial et diagnostic prospectif : réflexions autour du viaduc de Millau*. La Tour-d'Aigues (France) : Éditions de l'Aube, 377 p.

# Participatory dynamics of smart villages

---

**Marjorie Jouen**

ECOLIMONT Association ([www.ecolimont.eu](http://www.ecolimont.eu))

Institut Jacques Delors Institute ([www.institutdelors.eu](http://www.institutdelors.eu))

---

## **Introduction**

The concept of “smart villages” has aroused strong interest in European institutions since the European 2.0 conference on rural development in Cork in September 2016. By announcing possible support within the framework of the future European rural development policy, the Commissioner Phil Hogan thus focused on the dynamics induced by the use of digital technology in rural areas. As the European Parliament wished to explore the subject in greater depth and assess its potential, the European Commission (DG AGRI) launched an exploratory pilot project devoted to “smart eco-social villages” which was coordinated by ECORYS, R.E.D. and Origin for Sustainability, in which ECOLIMONT took part.

This study and the work carried out in parallel by European rural networks have broadened and enriched the view on the challenges of mobilising rural communities and the methods which have proved their worth. The definition of smart villages as well as the identification of the conditions for technological, financial and governance success now pave the way for a policy to stimulate or catalyse rural development initiatives, complementary to that associated with the LEADER program. On the eve of the launch of the new 2021-2027 program, it is important for island and mountain territories to understand how to seize this new opportunity.

## **A controversy worth exploring**

**Behind the attractive slogan of “smart villages”, are digital technologies a game-changer for development in rural areas?**

Like the development models generally studied, the rural dynamic is driven by the meeting of supply and demand that are refined and self-sustaining, in the current general context of the digital transition and social networks. More precisely, the first level consists of having satisfactory “coverage” of the territory by very high speed broadband, which makes it possible to meet the basic needs of daily life (telephone communication, remote electronic access to most public or private services. ...). The next level is reached with the development of digital services to residents and businesses which, on the demand part, induce new uses and behaviours in the population. The third step is taken with the offer of products and services to the outside world, opening the door to tourism and the possible arrival of new resident populations. This socio-economic path and the effects it induces, or not, on the functioning of the rural community makes it possible to answer the question posed.

**Yes, but...**

Digital technologies are indeed bringing change in the development trajectory of villages which acquire such equipment and know how to make intelligent use of it in the economic, social and environmental fields. Nevertheless, the analysis of the various situations regarding good practices and a few “smart villages” in Europe, led by the ECORYS-RED-ODT-ECOLIMONT team, requires us to be careful: digital technology is more a permissive condition than the key to success. It should be used wisely. It can help and stimulate, but not replace a good strategy, combined with a participatory approach.

## **Analysis of the practices and the toolbox of «smart villages»**

The exploratory pilot project devoted to “smart eco-social villages” focused on the study of 15 good practices and 6 case studies. In 25% of the villages studied, no participation of the population is reported because the project only focused on the digital tool. In the other villages, on the contrary, there is a great diversity of approaches and methods used. Participation brings added value because it makes it possible to better focus the project, to anchor it in the territory and to give it greater strength over time.

As for the participants of the digital project in the village, who were invited to participate, several concrete realities paint their picture. They can be called upon as citizens as part of an exercise of co-creation and information sharing, as inhabitants and / or economic professionals responsible for building places, restoring and

managing facilities, providing technical services and carrying out business projects, as customers whose needs will be met, as evaluators called upon to provide their feedback, monitor and possibly reframe the evolution of the local project and finally, social economy actors, creators or producers of services or goods.

Public involvement and participation methods are also very varied in smart villages. They take the form of, for example, a specifically created platform, support on existing structures, the creation of a steering committee, informal meetings or digital communication. In some cases, these methods are even combined simultaneously or evolve during the project.

### **A definition of smart eco-social villages**

The pilot project made it possible to specify what could serve as a basis for selection criteria for the future European support program and, therefore, to emphasise the conditions for success. "Smart villages are communities in rural areas that use innovative solutions to improve their resilience, taking advantage of local strengths and opportunities. They rely on a participatory approach to develop and implement a strategy for improving their economic, social and / or environmental conditions, in particular by mobilising the solutions offered by digital technologies. Smart Villages benefit from cooperation and alliances with other communities in rural and urban areas. The initiation and implementation of smart village strategies can build on existing initiatives and be funded by a variety of public and private sources. » This definition can also become a guide for villages in mountain and island territories who wish to engage in such projects.

### **References**

1. [https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cmef/rural-areas/smart-eco-social-villages\\_en](https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cmef/rural-areas/smart-eco-social-villages_en) Promouvoir les 'smart eco-social villages'
2. Promoting « smart eco-social villages »  
<https://www.reseaurural.fr/centre-de-ressources/actualites/promouvoir-les-smart-eco-social-villages>

---

### **Marjorie Jouen**

#### **Activities, research themes and areas of interest:**

Volunteer administrator of ECOLIMONT and external advisor to Notre Europe - Jacques Delors Institute. Senior official in the French administration. EU policies relating to regional, rural and local development; territorial cohesion and social innovation in France and the EU.

#### **Indicative author bibliography:**

1. Jouen M. (2011). *La politique européenne de cohésion*. Paris (France) : La Documentation Française, 188 p.
2. Jouen M. (2016). *Eloge de l'arrière, repenser le rôle des campagnes à l'ère de l'anthropocène*. 7p. <https://ecolimont.eu/wp-content/uploads/2017/03/Eloge-de-l-arriere.pdf>
3. Jouen M. (2017). *Solidarité 2.0, Propositions pour la future politique de cohésion*. Etude pour la DG REGIO, Institut Jacques Delors, 36 p. <https://institutdelors.eu/wp-content/uploads/2018/01/solidarite2.0.-marjoriejouen-juin2017.pdf>

# Product qualification and participatory guarantee systems

---

**Barjolle Dominique**

Federal Institute of Technology (ETH), Zurich, Switzerland ([barjolle@ethz.ch](mailto:barjolle@ethz.ch))  
University of Lausanne ([dominique.barjolle@unil.ch](mailto:dominique.barjolle@unil.ch))

---

## *Introduction*

The challenges to mountains of the Mediterranean islands are considerable. In fragile ecosystems threatened by local and global anthropogenic pressures, it is for rural communities to find motivation and livelihoods that guarantee the sustainability of a thriving economic and social fabric.

To address these challenges, this paper proposes to discuss how the processes of qualifying origin labelled products, as negotiations of **boundary objects** (Star, Griesemer, 1989), can lead to the creation of participatory discussion platforms allowing rural communities to define virtuous development paths for both economic and social development and for the preservation of their human and natural heritage. The **participatory guarantee system** is a possible tool for this qualification process, illustrated by the brand «Terra Thessalia» in Greece.



*Figure 1 : Thessalie. Crédit photo : <http://www.terraithessalia.gr>*

## *The qualification of origin labelled products as a negotiation of boundary objects*

Boundary objects are formalised by the predetermined definition of "containers" whose nature and form can vary (such as a norm or a museum collection), and which are agreed on by stakeholders. This discussion on the container allows a convergence in understanding ("common language") then a convergence of interests among several actors, whose individual interests sometimes diverge, in the achievement of an objective that is common and beneficial to them. The very existence of this common objective can help overcome antagonisms to reach a consensus or compromise.

The qualification of origin labelled products is a collective process anchored in a territory defined by a geographical coherence and an identity anchored in history, which translates into a reputation. The qualification process allows producers to have the product, its link to the terroir and its typicity recognised by third-party experts. As an achievement marking an agreement between producers and at times the competent public authority, the specifications of an origin labelled product are a boundary object (Vinck, 2009). In fact, they are a norm, thus a "container" with several categories: product definition, composition, production method, characteristics as well as sensory verification methods, and validation of its commercial identification according to a procedure defined by a national legal basis at times reinforced at a supranational level (for example the European Union defines these aspects in a Community Regulation with regard to PDO and PGI). Producers, facing their own challenges, are united behind common objectives such as the protection of their products against

usurpation, a common promotion plan which will help develop sales and profits for producers, or safeguard of a gastronomic heritage.

The question we ask ourselves here is whether this procedure can serve as a basis for the preservation of natural resources in the particularly fragile mountain areas of Mediterranean islands.

*The virtuous circle of origin labelled products at the service of sustainable ecosystems*

The specifications of an origin labelled product can act as the driver of the "virtuous circle of remuneration" as well as of the preservation of natural resources (Vandecandelaere, Arfini, Belletti, & Marescotti, 2010) (Figure 2).

In an identification phase, local actors and their partners identify and evaluate the product's potential, in terms of specificity in relation to geographical origin (evaluation of the link to terroir), and in terms of potential sustainable development. A tool has been developed to guide actors in this identification phase (Barjolle, Vandecandelaere, & Salvadori, 2012).

In a qualification phase, the actors in the value chain and their partners, within and outside the region, reflect and negotiate collectively to establish collective rules, which are inscribed in the specifications, to be subjected to a formal examination by the administrative authorities in charge of implementing the legislation around PDO-PGI (for example in France, the INAO, which then communicates them to the European Commission)).



*Figure 2 : Virtuous circle of remuneration of origin labelled products (Vandecandelaere et al., 2010)*

The remuneration phase is the commercialisation of the product after it has been certified as compliant with the specifications, and this commercialisation is synonymous with the generation of income for the different actors in the chain. This remuneration goes through one or more collective quality management mechanisms, and the prices obtained by each link in the chain depends on several aspects, such as quality, logistical efficiency but also the efficiency of the collective management of the product.

Based on the remuneration obtained by the various links in the chain, it is possible to strengthen the sustainability of the system through targeted actions decided at the individual or collective level. This sustainability can be measured through different scientific approaches (Schmitt et al., 2016).

The issue that arises when a PDO (or PGI) is already in place, and sometimes at the scale of an entire country, is how to negotiate agreements that take into account the existing PDO framework and respect the local specificities of agro-ecosystem protection, all while moving beyond the PDO framework and identification on the market. Analysing the issues and transposing them into an extension of PDO specifications, more demanding or more specific in certain aspects is a process that can be beneficial. However, as it entails bringing the norm closer to the realities on the ground within a small territory, and as the actors must understand the approach and be motivated to build and bring it to life, their direct participation is a crucial condition for success. This is why a **participatory guarantee system (PGS)** approach is a promising possibility which has already proven its worth.

**The participatory guarantee system as a tool for preservation and development**

A PGS is a particular method of co-construction, of a production standard and its certification, among producers and consumers in the production territory. Together, the means of agricultural production, processing and conservation of the product, its packaging and its identification (guarantee mark and logo) are defined in the specifications and guides to good practices. It is similar to a boundary object, because the PGS must be

"translated" into a language and rationale common to the stakeholders whose interests diverge in order to reach a consensus on the content of some fundamentals of local collective action.

The PGS, being a negotiating platform between stakeholders within insular mountain territories of the Mediterranean, is a particular form of organisation which makes it possible to address all aspects of territorial development and the preservation of natural resources. Aggravated by threats connected to climate change, the major issues are environmental: Mediterranean mountains suffer from a lack of water resources, loss of biodiversity, soil damage, and forest fires. It is also a matter of social issues, with the loss and aging of communities, the need for infrastructure and training to overcome isolation and the digital divide. Finally, the issues are also cultural to avoid the loss of know-how engendered by the rural exodus, and economic as the mountain environment imposes additional costs on businesses in terms of access to connection infrastructures.

Faced with these challenges, the profound transformation of agro-sylvo-pastoral production systems will allow communities and insular mountain territories to define their vision and their action plan to restore the health of ecosystems and improve human health. Through enhanced sustainability and resilience, conservation and development find a balance between the maintenance of fragile natural environments, economic value and the vitality of businesses. The PGS is a tool that opens a path to this transformation.

As an example of the role of qualification as a process of realization of a particularly interesting boundary object in the context of Mediterranean mountains, we can cite the "Terra Thessalia" PGS. Thanks to the financing of the LACTIMED project in 2012, a local development process was started in close consultation with livestock farmers, pastoral communities and local authorities but also with cheese dairies and consumers, as well as numerous technical and financial partners in the region and even beyond (Goussios et al., 2014). Of course, Thessaly is not an island, but it is a Mediterranean mountain area, so certain lessons and some successes can serve as a basis for adaptation to island areas. It should be noted that the increase in value added via the implementation of PGSs constitutes one of the objectives and an operational action of the National Strategy for the Development of the Mountain Communities of Cyprus since 2020.

