



## Mid-mountain adaptation to climate change, LIFE MIDMACC

**Duration and budget:** 07/2019 – 06/2024, 2,595,725€ (total project budget)

**Partners:** CREA, IRTA, IPE-CSIC, CTP-OPCC, University of Zaragoza, University of La Rioja, Autonomous University of Barcelona, Catalanian Government –CC Office

**Demonstration areas/case study areas:** Three regions, 11 case study areas (3 in pasture recovery, 3 in adaptive forest management and 5 vineyards assays) . Two kinds of case study per region

### Main Goals:

- Promote adaptation through the **implementation and testing of different landscape management measures** to meet climate change related challenges in marginal mid-mountain areas of Spain (La Rioja, Aragón and Catalonia), while improving their socioeconomic development.
- Create a **coordinated policy framework** among regional governments to improve the sustainable use of marginal mid-mountain areas.
- Develop **integrated climate change adaptation guidelines** for mid-mountain areas.





## Main Actions:

- Develop **landscape adaptation measures** in marginal mid-mountain areas in order to improve their environmental and socioeconomic resilience to climate change. Assess the **socio-economic and ecological effectiveness** of the applied measures through widespread monitoring and modelling.
- Involve the **regional managers and stakeholders** in the design, development and evaluation of adaptation measures, through decision-making regional committees. **Engage the governments** (La Rioja, Aragon and Catalonia) in the creation of a coordinated policy framework that improves the sustainable use of mid-mountain.
- Develop an integrated climate change **Adaptation Guidelines** for mid-mountain areas.
- Carry out **awareness and capacity building** activities on adaptation to climate change at local and regional level.
- Support the application **and further development of European policies** related to climate change adaptation in mountainous rural areas.

## Main results:

- **11 pilot experiences** completed using three climate change adaptation approaches.
- **Three regional stakeholder committees** and one supra-regional working group established
- **One Guide on integrated CC adaptation** for marginal mid-mountain areas, including a cross-sectoral vulnerability assessment, a compilation and evaluation of previous adaptation practices; a scale-up of the results of the pilots to the river basin level, and a proposal of measures and policies to be developed.
- **3 replicability activities** in other Euro-Mediterranean mountain regions; one handbook created on lessons learned.



## Policy implications:

- Need for a smarter Common Agricultural Policy (CAP) policy that recognizes the **role of pastures under forests** (perceive funds). Silvo-pastoralism in the Mediterranean plays an outstanding role in preventing fire, encroachment and loss of open areas.
- Create a **label of extensive livestock farming** (trade marks, quality seals), including regulation and the sensibilization about the added value of these products.
- Facilitate the **direct sale of livestock products** by relaxing current legislation or creating specific one. New policies needed: mobile slaughterhouses.
- Recognize (and establish payment mechanisms) of the **ecosystem services** provided by silvo-pastoral activities.
- Promote the **livestock of small size** (goats, sheep), valuable contribution to landscape maintenance and fire risk reduction. Allow for **heterogeneous extensive livestock** (different types of livestock), for product diversification and better pasture restauration.
- Need for more flexible criteria of CAP supervision, for example more **flexibilize health controls** (compared to industrial livestock production).
- Consider **forest management** as contribution to the **carbon credits**, not only new repopulations (at least in Spain).



Summer in Extremadura (Med Spain), Lawson & Worms, 2019



Winter in Soria (continental Spain, 1,200 m altitude)