The recognition of Feta cheese as a PDO and the reservation of this name for Greek production, by suppressing unfair competition from foreign Feta cheese, represented an opportunity for the development of the large industrial dairies of Thessaly. Pastoral productions and artisanal mountain cheese dairies have been placed in a new competition field, marking a halt for these productions whose production costs are very high compared to those of modern farms in areas where fodder production is fully mechanised and where feeding is automated and also based on productive breeds and use of concentrates. To maintain the pastoral spaces of the Pindus chain, as well as of the mythical mountain of Olympus, a process of qualification of the Feta cheese "Terra Thessalia" was initiated under the aegis of the establishment of a participatory guarantee system (PGS) (Anthopoulou, Goussios, 2018) in order to reinforce the value of cheese products with a specific quality linked to origin.



**Figure 3 : Thessaly, traditional cheese making. Crédit: <http://www.terrathessalia.gr>**

The "Terra Thessalia" brand was developed within the framework of the LACTiMED project. It is certified on the principle of the participation of the local community. University laboratories have been closely associated with the process and have enabled the development of methods based on the most modern technology combined with traditional knowledge and practices of pasture management and cheese making techniques. The brand's collective management structure has developed its own means of guarantee which incorporates official certifications (PDO Feta controls, extensive analyses in an accredited laboratory).

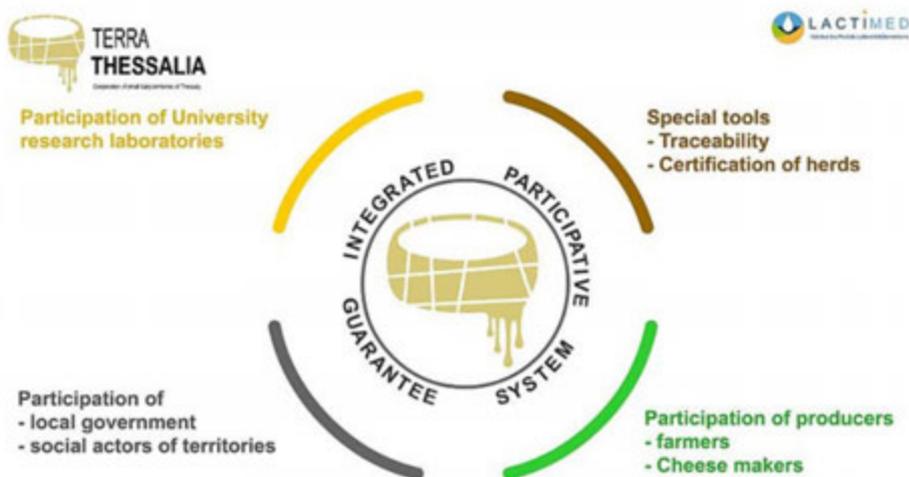


Figure 4 : Participatory guarantee system. Source : <http://www.terrathessalia.gr/warranty/participatory-guarantee-system/?lang=fr>

The specifications are based on specifications applied to all areas of the dairy chain (pasture, animal breed, local foods, health and product quality, etc.). The participatory system for the governance of certification guarantees that the quality mark is affixed exclusively to products originating in the dairy territories of Thessaly. Finally, a guide to good practices to direct livestock farmers and respect the specifications of “Terra Thessalia” has been drawn up, to engage producers in a way of managing animals and pastoral areas that preserve natural resources. The participatory guarantee system supports a vision shared by producers and consumers of “Terra Thessalia”, strengthening their knowledge exchange on the basis of the principles of participation, reciprocity, transparency and trust. The impacts of this approach are perceived as positive by the actors, who continue their work with the brand, even after the end of the LACTIMED project. A more quantitative assessment of the impacts has not yet been done, but the results are visible.

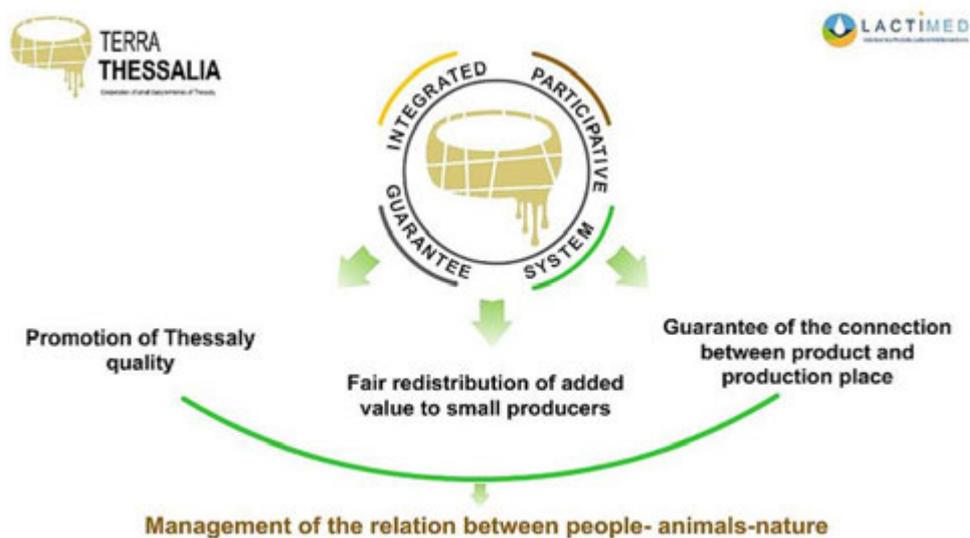


Figure 5 : Participatory guarantee system. Source : <http://www.terrathessalia.gr/warranty/participatory-guarantee-system/?lang=fr>

## Conclusion

The qualification of origin labelled products corresponds to a process which is accompanied by an interesting boundary object, in that it allows a convergence of interests of very different stakeholders who manage to speak a common language and formulate specifications. As the driver of the virtuous circle of product remuneration, qualification is standardised and can extend an effective trade protection regime. However, if the territory of origin in the PDO specifications for example is very large, the examination of the effects of this protection on Mediterranean mountain territories may be insufficient, in particular regarding the protection of fragile

ecosystems, and the associated economic model. Therefore, in order to render the qualification of origin labelled products more sensitive to the specific challenges of smaller territories, it is useful to create a new boundary object. A participatory guarantee system responds well to the definition of a boundary object, in that it allows the translation of the issues into a common language base resulting from a developed “inter-knowledge” among all the stakeholders in a territory. The local dialogue platform facilitates the achievement of new specifications and a participatory mechanism for its certification of conformity, which engage agricultural producers, processors, but also other actors, in a virtuous process of valorisation and preservation, such as the Terra Thessalia guarantee brand.

## References

1. Anthopoulou T., Goussios D. (2018), Re-embedding Greek Feta in localities - Cooperation of small dairies as a territorial development strategy. In: *Localizing Global Food Short Food Supply Chains as Responses to Agri-Food System Challenges*, Ed: Kalfagianni A., Skordili S., chapitre 8, 18 p. Taylor and Francis Group.
2. Barjolle D., Vandecandelaere E., Salvadori M. (2012). *Identification of origin-linked products and their potential for development - A methodology for participatory inventories*.
3. Goussios D., Tsiboukas K., Anthopoulou T., Anastasios V., Gaki D., et al. (2014). *Developing the typical dairy products of Thessaly: diagnosis and local strategy*. [Research Report] CIHEAM-IAMM / ANIMA. p.81. (hal-02163648)
4. Schmitt E., Barjolle D., Tanqueray-Cado A., Brunori G. (2016). Sustainability comparison of a local and a global milk value chains in Switzerland. In: *Bio-based and Applied Economics*, 5(2). p. 79-102.
5. Star S. L., Griesemer J. (1989). Institutionnal ecology, ‘Translations’, and Boundary objects: amateurs and professionals on Berkeley’s museum of vertebrate zoologie. In: *Social Studies of Science*.
6. Vandecandelaere E., Arfini F., Belletti G., Marescotti A. (2010). *Linking people, places and products*. FAO and SINERGI.
7. Vinck D. (2009). De l’objet intermédiaire à l’objet-frontière. Vers la prise en compte du travail d’équipement. In: *Revue d’anthropologie des connaissances*, 2009/1, Vol. 3, n° 1. p. 51-72.

---

## Dominique Barjolle

### Activities, research themes and areas of interest:

Agrarian economist and agricultural engineer by training, Dominique completed her engineering studies and thesis at AgroParisTech in France, and then continued her academic career at the Swiss Federal Institute of Technology in Zurich (ETHZ) as a teacher-researcher. She works as a researcher at the University of Lausanne. Currently, her research focuses on the certification of agricultural products, PDO-IGP, sustainability and resilience of farms and innovation processes towards agroecological transition.

### Indicative author bibliography :

1. Van der Ploeg J. D., Barjolle D. et al. (2019). The economic potential of agroecology: Empirical evidence from Europe. In: *Journal of Rural Studies*, 2019, Vol. 71. p: 46-61. ISSN 0743-0167.
2. Bombaj F., Barjolle D., Casabianca F., Anthopoulou T. (2018). Albanian Municipalities facing decentralisation of pastures’ management rules. In: *Food Systems – Systèmes Agroalimentaires*. 18 p.
3. Vandecandelaere E., Teyssier C., Barjolle D., Fournier S., Jeanneaux P. and Beucherie O. (2018). *Strengthening sustainable food systems through geographical indications - An analysis of economic impacts*. FAO, Rome (Italie). <http://www.fao.org/3/I8737EN/i8737en.pdf>

# Mountain areas of Sardinia

The challenge of harmonizing pastoral activity, dairy products quality and care for the environment

**Andrea Cabiddu <sup>1</sup>, Mauro Decandia <sup>1</sup>, Jean Cristophe Paoli <sup>2</sup>, Giovanni Molle <sup>1</sup>**

<sup>1</sup> Research Agency of Sardinia (Agris), Italy  
(<http://www.sardegnaagricoltura.it/innovazionericerca/agris/>)

<sup>2</sup> INRAE LRDE, Corte, France (<http://www.corte.inra.fr/lrde2/index.php>)

## Introduction

In Sardinia the actual pastoral activity includes two million eight hundred fifty thousand of sheep, two hundred and forty-one thousand goats, two hundred fifty-two thousand cows (dairy+beef), and one hundred and seven thousand pigs. The sheep milk sector represents 25% of the Value of Agricultural Commodities Produced (VACP). During last century dairy sheep sector in Sardinia experienced a strong evolution in particular after 1970 (Paoli 1997) with the intensification of dairy sheep production system, throughout the island, and particularly in the lowlands. In the mountains area (East and Center) the growth of this livestock sector for long time was considered detrimental for the forest scrubland area and the goat sector. Actually we observe that from 1935 to 2011 forest areas increased likewise the degraded areas. We asked ourselves if, in one mountainous area of Sardinia like Ogliastra, options are available to avoid land abandonment of these less favored areas (LFA).

## Area study of Ogliastra

### Description of area study

Ogliastra is located in central east of Sardinia area (figure 1). The area covers 150.000 hectares – with respectively 74% hills and 26% mountain. In Ogliastra live about 60.000 people and about 60% of the total area belongs to collective areas. Ogliastra is particularly devoted to livestock goat farming system, mainly based on local breed Capra Sarda Primitiva. All village located in the Mountain areas (figure 1B) are suffering for the depopulation process.

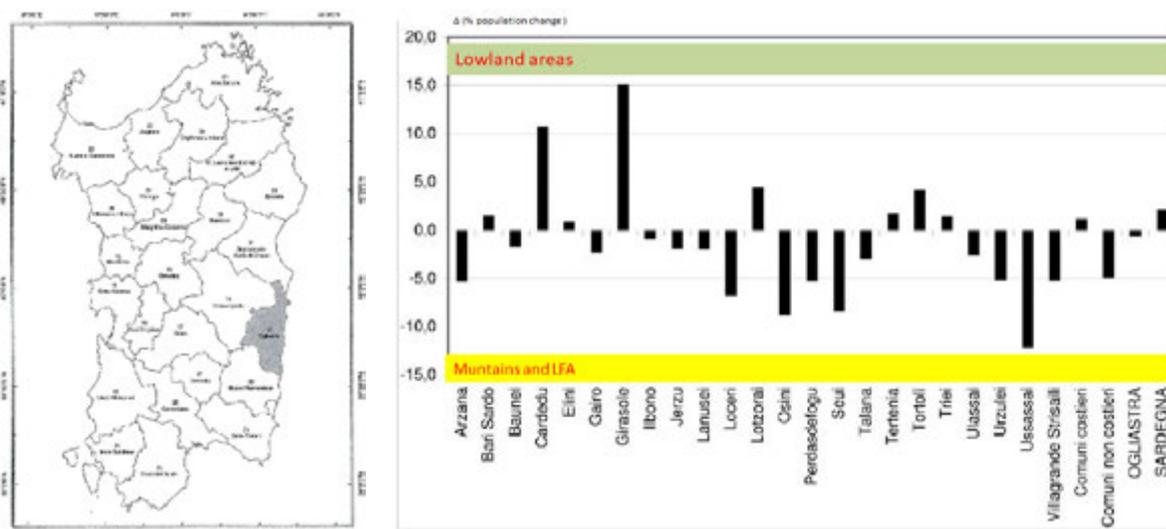


Figure 1A : Ogliastra location. Figure 1B: Abandon rate (from Renoldi 2009, modified)

## Results and discussion

### Livestock farming system

In Ogliastra are reared about 60.000 goats and the main livestock system adopted is the extensive one especially in the medium an upper part the mountains areas (from 300 to 1200 meters) where 65% of the land are collective areas. In the past, usually milk from dairy goats sourced from this area was processed at farm level but, in the last 25 years, farmers (96-98% of total goat farmers) prefer to sales the milk directly to the industrial cheese factory and farm processing is decreasing sharply. In this context the industrial cheese factories are not making any difference in price between milk from grazing and milk from stall. In addition, as a result of European subsidies farmers prefer to breed sulked cows rather than goat and ewes' husbandry. The governance of public goods (named *usi civici* in Italian) is uneven among municipalities of Ogliastra and can explain the different impact in terms of livestock management between local communities (for example Talana versus Baunei).

### Dairy products quality and added value

The results of our study clearly shows that milk sourced from animals reared on extensive system increase the level of polyunsaturated fatty acid, conjugated linoleic acid, C $\omega$ -3/ C $\omega$ -6 ratio, degree of antioxidant protection volatile organic compound, vitamins A and E, and aroma compared to the milk sourced from animal stall feeding. In addition, animal browsing in the Mediterranean scrublands increase the phenols content in milk: these molecules are very important for the healthiness of dairy products and their taste.

## Conclusion

The local governance of these municipalities in the future need to better balance the environmental scopes with the development of husbandry even if up to now forestry and livestock activity has been seen as antagonistic. In addition, we need to find the right public instruments to enforce the environmental goat and sheep husbandry. Since up to now the 1 and 2 pillars not always favor good practices (enforcement of beef cow versus dairy activity), new tools are now available from research results to favor it. For example, the higher quality (fatty acid profile, volatile compounds and phenols) detected in dairy products sourced from animals reared in the mountains area under extensive system suggest that we can now differentiate these dairy products respect to dairy products sourced in the plain area.

## References

1. Paoli J.-Chr. (1997). *Patrons et bergers sardes : origines et transformations d'un élevage ovin méditerranéen*. Paris (France). Thèse de docteur de l'INA P-G, 425 p.
2. Cabiddu A., Delgadillo-Puga C., Decandia M., Molle G. (2019). Extensive Ruminant Production Systems and Milk Quality with Emphasis on Unsaturated Fatty Acids, Volatile Compounds, Antioxidant Protection Degree and Phenol Content. In: *Animals*, 9, 771 p.
3. Renoldi S. (2009). Breve descrizione socio-economica della provincia. In: *Le terre civiche: opportunità di crescita e sviluppo per l'Ogliastra*. Eds: Laboratorio Territoriale della Provincia Ogliastra. Mondadori Electa S.P.A. Milan (Italy). p 287.

---

## Andrea Cabiddu

### Activities, research topics and interests:

Has a degree in Agricultural Science, from the University Sacred Heart of Piacenza, Italy, where he carried out study on rumen metabolism with particular reference on fiber and protein degradation. He is a Researcher in the department of Animal Production of Agris. He is presently working on the relationship between goat and sheep nutrition and milk composition, with particular reference to nutraceutical components. In the last years the focus of study is also point out on the recovery pastoral activity in the « vacated areas ».

### Indicative author bibliography:

1. Cabiddu A., Addis M., Fiori M., Spada S., Decandia M., Molle G. (2017). Pros and cons of the supplementation with oilseed enriched concentrates on milk fatty acid profile of dairy sheep grazing Mediterranean pastures. In: *Small Rum. Res.* 146. p. 63-72.
2. Cabiddu A., Wencelová M., Bomboi G., Decandia M., Molle G., Salis L. (2017). Fatty acid profile in two berseem clover (*Trifolium alexandrinum* L.) cultivars: effect of part of plant and phenological stage. Preliminary results. In: *Grassland Science* 63. p. 101-110.
3. Cabiddu A., Molle G., Decandia M. (2014). Formaggi da latte di pecora. Aspetti zootecnici: legame al territorio. In: Nardone A., Piva G. (Eds.). *Prodotti a denominazione di origine. Fattore di competitività e qualità: i formaggi*. Florence (Italie) : Accademia dei Georgofili, 2 décembre 2014. Ed. Polistampa. p. 75-88.

# Innovative approaches in High Nature Value Systems' agroecological management

The case of Troodos mountain in Cyprus

**Georges Vlahos**

Agricultural University of Athens ([www.augr.gr](http://www.augr.gr))

## Introduction

The main problems identified in the National Action Plan for Biodiversity of the Republic of Cyprus have been the lack of engagement of local actors and the partial nature of the various measures proposed. And this was not the case only in Cyprus. These two challenges are mentioned in most of the relevant documents composed at all levels of planning and policy design. The objectives of the comprehensive management plan for High Nature Value systems in the Troodos area, proposed within the National Strategy for the Development of Mountainous Communities – NSDMC (Gousios, D., 2019) and presented here, is to face these challenges using an integrative approach incorporating natural processes in agriculture and, at the same time, adapting farming practices to biodiversity enhancement.

## A highly protected area...

A large part of the Troodos area is under protection in various forms: National Forest Parc, NATURA 2000 areas, Nature reserves, High Aesthetic value areas and other legislative tools for the protection of the area. However, the management of the area seems to be lagging in co-ordination, attributed by most of the actors to the multiplicity of institutions involved, as revealed during the course of the diagnostic phase of the NSDMC as well as the fragmentary nature of policy measures implemented became also apparent. The new inclusive approach shared by the Common Agricultural Policy and EU environmental policy, can be considered a window of opportunity, since the need to integrate measures drawn from both policies in a comprehensive manner in order to achieve the common objectives.

On the other hand, the fact that participation of local actors not only is an explicit provision included in both policies, it is widely accepted as a prerequisite for a successful design and most of all implementation of any intervention.

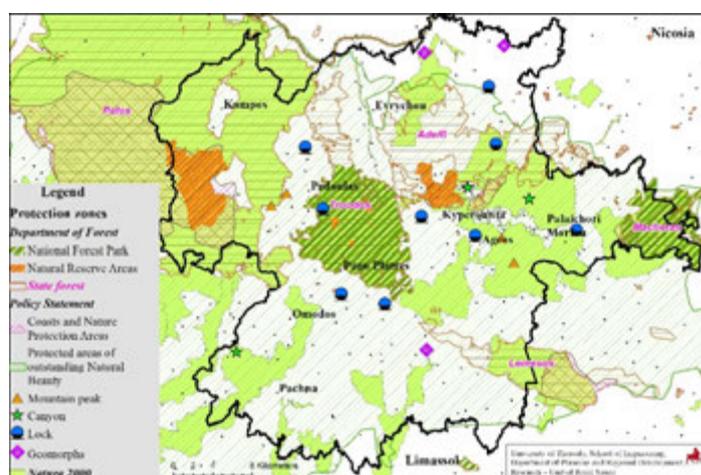


Figure 1: A map of the protected areas (UTh, 2019)

## Our proposal

### A bottom up innovative approach

The proposal presented by the NSDMC team and in particular the group dealing with agroenvironmental issues concerns a new approach for the management of the area and it is three fold.

The first dimension is to expand biodiversity protection activities in order to include the agricultural ecosystems of the area. The design of all actions would be at the landscape level hence the effectiveness of the measures is expected to be improved.

Local farmers, managers of the agroecosystems, are thus going to be involved in conservation activities and their practices are going to contribute to the enhancement of both the agroecosystems' dependent biodiversity as well as in the protection of other valuable habitats and species.

Finally, the process is going to be completed with the co-creation of a comprehensive management plan of all habitats and ecotopes (Forest, NATURA 2000, habitats, High Nature Value farming systems and Geotopes), together with local actors and national stakeholders, which would integrate human activities to promote the transition of the area towards an agroecological system.

### Prioritisation of needs

A number of valuable guidance documents on the management of the protected areas and the forest has been issued by various authorities and the academia. These documents are considered indispensable in the process of the co-creation of the comprehensive management plan. Furthermore, the team has identified three priorities. The first is spatial: it consists in focusing on farming areas located within the protected areas, on areas bordering forests and the protected areas and the abandoned land both in and around the villages. The second priority is to correctly identify local farmers, stakeholders/ actors and engage them in the co-creation process, while the third challenge is efficient governance of the project.

## Conclusion

What is at stake in the Troodos area is the effective co-ordination among the fragmented management systems, public authorities, land users/managers and local actors. Their co-operation is a '*sine qua non*' for the implementation of the available horizontal policy measures in order to emphasise on adaptation to climate change and the promotion of the transition towards agroecology.

## Références

1. Gousios D. (coord.) (2019). *National Strategy for the Development of Mountainous communities of Cyprus*. University of Thessaly, Laboratory of Rural Space, Scientific co-ordinator Gousios D. Nicosia (Chypre): Presidency of the Republic of Cyprus.
- 

## Georges Vlahos

### Activities, research topics and interests:

Dr Vlahos, co-ordinator of the agrienvironmental group during the design of the National Strategy for the Development of Mountainous Communities of Cyprus, is currently teaching Environmental Management and Policy for rural systems, in the Agricultural University of Athens, School of Applied Economics and Social Sciences, Department of Agricultural Economics and Rural Development. He has participated in research projects focusing on EU agrienvironmental policy, the agriculture-environment interface and transition to agroecology and co-authored articles and book chapters in relevant topics.

### Indicative author bibliography:

1. Vlahos G. (2020). Farming System Transformation Impacts on Landscape: A Case Study on Quality Wine Production in a Highly Contested Agricultural Landscape. In: *Land*, 9, 120 p.
2. Vlahos G., Karanikolas P., Koutsouris A. (2017). Integrated Farming in Greece: a transition-to-sustainability perspective. In: *International Journal of Agricultural Resources, Governance and Ecology*. 13 (1). p. 43-59.
3. Vlahos G., Schiller S. (2015). Transition processes and natural resource management. In: Sutherland L-A., Darnhofer I., Wilson G. A., Zagata L. (eds). *Transition Pathways towards Sustainability in Agriculture: Case Studies from Europe*. Wallingford (United Kingdom) : CABI.

# Approaches and practices of agro-ecosystem management in Cyprus

**Menelaos Stavrinos<sup>1</sup>, Ioannis Vogiatzakis<sup>2</sup>, Elena Erotokritou<sup>3</sup>, Margarita Hadjistylli<sup>4</sup>, Vassilis Litskas<sup>1,2</sup>, Athanasia Mandoulaki<sup>1</sup>, Lefkios Sergides<sup>5</sup>, Marina Xenophontos<sup>3</sup>, Savvas Zotos<sup>5</sup>**

<sup>1</sup> Department of Agricultural Sciences, Cyprus University of Technology ([www.sustagric.com](http://www.sustagric.com))

<sup>2</sup> School of Pure and Applied Sciences, Open University of Cyprus (<https://temlabcy2014.wixsite.com/temlabouc>)

<sup>3</sup> Department of Environment, Ministry of Agriculture, Rural Development and the Environment, Cyprus

<sup>4</sup> Department of Agriculture, Ministry of Agriculture, Rural Development and the Environment, Cyprus

<sup>5</sup> Terra Cypria Foundation, Cyprus (<https://terracypria.org/>)

## Introduction

The diverse geology and microclimate of the Troodos region has been catalyzing for more than four millennia the development of an impressive diversity of cropping systems and practices. A salient feature are the small-sized agricultural fields, usually less than 1 ha in size, with low-input crops, such as vines, olives, and carobs. Cereals and fodder crops are common in the lowland areas, whereas vines and fruit trees are more prevalent at higher altitudes. The fields are embedded in a matrix of semi-natural and natural landscapes, meeting the definition of High Nature Value Farmlands, i.e. areas with agriculture that are important for the conservation of biodiversity and the maintenance of traditional landscapes (Zomeni et al. 2018). Flower-rich margins, and other landscape features, such as stonewalls, are the norm for Troodos agriculture. Landscape features are a highly sought attribute as they increase the conservation value and ecosystem service provisioning potential.

## Two opposing forces acting upon the landscape: Intensification and abandonment

### Agricultural intensification and land abandonment in Cyprus

Agriculture in Cyprus, and especially in the Troodos region, is under threat from two opposing forces: Agricultural intensification and land abandonment. In an effort to increase yields over the last half century, farmers have been shifting to intensive management practices that rely on high inputs of certain agrochemicals, such as fertilizers and pesticides. However, overuse of fertilizers and pesticides causes significant problems to human health and the environment, and harms biodiversity conservation. Cyprus is ranked among the top EU Member States in pesticide use per area, and in the exceedance of the maximum pesticide residue limits in agricultural food products. At the same time, problems inherent in residing and practicing agriculture on mountainous areas have led to a wave of agricultural land abandonment that has been changing the landscape for the last 40 years. The abandonment trend is exemplified by the steep reduction of the area under vines in Cyprus, from over 30.000 ha in 1985 to ca. 7.000 ha today.

## Promoting extensification and reversing land abandonment

### No simple solution to complex processes

While agricultural intensification and agricultural land abandonment seem at first glance to be opposing forces, they share common attributes, both in terms of their drivers and their impacts. Both processes are the result of complex socioeconomic changes, including strong international competition for low priced agricultural products. The focus on higher and cheaper yields has led to the simplification of agricultural ecosystems, as uncultivated pieces of land within a field do not provide immediate value to the farmer. The movement of rural populations to urban centres in search of better job and life opportunities, together with the increased costs of mountain agriculture have been nourishing the trend for abandonment. A range of socioeconomic policies and measures had been proposed to reinvigorate mountainous communities in Troodos (Gousios et al., 2019). Mountain agriculture represents a key pillar for the development of rural communities.

## Building an environmental identity for Troodos products

### From environmental to economic benefits

Work in our group in the last seven years demonstrated the positive environmental profile for many types of agriculture practiced in Troodos, and the potential for reversing both intensification and land abandonment. Results from the AgrolIFE project ([www.agrolife.eu](http://www.agrolife.eu)) show that vineyards host a high biodiversity of butterflies, reptiles and birds. Landscape features such as rockpiles and stonewalls support a high diversity of wildlife, while implementation of sustainable crop protection practices for the control of vineyard pests can lower pesticide use. Further work showed that grapes from the indigenous variety Xynisteri have a much lower carbon footprint than grapes from the introduced Cabernet Sauvignon (Litskas et al., 2017). The positive environmental profile for many Troodos products represents an inherent characteristic, arising in part from low input agro-ecological production methods that farmers have been developing and practicing through trial and error for millennia. We propose that the positive environmental profile of Troodos products is equal in importance to their traditional and historical value, and it can be used in the framework of certification schemes to provide a marketing edge to Troodos farmers.

### Conclusion

Agricultural areas in Troodos exemplify the definition of High Nature Value Farmland. Troodos farmers generally apply low input cultivation practices in fields dotted with non-productive landscape features that are important for biodiversity conservation and ecosystem service provision. The agro-ecological production practices applied in Troodos for millennia are under threat from two opposing forces: Agricultural intensification and land abandonment. Research has highlighted the positive environmental profile of Troodos products, and the potential for reversing both land abandonment and intensification. Linking the positive environmental profile of Troodos products to their traditional and historical value can provide a marketing edge to farmers, and contribute to the reinvigoration of mountainous communities.

### References

- Gousios D. et al. (2019). *National Strategy for the Development of the Mountain Communities in the Troodos Region*. University of Thessaly (in greek). [https://medmountains.com/SYNOPTIKI%20STRATIGIKI\\_2020.pdf](https://medmountains.com/SYNOPTIKI%20STRATIGIKI_2020.pdf)
- Litskas V. D., Irakleous T., Tzortzakis N., Stavrinides M. C. (2017). Determining the carbon footprint of indigenous and introduced grape varieties through Life Cycle Assessment using the island of Cyprus as a case study. In: *Journal of Cleaner Production*, 156. p. 418–425. <https://doi.org/10.1016/j.jclepro.2017.04.057>
- Zomeni M., Martinou A., Stavrinides M., Vogiatzakis I. (2018). High nature value farmlands: challenges in identification and interpretation using Cyprus as a case study. In: *Nature Conservation*, 31. p. 53-70. <https://doi.org/10.3897/natureconservation.31.28397>

## Menelaos Stavrinides

### Activities, research topics and interests:

Menelaos' research focuses on integrating biodiversity and environmental targets into agricultural practices and policy, as well as on assessing the impacts of climate change on agriculture. He has published more than 30 papers in peer-reviewed journals, and results from his research have been presented in more than 45 international conferences. He has coordinated / collaborated in more than 15 research projects and participated as a member in expert committees of international institutions. More information about his work and publications are available at <https://sustagric.weebly.com/>.

### Indicative author bibliography:

- Litskas, V., Mandoulaki, A., Vogiatzakis, I. N., Tzortzakis, N., & Stavrinides, M. (2020). Sustainable Viticulture: First Determination of the Environmental Footprint of Grapes. In: *Sustainability*, 2020, 12(21), 8812. <https://doi.org/10.3390/su12218812>
- Cole L. J., Stavrinides M. C. et al. (2020). A critical analysis of the potential for EU Common Agricultural Policy measures to support wild pollinators on farmland. In: *Journal of Applied Ecology*. 00. p. 1-14. <https://doi.org/10.1111/1365-2664.13572>
- Vogiatzakis I., Zotos S., Litskas V. D., Manolaki P., Sarris D., Stavrinides M. (2020). Towards implementing Mapping and Assessment of Ecosystem Services in Cyprus: A first set of indicators for ecosystem management. In: *One Ecosystem*, 5. <https://doi.org/10.3897/oneeco.5.e47715>

# Margins: spaces for the affirmation of collective intelligence ?

---

**Pierre-Antoine Landel**

Grenoble Alpes University, UMR PACTE-CERMOSEM  
([www.pacte-grenoble.fr/membres/pierre-antoine-landel](http://www.pacte-grenoble.fr/membres/pierre-antoine-landel))

---

## **Introduction**

The Mediterranean islands have been the area of affirmation of a geographical form that has become universal: that of the link between the port and its "hinterland". Since ancient times, their status has been profoundly transformed, constantly questioning the nature and intensity of relations between town and country. Today, under the effect of globalization, belonging to the hinterlands is differentiated by the ability to access trade flows of all kinds. Home / work mobility generates peri-urban and residential peripheries, marked by a strong dependence on urban centres. Recreational mobility generates tourist areas more or less distant from urban centres. Other spaces, removed from communication routes and disconnected from networks, constitute isolated and depressed margins, marked by depopulation, aging and the departure of young people. Conversely, some of these hinterlands are experiencing changes in trajectories, becoming productive and innovative. They are marked by the arrival of new inhabitants who make lifestyle choices characterised by a desire to break with urban lifestyles. "Less subject to social controls, benefiting from less restrictive standards, and more flexibility, more free in short, the margins can show more inventiveness and generate beneficial counter cultures that will energize the whole society" (BavouxChapelon, cited by Woessner, 2016, p.23).

It is these latter territories that raise questions. The aim is to characterise the process of building specific resources, but also to create social innovations, which will provide unprecedented responses to crisis situations. Our question relates in particular to the construction and dissemination of new knowledge, in specific contexts of production revitalisation and transition. Our hypothesis is that this construction mobilises a collective intelligence, resulting from a capacity of differentiated actors to coordinate around shared questions, and proceed to a hybridisation of knowledge, allowing the construction of new knowledge mobilised in action.

## **40 years of observations of a territory in transition**

The field of study is that of the Drôme Valley, located in the South East of France. It develops over a watershed of more than 120 kms, bringing together more than 50,000 inhabitants, spread over 103 municipalities, and articulating a difficult mountain area (8 ha per km<sup>2</sup>) to a plain area linked to the powerful Rhône Valley. . It is a key location for the transition to agroecology, as more than 28% of the areas are now classified as Organic Farming. This process has been developing over a long period of time, which has been the subject of an analysis based on interviews with 40 stakeholders in the territory.

The work results in the construction of a timeline, which identifies nearly 250 milestones in almost 50 years of transition to organic farming. It makes it possible to propose the construction of different trajectories, including that of knowledge. Others were also identified such as territorial dynamics, production chains, socio-cultural action and producer-consumer relations.

## **Characterising the trajectory of territorial knowledge**

The knowledge trajectory is marked by the coexistence and then the hybridisation of three types of knowledge: local knowledge transmitted locally from generation to generation, knowledge imported throughout the period of modernisation and knowledge built in action, by capitalising on experience, which implies an approach based on DIY, trial and error and failure. The most telling example is that of the aromatic and medicinal plants (AMP) sector, introduced in the 1970s by "enterprising" neo-rural people who revealed the resource and developed it through organisations involving traditional farmers, local knowledge holders and neo-rural people, engaged in action. Today, the territory is marked by the presence of 7 AMP processing companies, representing more than 300 new jobs.

## Affirmation of transformative capacities

The other result is that of the multiplication of social innovations, in multiple fields among which agriculture and food occupy a prominent place. These are currently being identified and characterised through a database of social innovations in mountains<sup>1</sup>. The observations allow the identification of different interface categories between social innovation and territory. Some of them can be considered to have transformative capacities in the sense that they develop at the same time as they participate in changing the territory. They represent real places of production of new knowledge, transferred to other territories. Examples include the "La Carline cooperative"<sup>2</sup> or the "Holy Cross monastery"<sup>3</sup>. In this case, we can also speak of real processes of cross-fertilisation and hybridisation between social innovations and territories.

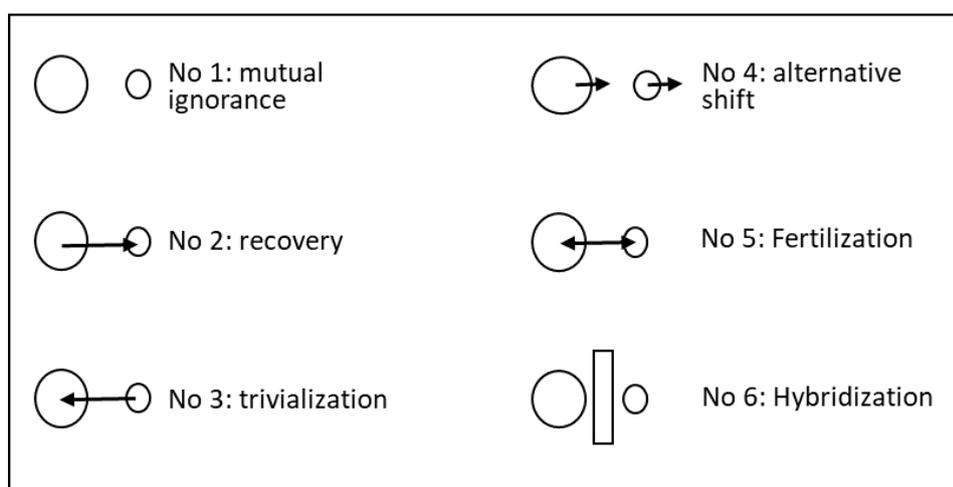


Figure 1 : Different interface patterns between social innovation and territory. (Source : Landel, Koop, Senil, 2018)

### Conclusion :

This dynamic questions the place of research. These are areas of multiple studies, in which researchers retain a place that should be questioned. The stance of the action research mobilises the capitalisation of experience, by involving stakeholders in the definition of a shared question, but also through participation in discussions based on actions, results obtained and methods mobilised. The approach leads to the introduction of the notion of collective intelligence which is "intelligence distributed everywhere, constantly valorised, coordinated in real time, which results in an effective mobilization of skills» (Lévy, 1997, p.23).

### Sources

1. <http://collecti.cc/transformont/?PagePrincipale>
2. <http://www.lacarline.coop/>
3. <http://www.le-monastere.org/>

### References

1. Bavoux J.-J., Chapelon L. (2014). *Dictionnaire d'analyse spatiale*, Paris (France), Colin A., 607 p.
2. Lévy P. (1997). *L'intelligence collective : pour une anthropologie du cyberspace*, Paris (France) : La Découverte, Sciences et société.

---

## Pierre-Antoine Landel

### Activities, research themes and areas of interest:

Après avoir exercé des fonctions de direction dans différentes collectivités territoriales, Pierre-Antoine Landel a After having held various management positions in local government, Pierre-Antoine Landel joined Grenoble-Alpes University in 2000. His research focuses on territorial development, in particular in the Mediterranean hinterlands. His stance at the interface between research and action, enables him to query the contribution of

experience in the construction of transmissible knowledge in a territorial development context. He is a member of the MeDiTer, the joint international laboratory of the French National Research Institute for Sustainable Development (IRD).

**Indicative author bibliography:**

1. Landel P. A., Mao P., Rey A., Robinet N. (2017). Les dynamiques des arrière-pays méditerranéens français : Une marqueterie territoriale entre marge et périphérie. In: Roth H. (coord.). *Espaces fragiles, Construction scientifique, dynamiques territoriales et action publique*, Clermont Ferrand, Presses Universitaires Blaise Pascal, pp. 213-229.
2. Landel P. A., Koop K., Senil N. (2018). Quand l'innovation sociale change la dynamique des territoires de montagne. In: Fourny M.C. (dir.). *Montagnes en mouvements, Dynamiques territoriales et innovations sociales*, Presses Universitaires de Grenoble, UGA Editions. p.21-43.
3. Aderghal M., Genin D., Hanafi A., Landel P. A., Michon G. (2020). L'émergence des spécificités locales dans les arrière-pays méditerranéens. In: *Les impromptus du LPED*, 394 p. <http://www.lped.fr/les-impromptus-du-lped-5-l-emergence-des.html>

# Expectations on the European reform discussion for future mountain policies

**Thomas Dax**

Federal Institute of Agricultural Economics, Rural and Mountain Research (BAB), Vienna, Austria  
([https://www.researchgate.net/profile/Thomas\\_Dax](https://www.researchgate.net/profile/Thomas_Dax))

## Introduction

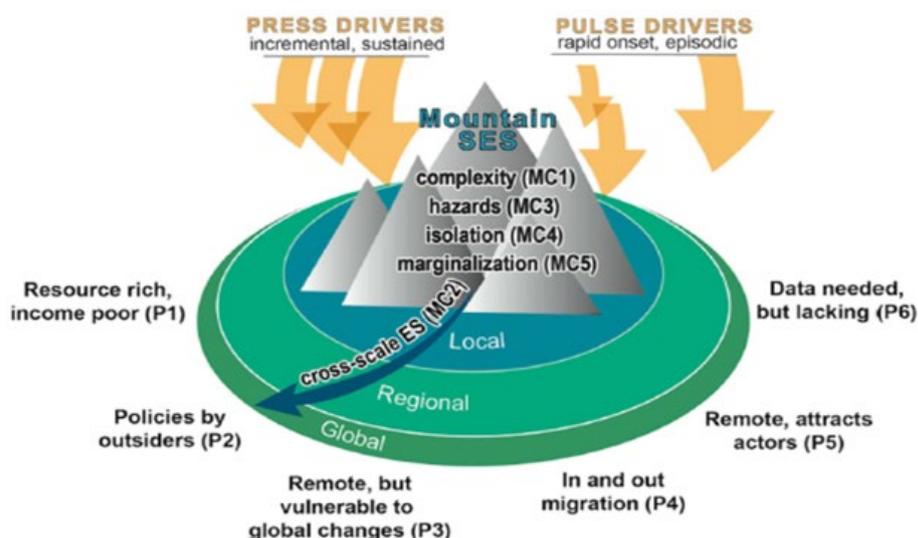
Reform periods raise significant expectations for tackling the key challenges linked to the specificities of mountain regions. Involved stakeholders aim at influencing policy decisions to reflect adaptation needs and at the same time face numerous high-level goals and competing views from other areas. In this highly inter-related policy setting of EU regulations and national implementation strategies, it is a top priority to choose carefully the European tools to be used to enhance mountain dynamics. After presenting the framework of the socio-ecological system of the mountain regions as a comprehensive analytical concept to address mountain population's needs, this communication presents options arising from the on-going EU-policy reform to enhance incentives for mountain action. As the reform discussion is on-going there remain a number of open issues, but also potential to pro-actively influence the decision-making process.

## Socio-Ecological Systems of Mountain Areas

### Characteristics and paradoxes

Key characteristics are driving socio-ecological systems of mountains and their interrelations to other spaces. Specific mountain features relate to the high degree of isolation, exposure to hazards and marginalization pressure, and a complex interaction of natural and human interrelations. In many mountain regions this leads to significant paradoxes showing diverse future pathways, simultaneously including resource rich and income poor areas, local experiences/ action plans vs. policies by « outsiders », remoteness and high vulnerability to global changes, in and out migration, distant, but attractive locations, and a high need for information, but severe lack of detailed data.

Due to these aspects, adapted land management systems in mountain areas are providing a range of highly valued public goods, contribute to high quality ecological performance, preserve protected areas and enhance rural vitality. These environmentally and socially beneficial outcomes are supplied for and demanded by local inhabitants and population from lowlands as well.



**Figure 1 : Key characteristics and paradoxes of mountain social-ecological systems. Source: Klein et al., 2019.**

## Challenges and opportunities

In contrast to past views on mountains that focused primarily on far reaching challenges, a more balanced assessment integrating place-specific opportunities is emerging. Nevertheless, the considerable threats to the provision of public goods and of land abandonment and even marginalisation of these areas should not be neglected. As these might deploy at a fine geographical scale, researchers and practitioners should be attentive to local differentiation and system changes. Enhancing local involvement bears opportunities to harness the strengths of renewed value patterns and rising interest in ecological performance for interesting mountain development strategies. In the framework of transformation needs for effective pathways towards sustainable development and 'spatial justice' approaches such a shift in strategic thinking is inevitable.

### **Relevance of EU policy reform for mountains**

A comprehensive analysis of the policies with spatial implications reveals a number of entry points for activities in policy design and implementation to be taken up by different actor levels (Euromontana 2013). Even if activities can be discerned in almost all policy domains, the focus is on CAP and Structural Funds reform, and the included changes to enhance mountain dynamics.

#### **« Repackaging » of CAP objectives**

The CAP reform proposals envisage to keep the existing interventions oriented at mountain areas and its approved mode of operation. With the Areas of Natural Constraints (ANC) scheme, the Agri-environment-climate Measures (AECM), the LEADER/CLLD local development support, value chains, services and village renewal and cooperation support Member States already now dispose of intervention tools to enhance mountain farming specifically. While research has underpinned the urgency to prioritize the territorial focus for a long time, that would enable a stronger ANC and mountain perspective in policy implementation (Dax and Copus 2016), the EU-proposal hardly draws the desired conclusion to address the common challenges for the future of rural regions (EC 2018). Even if the focus on a « green architecture » claims for a higher ambition on environmental and climate action, the increased national strategy building through the « Strategic National Plans » don't raise expectations on changes towards increasing mountain specificity. With a redesign of the CAP objectives and new labelling of various issues it falls short of an ambitious reform. With regard to considering local development, maybe the most inspiring new input is the 'smart villages' strategy. The thrust of the CAP orientation seems to persist, but activists in mountain regions should engage to explore and extend potential niches of innovative and targeted action in mountains.

#### **Realizing cohesion in Cohesion Policy?**

Similarly, for Cohesion Policy there are already many optional policy measures available (Smart Specialisation Strategy, networks and innovative projects in health sector, broadband, renewable energy and clusters; climate change action, sustainable transport, social inclusion and institutional development). However, actual effects are largely dependent on national/regional priorities and remain often, due to small-scale nature of projects, limited. The five new Cohesion Policy Objectives for 2021-2027 (smart, green, connected, social and close to citizens) provide a range of mountain specific entry points. To all these objectives a renewed focus with specific priorities for mountain areas could be elaborated if Member States engage in such a strategy (Gløersen et al. 2018). These include, in particular, to improve connections to overcome limited critical mass, to foster circular economy, to balance technological possibilities and social innovation needs, as well as to raise attractiveness of living environments. Crucially, arising conflicts between different types of activities and areas, and pressures due to socio-ecological changes, have to be considered in strategy building and implementation.

### **Scope for emerging strategies and action**

The reform period allows an enhanced discussion and enables local actors to raise their voice, emphasizing local, mountain-specific needs and policy requirements. The list of relevant policy measures and action points for the past period (Euromontana 2013) can serve as an inspiration. It should be supplemented by more recent aspects of technological development, increased considerations on measures to cope with population decline, as well as more explicit sustainable development targets and the emerging consensus on priority for resilience.

Activities are focusing on effective ways how to continue and enhance small-scale programmes, like LEADER/CLLD, to meet the needs of the local perspective. These would be complemented by cooperation activities and a strategic focus in policy programmes (RDP and SF) checking measures to take account of mountain specificities. The schemes of Integrated Territorial Investment (ITI; CPR art. 22) should be addressed as specific

option for mountains. The European Parliament's proposal (EP 2019, amendment 110) for a 5% reserve in « non-urban areas with natural, geographic or demographic handicaps or disadvantages or which have difficulty accessing basic services » is particularly important for mountain regions. Moreover, the already started smart specialization strategies would have to be implemented targeting specifically on the mountain specificities and opportunities.

Given the large set of policy measures relevant for mountain development, there is a threat for restricted effectiveness due to conflicting territorial objectives and policy goals. It will be crucial to achieve high national priority so that the common concern would be reflected in strategic planning and distribution of programme resources.

## Conclusion

Future mountain policies might tap more systematically and efficiently into the available set of policy instruments and harness the policy framework that is oriented towards territorial differentiation, asset-based development and convergence. Basic requirements for a fruitful application, however, depend on the appropriate institutional setting for multi-level governance and the recognition of the interrelations and contributions of mountain regions towards lowlands demands. In this regard, it is crucial to acknowledge the local specificities and design strategies that foster the uniqueness of mountain areas. Given the inertia of policy reform processes and slow shifts towards a stronger territorial targeting of rural development policies, synergies for various actors and types of areas have to be highlighted. This process has to be invigorated by inclusion and participation of mountain people and should build on a regional strategy for social innovation.

## References

1. Dax T., Copus A. (2016). The Future of Rural Development. In: European Parliament, Directorate-General for Internal Policies (ed.). *Research for AGRI Committee – CAP Reform Post-2020 – Challenges in Agriculture*, Workshop Documentation, IP/B/AGRI/IC/2015-195. Bruxelles (Belgique): Policy Department B: Structural and Cohesion Policies, Agriculture and Rural Development. p. 221-303.  
[http://www.europarl.europa.eu/RegData/etudes/STUD/2016/585898/IPOL\\_STU\(2016\)585898\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2016/585898/IPOL_STU(2016)585898_EN.pdf)
2. Klein J. A., Tucker C. M., Nolin A. W., Hopping K. A., Reid R. S., Steger C. et al. (2019). *Catalyzing transformations to sustainability in the world's mountains*. *Earth's Future* 7. p. 547-557. <https://doi.org/10.1029/2018EF001024>.
3. EC (2018). *Proposal for a Regulation of the European Parliament and of the Council establishing rules on support for strategic plans to be drawn up by Member States under the Common agricultural policy (CAP Strategic Plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulation (EU) No 1305/2013 of the European Parliament and of the Council and Regulation (EU) No 1307/2013 of the European Parliament and of the Council COM (2018) 392 final*.
4. Euromontana (2013). *Toward Mountains 2020, Step 1 – Capitalising on Euromontana work to inspire programming*. Bruxelles (Belgique).
5. Gløersen E., Corbineau C., Toptsidou M., Haarich S., Montán A. et al. (2018). *Balanced Regional Development in areas with Geographic Specificities*, ESPON BRIDGES project. Draft Final Report. ESPON EGTC: Luxembourg.

---

## Thomas Dax

### **Activities, research topics and interests:**

Thomas Dax is deputy director of BAB, Vienna, Austria and has collaborated in European and international research on mountain development research and rural policy assessment since the 1990s. His research themes focus on the analysis of the territorial dimension of structural changes in mountain agriculture and an integrated perspective of regional economy in mountain regions. Beyond many EU-projects on these topics, he is member in numerous international working groups (including the OECD Working Party on Rural Policy) and served as international expert for mountain policy in several countries.

**Indicative author bibliography:**

1. Dax T. (2008). *The role of mountain regions in territorial cohesion, a contribution to the discussion on the Green Paper on Territorial Cohesion*. Brussels (Belgium): Euromontana.  
[www.mtnforum.org/sites/default/files/pub/4877.pdf](http://www.mtnforum.org/sites/default/files/pub/4877.pdf)
2. Drexler C., Braun V., Christie D., Claramunt B., Dax T., Jelen I., Kanka R., Katsoulakos N., Le Roux G., Price M., Scheurer T., Weingartner R. (2016). *Mountains for Europe's Future – A Strategic Research Agenda*. Bern (switzerland): The Mountain Research Initiative, 41 p.  
[http://nemor.creaf.cat/wp-content/uploads/2018/05/Mountains\\_for\\_Europes\\_Future\\_I.pdf](http://nemor.creaf.cat/wp-content/uploads/2018/05/Mountains_for_Europes_Future_I.pdf)
3. Gløersen E., Price M. F., Borec A., Dax T., Giordano B. (2016). *Cohesion in Mountainous Regions of the EU – Research for REGI Committee*. European Parliament, Directorate-General for Internal Policies, Policies Department B: Structural and Cohesion Policies, Regional Development, IP/B/REGI/IC/2015\_175. Brussels (Belgium): European Parliament, 72 p.  
[http://www.europarl.europa.eu/RegData/etudes/STUD/2016/573420/IPOL\\_STU%282016%29573420\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2016/573420/IPOL_STU%282016%29573420_EN.pdf)

# What methods to meet the challenges to the mountains of the large Mediterranean islands ?

**Laurent Rieutort**

Clermont-Auvergne University, UMR Territoires, France  
 Institute of Auvergne-Rhône-Alpes Territories Development (<https://www.iadt.fr>)

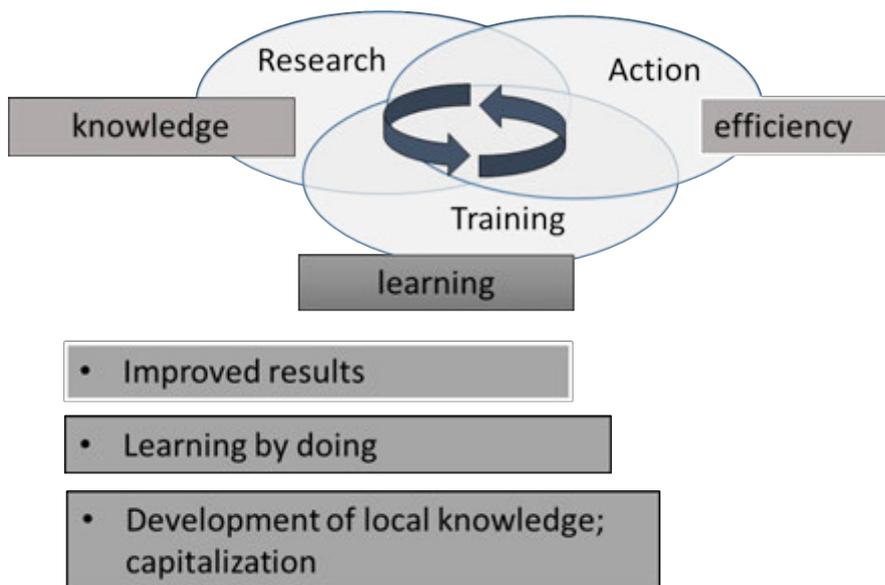
## Introduction

The mountain areas of the large Mediterranean islands are confronted both with many challenges - socio-cultural but also economic, political or environmental -, and with expectations of solutions, on the part of local actors, often with the desire of citizens to play a role in the debates. At the same time, the scientific approach is evolving in an attempt to deploy forms of participatory, even "transformative" research, often multidisciplinary, interdisciplinary or transdisciplinary. Finally, in the field, we can observe a new generation of project leaders - private and public - with, again, new expectations, new behaviours and communication habits.

By aiming for a better co-construction of the challenges of social innovation, preservation and development of these territories, while disseminating knowledge and sharing experiences, what method can we then implement? How do we identify these insular mountain territories and co-construct with local actors specific policies that do not ignore global contexts? How do we develop innovative and participatory development strategies and mechanisms, taking into account the needs of the populations and the situation of local resources? How to support local projects? How do we assess the trajectories (ecological, social and economic) of these mountains and identify the improvement or creation of necessary regulations?

These very broad questions in fact raise issues of transmission, knowledge, capitalisation of experiences, but also collective action, "coupling", "bringing together" actors and functions, cooperation and territorial alliances.

## The bet on research-action-training



**Figure 1 : The research-action-training approach. Source: d'après Michel Boyer**

Supporting island and mountain territories in their development projects with renewed practices promoting territorial dialogue, local anchoring and the enhancement of material and immaterial resources, can be based on

“research-action-training” or “training-development” types of approaches. By bringing together these different spheres of intervention (see figure 1), the aim is to improve the effectiveness of the action, renew and hybridise knowledge - in all its forms: local, “imported” or “Built in action” to use the classification proposed by Pierre-Antoine Landel in this work - and the generalisation of formal, informal or non-formal learning. In line with this, we generally combine a bias (an insularity and a positive “mountainness” - actors of their development and drivers of ecological, democratic, digital transitions ...) and a will (that of supporting the increase in skills of local actors), by deploying project methodology, consultation, territorial anchoring, practices through uses, etc.

### Acquisitions in the formalisation of methods

In this context, the rigorous methods deployed in the field are *defined* in clear and sequenced stages (see figure 2) and a renewed interpretation grid for the territories (approach through “specific resources” and the territorial economy, approach through proximity, networks and collective dynamics, participatory approach...). Each stage intersects the views / points of view of local and “external” actors and constitutes a collective production phase which provides elements used in the following stage. This approach is based on “getting things done” and coordination, much more than on the contribution of “top-down” expertise; it is frequently based on participation and restitution supports (for example: digital visualization and cartography, “territory games” or other “serious games”, timelines, prospective approach, collection of user experience and “service design” ...). The objective is indeed, through dialogue, active listening and the crossing of points of view, to stimulate collective multi-actor dynamics over the long term.

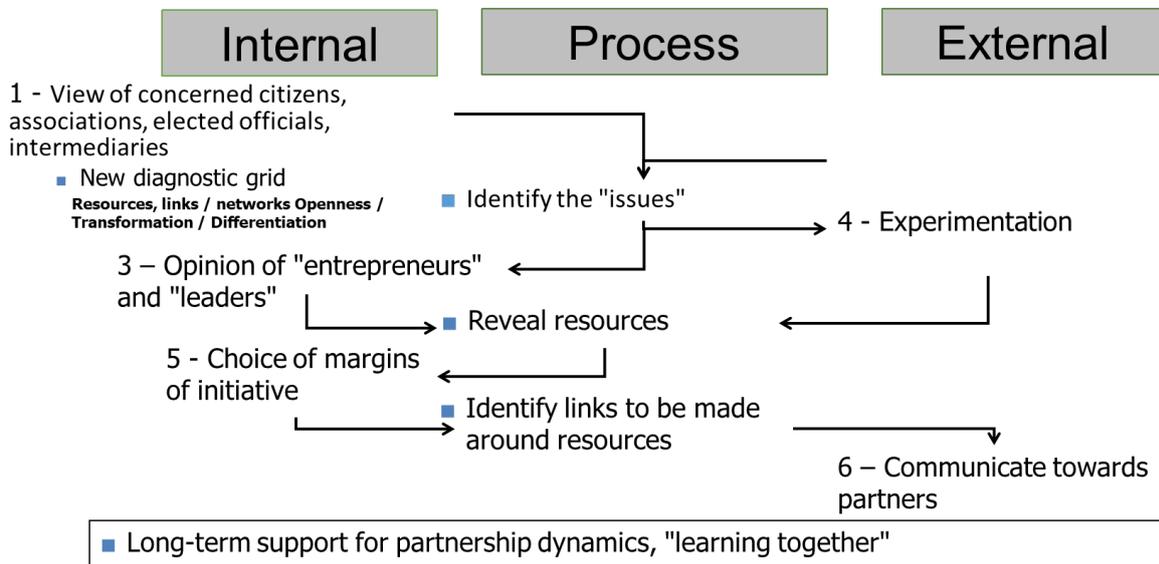


Figure 2 : Example of an iterative process in the territorial approach. Source : modifié d’après Franck Chaigneau (2012)

### A “discourse on method” to stimulate a process of territorial development

It is not a question here of producing a method that can be generalized everywhere, a unique “development model” and general recommendations, often not very applicable in the field. The objective is to move forward on a “method discourse”, necessarily multidisciplinary, multi-actor, multi-institutional and multi-scalar, based on concrete realities, the expertise of local actors and the results of scientific and technical research, in particular, to create new forms of territorial development that attract workers and businesses. It is therefore a question of thinking about an “engineering of support” and method transfer that mobilises a system of actors and seeks to create a collective dynamic. It is not a question either of setting up experiments in “good practices” that could simply be reproduced in each territory, but of assisting reflection in all the mountain and island geographical regions, making it possible to connect actors and to identify innovations from which everyone could draw inspiration while taking into account local specificities and issues.

What then can we retain about this “discourse on method”? First, perhaps, the idea that any research-action-training or research-intervention is based on both:

- the acquisition of new skills by the actors and therefore on the “capacity building” of the territory;

- the territorial and professional anchoring of the project in its environment, presence in the field, "tailor-made" support, the solicitation and assembly of stakeholders to co-construct, "hybridise" and transfer skills;
- the need for concrete progress, starting from the needs of the territory, in the creation of partnership (s), the articulation of resources and actors, collective dynamics - assuming coordination / contractualisation or even the definition of new modalities of governance - and the realisation of projects.

Such an approach raises some points needing attention:

- In the phase of diagnosis and development of a territorial strategy, an essential step in calibrating a shared vision and an action plan, it is necessary to ensure the representation of the various stakeholders and to really involve them;
  - In the implementation and to avoid project managers or leaders finding themselves alone in a rationale of simple completion, it is important to maintain governance in the long term, and this implies reflection on the implementation of arenas, support which allows discussions / exchanges on the strategy and its implementation, even changes according to events;
- ⇒ Always come back to the goals and constantly explain the development vision, which therefore supposes providing a framework to highlight the impacts of changes and capitalise on the actions, the solutions already implemented and how to articulate them...

### Conclusion

In the end, to meet the challenges to the mountains of the large islands, the methods deployed are part of an approach of "learning territories" with:

- local collective organisations on a human scale generally offered by islands and mountain ranges;
- a great deal of importance given to training, research and action, associated with various forms of dissemination of knowledge and information and by mobilising comparisons against local references, graphic visualisation tools or more recently digital; the combination of knowledge, the exchange of knowledge and capitalisation contribute to what one could call "empowering training" enabling action;
- leaders and "facilitator" actors involved in networks of exchange and influence;
- "meeting spaces", cooperation platforms, with tools beyond common workshops such as "think tanks", "living labs" and other "third places" allowing the dissemination of information and the emergence of actions and innovations;
- the value of strategic and forward-looking approaches that can lead to "plans" regarding development or economic sectors, allowing an integrated and multifunctional approach and without neglecting permanent evaluation;
- territorial governance, i.e. a balanced representation of the different categories of actors and structures, with the quest for the participation of each, forms of shared coordination, the combination of regulations;
- the role of memory and its transmission (notion of "spirit of places" made up of a shared historical and cultural understanding).

This vision raises many questions that can be debated, by insisting in particular on the ability to associate "equity, participation and inclusion" (how do we involve all mountain and island actors to produce knowledge, learning and action? who participates? in what way? what knowledge? what place does action hold?) and on the ability to connect, cooperate and "network" (for what? how Could different actors, sectors and scales interact in specific places / arenas? Which agenda? At what scale? *What are the engineering needs?*).

### References

1. Caron P., Valette É., Wassenaar T., Coppens d'Eeckenbrugge G., Papazian V. (dir.) (2017). *Des territoires vivants pour transformer le monde*. Versailles (France) : Quæ, 279 p.
2. Chaigneau F. et al. (2012). *Territoire en dynamique : vers une économie régénérative ?* Mairie-conseils caisse des dépôts, 32 p.

3. Le Boterf G. (2018). *Développer et mettre en œuvre la compétence*. Eyrolles, 304 p.
- 

### **Laurent Rieutort**

#### **Activities, research themes and areas of interest:**

Professor of geography at Clermont-Auvergne University, Laurent Rieutort is Director of the Auvergne-Rhône-Alpes Institute for Regional Development, a Public Interest Group bringing together local authorities and higher education establishments. Within UMR Territoires (Clermont Auvergne University, AgroParisTech, INRAe, VetAgro Sup), his work focuses on new rural areas and the territorialisation of economic activities and public policies.

#### **Indicative author bibliography:**

1. Grison J.-B., Rieutort L. (2017). *Valorisation des savoir-faire productifs*. Presses Universitaires Blaise Pascal, CERAMAC 36, 184 p.
2. Rieutort L. (2019). Quelle ingénierie face aux fractures territoriales. In: Lérique F., Pissaloux J.-L. (dir.). *L'ingénierie territoriale : quels prolongements à la réforme territoriale ?* L'Harmattan, 2019. p. 143-153.
3. Rieutort L. (Sous la dir.) (2020). *Manager à l'heure des recompositions territoriales*. Presses de l'EHESP, 2020, 192 p.

# Governance and tourism diversification in the Alpine Valleys

George Emmanuelle<sup>1</sup>, Achin Coralie<sup>1</sup>

<sup>1</sup> Grenoble-Alpes University, INRAE Laboratory for Ecosystems and Mountain Societies (LESSEM) (<http://www.inrae.fr>)

## Introduction

Mountain tourism, in particular when structured by and around winter sports resorts, faces major challenges, calling into question its ability to adapt and the evolution of its development model. Significant climate change, meaning less snowfall, and changes in the expectations of resort customers are two major areas of reflection that have led, for many years, to the implementation of policies towards less dependence on the “snow” resource and the development of diversified tourism. These policies implemented at the mountain, regional and departmental levels are part of the context of Decentralization and the affirmation of territorial approaches. Our paper is concerned with the implementation of tourism diversification policies, through the Valley Areas (Espaces Valléens) programme carried out in the Alps. This paper presents up-to-date knowledge about the involvement of stakeholders and points out both the positive effects and areas needing attention. Thus, the first part will return to the emergence of these actions in terms of diversification, by specifying the expectations of the Valley Areas system. The following two parts will focus on the conditions present, regarding implementation of said programme, particularly in terms of ownership and collective dynamics, both in the application phase and in the practical implementation period.

## Policies to support tourism diversification in resorts

Tourism diversification appeared in resorts at the end of the 1990s (Achin, 2015). The local property sales slump in the 1980s, the three consecutive winters without snow at the start of the 1990s as well as the associated financial difficulties for local authorities already heavily in debt, highlighted the vulnerability of tourist resort systems. Also, actions were gradually put in place intending, initially, to improve the organisation of destinations but also to enrich their tourist offer in a rationale of diversification. Resorts qualified as “medium-sized” were the primary target of these policies, particularly in the former Rhône-Alpes region at the end of the 1990s. These initial measures were renewed and reinforced with, in the early 2000s, the adoption of the Medium-sized Resorts policy, focused on improving tourism governance and the implementation of actions to diversify tourism in response to meteorological hazards (EDATER, Cemagref, 2006). Expanded to the perimeter of the Alps, and jointly supported by the State and the former Rhône-Alpes region (now the Auvergne-Rhône-Alpes region) and the former PACA region (now South Region), the Valley Areas (VA) programme displayed, over the periods 2007-2013 and 2014-2020, an affirmed desire to diversify both summer and winter tourism. The VA tool results in the definition of a project territory, associated with a shared tourism strategy focused on the diversification of activities. With this latest VA 2014-2020 programme, diversification strategies promoting local heritage, whether natural or cultural, are particularly encouraged, with a view to increasing summer tourist numbers. For example, the 35 certified VAs in the whole of the Alps (Achin et al., 2018), have been able to propose actions aimed at the development of their hiking and cycling routes or even create services to valorise resources, such as museums-shops promoting local know-how or educational trails. The diversification of the offer also involved the creation of infrastructures, such as water parks.

In addition to the nature of actions to be implemented, this public policy mechanism also leads us to question the capacity of actors, in territories strongly structured around alpine skiing, to undertake the challenge of tourism diversification. Indeed, the economic importance of snow is well known, while diversification is difficult to estimate, especially in terms of all of its implications. In this context, one of the major challenges in the implementation of this system is overcoming traditional divisions and bringing together all the stakeholders, whether they are political, economic or from the civil sphere, for the development, firstly, and, secondly the implementation of this diversified tourism strategy.

### **Local undertaking of diversification: the application phase**

In order to provide some answers, we analysed the implementation of the programme over the period 2015-2018 in the 35 VAs (Achin et al., 2018), via participant observation during local and interregional tourist meetings, questionnaires sent to the 35 project managers as well as semi-structured interviews with local tourist activity stakeholders and programme leaders. By following a pattern inspired by Callon (1986), four key stages are identified in the process of developing the tourism strategy and its implementation. The first steps, focused on the development of the application for the programme, underline the need to identify and enlist the territory's actors in all their diversity: socioeconomic actors, political actors and inhabitants. In this specific case of a tourism diversification project, this step is all the more crucial as local tourism governance is called upon to renew itself. Formerly centered on the relationship between the mayor - ski lift operator and tourist office, there is now a great diversity of stakeholders (guides and mountain guides, providers of sporting activities such as mountain biking, climbing, managers of protected areas or even local museum directors) which is mobilised in the organisation. As the list of actors is not exhaustive, each territory is therefore responsible for identifying and approaching the persons concerned. In addition to this first request, the consolidation of this network presupposes the gathering of actors around a problem and especially around a common response. The diversification of activities being understood as "THE solution", and therefore as the target of public policy, entails convincing all the players of the importance of the following strategy: developing diversification to preserve an economic activity in the territories of the Alps, despite climate change. The VA system provides territories, in return for their commitment to this process, with co-financing of the actions envisaged as well as the financing of a project manager position in each of the territories. This project manager is responsible for the administrative and financial monitoring of the programme and acts as regional coordinator, in charge of mobilising and coordinating all the stakeholders in the diversified tourist activity.

Project managers are real linchpins, thus called upon, for example during the preparation of the application, to manage the perspectives of the actors, which are sometimes contradictory. Finally, this process of building a tourist offer is deemed to be successful when the diversity of stakeholders adheres to, and mobilises to allow and finalise, the drafting of the diversified tourism strategy. In the 35VAs, this construction phase was generally positive: (very) many actors responded to the various requests and mobilised to contribute to the construction of the process.

### **The challenge of maintaining this mobilisation over time**

Following the VA application procedure, materialised through a tourism strategy and an associated action plan mentioned above, the implementation period of the identified projects questioned the ability to maintain the territorial dynamic. Indeed, unlike the application phase which was rich in competition, projections and reflections, this new phase experienced two main difficulties: the ability to articulate the rhythms of the programme managers and those of the project leaders as well as the changes in the conditions of support.

The prospect of a public subsidy for a project included in a VA was subject to the satisfaction of administrative and financial criteria, assessed in the context of documentation to be submitted by the territory. Complex and time-consuming, often under- or poorly estimated by the territories, this administrative phase, was a source of tension or even of certain actors renouncing active participation in the collective dynamic. The time needed to prepare the documentation, combined with that of instruction, has thus widely disseminated in the territories the idea of a disappointment, of an "all that for that", also resulting in the withdrawal of certain local actors. However, these reactions have had a strong impact on the fledgling renewal of governance, which is nevertheless fundamental for an adaptation of the "resort" tourism model towards a diversified model, at the territorial level.

These feelings were further reinforced by the change in the conditions of support by the programme leaders: the financial package initially allocated to each VA was thus significantly reduced, disrupting the effective implementation of the prepared action plan. In addition, there was a change in the stance of the regional executives of the two regions in favour of renewed regional mandates. In practice, the two regions reaffirmed, during the programming period, the role of the snow economy, through the vote of two Snow Plans (one in each region), each endowed with 50 million euros. This political choice associated with less financial support for diversification has undoubtedly weakened the collective dynamic in VAs around the relevance of diversification, by re-raising the opposition between the weight of the snow economy and uncertainties about the real impact of diversification. In the end, a demobilisation was observed in most of the VAs, to the point where it concerned some project managers. The latter thus refocused on adjusting the action plans in view of the new financial amounts, to the detriment of their function of coordinating the players in the territory. Finally, with the implementation of the programme and the difficulties encountered, some project managers lost their role as

intermediary, as unifier. From then on, the territorial dynamics concentrated on known operations, somewhat leaving aside the prospects for organisational innovation.

## Conclusion

Interpreting the dynamics at work in the Valleys of the Alps has thus highlighted the complexity of the renewal of local governance with a view to diversifying tourism. The development of a diversified and structured tourism offers in territories very strongly polarised by the winter tourist, however, strongly depends on the stakeholders involved in the tourism activity. To meet this major challenge, the public policies adopted by the various public actors have only partially helped achieve this objective. In this respect, the crucial element concerns the ability to bring a collective dynamic to life over time and in space; a collaborative process often torn between administrative constraints and the desire for territorial coordination.

## Notes

1. A noter que depuis la programmation 2014-2020, les Espaces Valléens peuvent ne pas inclure de stations dans leur périmètre. Notre contribution est ciblée sur les Espaces Valléens avec stations.
2. Ainsi, l'augmentation des nuitées estivales constitue le critère d'évaluation du dispositif.

## References

1. Achin C. (2015). *La gouvernance de la diversification comme enjeu de l'adaptation des stations de moyenne montagne : l'analyse des stations de la Bresse, du Dévoluy et du Sancy*. Thèse de doctorat, Université Grenoble-Alpes.
2. Achin C., George E., François H., Bray F., Torre A. (2018). *La diversification touristique dans le massif alpin : une lecture au prisme du dispositif « Espaces valléens »*. Rapport sur l'action 2 du projet EVALOSCOPE. POIA, 2015-2018, 68 p.
3. Callon M. (1986). Éléments pour une sociologie de la traduction : la domestication des coquilles Saint-Jacques et des marins-pêcheurs dans la baie de Saint-Brieuc. In : *L'année sociologique*, Troisième série, Vol. 36. p. 169-208, Presses Universitaires de France.
4. EDATER-Cemagref (2006). *Evaluation de la procédure « Stations de moyenne montagne » inscrite dans le Contrat de Plan Etat-Région 2000-2006*, Synthèse, 21 p.

---

## Emmanuelle George

### Activities, research themes and areas of interest:

A territorial economist, her work focuses on mountain tourism development, in particular carried out by winter sports resorts. After researching methods of governance in resorts, real estate and land dynamics, her current research interests lie in the transition processes of resorts, in the context of global change, particularly climate change.

### Indicative author bibliography:

1. George E., Achin C. (2020). Implementation of tourism diversification in ski resorts in the French Alps: a history of territorializing tourism. In: Dissart J.-C., Seigneuret N. *Local resources, territorial development and well-being*, EE, 266 p. p. 100-120.
2. Massart C., George E., Bourdeau Ph., Gauchon C., Granet-Abisset A.-M. (Dir.) (à paraître). *Les stratégies d'adaptation des stations de sports d'hiver aux changements globaux. Entre tendances générales et réponses locales*, accepté, à paraître.
3. Gerbaux M., Spandre P., François H., George E., Morin S. (2020). Snow Reliability and Water Availability for Snowmaking in the Ski resorts of the Isère Département (French Alps), Under Current and Future Climate Conditions. In: *Revue de Géographie Alpine*, 108-1, Numéro spécial : Eau, tourisme et montagne, sous la direction d'Emmanuel Reynard. <https://doi.org/10.4000/rga.6742>

## Coralie Achin

### Activities, research themes and areas of interest:

Doctor in Territorial Sciences, her work focuses on the issue of the adaptation of winter sport resorts and particularly tourism diversification. She uses Alpine, as well as national or even international examples, to question the forms and methods of implementation for this new type of tourism offer in mountain territories.

**Indicative author bibliography:**

1. Achin C., George E. (2019). Tourism diversification in the development of French ski resorts. In: Pröbstl-Haider U., Richins H., Türk S. (Dir.). *Winter Tourism – Trends and Challenges*. p. 388-399.
2. Achin C. (à paraître). L'avenir des stations de sports d'hiver avec le changement climatique : une lecture du point de vue des touristes. In: Massart C., George E., Bourdeau Ph, Gauchon C., Granet-Abisset A.-M. (Dir.). *Les stratégies d'adaptation des stations de sports d'hiver aux changements globaux. Entre tendances générales et réponses locales*, accepté, à paraître.



4

# Conclusion



# « Troodos Declaration »

## For the attention of the Government of the Republic of Cyprus

We, the participants in the European Conference "*Mountain Territories of the Large Mediterranean Islands: European issues, national and regional policies and local mechanisms*", have met in Troodos, Cyprus, from 28 to 31 January 2020, and based on Article 174 of the Treaty on the European Union which pays "*particular attention*" to the "*island, cross-border and mountain regions*", declare that, in response to the urgent challenges faced by large Mediterranean islands' mountain communities, there is an urgent need to implement a new multi-level, multi-actor, inclusive and sustainable strategy for the mountainous and insular areas and their communities. As an immediate response in the preparation of the next programming period of cohesion policy, EU-Member States and their Regions should take opportunity to prioritize mountain regions in their strategic planning and operational plans.

The strategy (1) recognises the key role of insular mountains while (2) underlining the need of revising policies in order to allow their needed adaptation to local conditions, in order to (3), when it comes to define concrete measures or actions, to follow five common principles, which are relevant for the mountainous and insular communities:

### **(1) Recognising the key role and the specificities of mountainous and insular areas at all levels**

The aim of this declaration is to recognize **the importance of mountain areas in the Mediterranean** as well as the need **to strengthen the corresponding territorial strategies**. It brings together the six large Mediterranean islands of common interest and should participate in further debates at the European level, expected to go deeper on particular issues related to the mountains on islands, their environment and their sustainable territorial development issues.

The mountain areas reflect a range of problems, challenges and opportunities no matter whether they are "insular mountains", mountain ranges in islands with coastal plains, being Regions or States. These highlands are European hotspots of biodiversity and environmental capital. They are places **under pressure and often in decline but, at the same time, they are undergoing new and innovative dynamics, and have endogenous resources as well as a rich heritage of European Community interest**. Nevertheless, the large Mediterranean islands, likewise other European mountains and islands, despite their assets – touristic dynamics and environmental, cultural, and landscape value – are particularly "sensitive" areas and include "declining rural areas". The economic, social, and connectivity problems become more serious as the inexorable and complex ecological turns are worsening – due to climate change, the collapse of biodiversity and the degradation of resources (water, soil, forests, etc.). They require particular focus in order to implement the new European "Green Pact" and the new long-term vision on rural areas.

Assessing the effects of climate change and its impact on natural and semi-natural environments, and developing adaptation strategies are not only local-level issues. They must be seen, at EU level, as affecting **public goods of primary importance**, such as island mountain areas, which are crucial at a regional level, but also at a national and European levels. Therefore, sustainability strategies are at the same time based on the collective action of local actors and designed to respond to collective European issues; first those of the environment, and second those of the economic and social transformation. They will enable the preservation of threatened heritage resources.

**The engagement of local and regional actors, especially the women and the young people**, is here, even more than anywhere else, a necessity, because these specific environments require knowledge from practitioners –

know-how that is often traditional and passed to new actors of local dynamics. Convergence of interests of mountain communities is a must to define strategic choices for the territories. Hence the need to focus the work and research on the actors and the local/regional action, while taking into account the global challenges and the prevailing and forthcoming EU mechanisms on these issues. These local actors dynamics must also be accompanied by “jumping-scale” strategies (regional, national, European or even international) to mobilise institutional, intellectual, scientific and technical resources, as well as the required practices and means.

## **(2) Renewing policies and mechanisms for the development of mountain and island areas**

We consider that it is necessary to renew the vision as well as the policies and development mechanisms of these areas, in order to make better use of their assets and better prepare them to face the environmental, social, economic and governance challenges.

These areas are at the crossroads of major global and EU issues, as well of very specific local and regional dynamics. The experiences and innovations taking place there, coupled with policies and tools (regional, national and European) are of utmost importance and include the **use/adaptation of new technologies** (digital, energy, etc.), which make it possible to meet both local expectations and global challenges. The same applies to agricultural production and the management of semi-natural areas, as long as **sustainable tourism** and **high quality and highly authentic products** reinforce their values, and as funding schemes defined in the Common Agricultural Policy are uptake in the national strategies and in the operational plans, in particular those that are foreseen for promoting High Natural Value (HNV) and Natura2000 protected area.

More generally, the ambition for these areas should be to:

- **Give priority to the quality and sustainability of landscapes and activities** (quality products, short value chains, recognition of the full value of forests, industries oriented towards new technologies, food, wood or mineral processing, contribution of sustainable tourism to the local and heritage resources) by limiting competition between the various land uses (residential, recreational, productive, logistical, etc.) and the pressure on natural resources;
- **Encourage accessibility** as well as the provision of equipment (networks, infrastructures) and basic services (education, training, health, etc.), while reducing the “barrier” effects thanks to exchanges and networking between the various actors (public institutions, communities, members of the diaspora, businesses, NGOs, etc.);
- **Anticipate the vulnerability to climate change and its effects** on the conservation of biodiversity, on the increase of natural risks, on the viability of agricultural or tourist systems, and on the traffic flows;
- **Fight against the alteration of mountain culture and for the continuity of specificities of Mountains** (risk culture, management of “common goods”, etc.) as to **strengthen their resilience**.

The mountain areas of the large Mediterranean islands are faced with specific challenges. However, strategic solutions are developed through participation in European debates. **The Troodos Conference participants insist on the need to strengthen the cohesion policy for mountains and islands** – as much as sectorial policies for agriculture, the environment, research, health, transport, innovation, etc.

For the Troodos Conference participants, it would be misleading to deliver a single “model” for the Mediterranean insular and mountain territories, or even general recommendations, which are often not quite applicable in practice. It would be as well misleading to set experiments as “good practices” that could simply be reproduced in any other territory. On the contrary, it is necessary to feed **the policy decision-making with reflexions coming from all mountain insular geographies, bringing together the actors and identifying the innovations from which everyone can draw inspiration while caring local specificities and problems**. As the discussion on declining rural areas has intensified over the past years, it is becoming necessary for Euro-Mediterranean insular mountain areas to strengthen cooperation both among

themselves and with continental massifs in order to participate actively in the preparations for the development of appropriate European policies.

In this new framework of negotiations, a remarkable European debate is developing, as well as an accumulation of innovative and alternative initiatives and experiences, which can contribute significantly to the sustainable development of mountain and insular areas.

### **(3) Defining some main principles of action for Euro-Mediterranean mountainous and insular areas**

The Troodos Conference participants agree on the following five principles for action:

**3.a. The need for multi-scale, multi-stakeholders and multi-institutional consultation in order to push a strong political project**, capable of overcoming the challenges faced by mountain and insular areas, and thus calmly anticipating changes in contemporary society, techniques, markets and environments and making them tomorrow's assets and sources of values. The facilitation capacities for working together at local level, which as well make the link with regional, national and European consultations' platforms, are key, and should get more support.

**3.b. The principle of equitable, inclusive and sustainable territorial development** must enable these mountains to achieve living standards and conditions comparable to those of national mainland territories, and to provide national and European communities high quality products, eco-systemic services, and natural resources.

**3.c. The need for fair treatment and solidarity between territories** in order to preserve and enhance the resources and amenities of mountains, by establishing reciprocities between coastal, lowland, urban centres and mountain areas (water, biodiversity, cultural and identity patrimonies) and promoting a multi-functional approach, while obviously correcting specific handicaps which would limit these opportunities for sustainable and inclusive development.

**3.d. The bet that innovation**, beyond a set of measures, will be achieved **by mobilising different forms of intelligence and valuable resources which are all too often disregarded in the territories, and by bringing together the conditions for joint action**, on the basis of:

- **An improved "integrated" building-up of the challenges of innovation, conservation and development in a "learning territories" spirit;**
- **A form of governance in which the managing authorities and each mountain stakeholder are clearly associated** – this is the heart of environmental and social justice;
- **Renewed and more participatory methods, placing the stakeholders involved at the heart of the actions, allowing them to experiment**, to adjust standards, regulations or financial frameworks, and to develop their own responses, acting as close as possible to the people and their needs by relying on local engineering.
- **Local facilitation capacities acknowledged and funded through public funds.**

The need to create and maintain, at EU-level, **knowledge exchange networks between the six large Mediterranean islands**. The needs relate, firstly, to the establishment of **knowledge infrastructures** that establish long-term collaboration between training and research institutions and that support the initiatives of insular mountain communities by high-level expertise. The needs also relate to mobility funds to open opportunities to organise exchanges of experience and establish partnerships to access European funds for cross-border, transnational or territorial cooperation. Needs are identified to establish **"innovation laboratories"** at territorial level around innovative projects undertaken by entrepreneurs, whether they are farmers, business leaders, heads of associations or other forms of organisation in the circular, social and solidarity-based economy, complementary to the action of territorial authorities. Finally, in the age of digital transition and coupled with real exchanges, a multi-lingual virtual platform for education and exchanges to disseminate knowledge and contribute to innovations in these areas, is required.









ISBN

978-960-9439-76-3



This book presents the proceedings of the European Conference of Troodos-Cyprus which was organized under the high patronage of the President of the Republic of Cyprus. Its title Mountain areas of large Mediterranean islands - European issues, national and regional policies and local mechanisms, indicates the intention to include the issue of insularity and mountainousness in a European framework in which Mediterranean issues are often overlooked. These questions are approached from a resolutely multiscalar perspective, ranging from global to local and vice versa.

Twenty-six synthetic communications from around forty authors from various scientific disciplines and field actors present converging and complementary approaches to dealing with mountain territories which are today abused and marginalized despite the importance of their natural resources. The necessary rebirth of these territories is undoubtedly still possible, and the approaches presented in this book provide concrete courses of action and methods for this saving and redeployment to take place.

The participants elaborated a «Troodos Declaration» for the attention of the Government of the Republic of Cyprus which is reproduced in this document.

The book is available online in three languages: Greek, French and English.



Published with the support of the John Papadouris Foundation  
by the Press of University of Thessaly

Volos, Greece, 2021