LIFE CLINOMICS
LIFE15 CCA/ES/000102
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Given the seriousness of the predicted **inevitable impacts** of climate change, each geographical region must also take measures that will allow it to **adapt to the changes to come** (resilience).

Therefore we must...

Minimize **vulnerability** to **risks and negative impacts**

Identify **positive impacts** and transform them into **opportunities for all sectors and regions**

Therefore, we must promote adaptive measures for all economic sectors in order to guarantee their **sustainable activity in the new climate scenario.**

The European LIFE CLINOMICS project **has selected three regional areas of Catalonia,** each with ecosystems representative of the country as a whole in order to analyse and evaluate the vulnerability and impacts each region faces from climate change.

The information should allow:

- The adaption/modification of **local socio-economic policies and activities**.
- Catalonia to serve as a **replicable model** in other Mediterranean areas of southern Europe.

Access to the technical report: **http://lifeclinomics.eu/en/informes**

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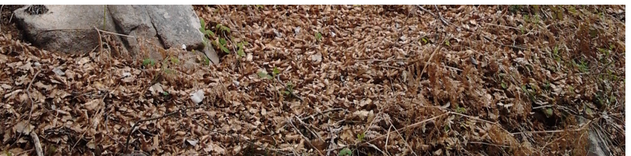
THE VULNERABILITY OF THE MONTSENY TO CLIMATE CHANGE

THE IMPACT OF CLIMATE CHANGE ON THE AGROFORESTAL AND TOURISM SECTORS

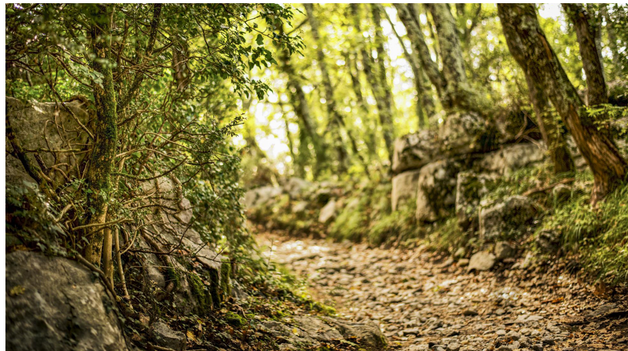


THE LIFE CLINOMICS PROJECT OF CATALONIA AND THE ADAPTATION OF THE REGION TO CLIMATE CHANGE

Adapting to climate change is a **collective challenge**.

It calls for a **shared effort** on the part of all social and economic agents, organisations, groups, and public institutions, in all sectors and at all levels.

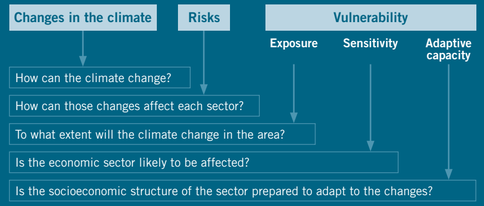
It is no longer enough to avoid further emissions; we must also work to reduce or mitigate the emissions that we produce now.



HOW HAS THE VULNERABILITY OF EACH SECTOR BEEN EVALUATED?

The vulnerability study has focused on the agricultural, livestock, forestry and tourism sectors. The identification of the principal risks that affect each sector has been carried out through the collection of technical information and interlocution with the various social and economic groups within the region.

A set of indicators has also been established for risks that are considered to be the most important for each sector, municipality and the region as a whole. The vulnerability associated with a particular risk has been calculated based on the following variables: exposure, sensitivity and adaptive capacity.



RISKS	SECTOR	VULNERABILITY
Reduced periods of snow cover	Agriculture / Livestock / Tourism	6
Reduction in the flow rate of rivers and streams, and an increase in the incidences of rivers running dry.	Forestry / Tourism	5
Loss of biodiversity	Tourism / Forestry	5
Changes in the distribution of species of interest	Forestry	4
Reduction in forest exploitation	Forestry	4
Loss of landscape quality	Tourism	3.5
Changes in crop types	Agriculture	3
Increased risk of fire	Agriculture / Forestry	3
Changes in livestock farming patterns	Livestock	2.5
Increased demand for irrigation	Agriculture / Livestock	2.4
Decreased water availability	Forestry	2
Reduction in grassland and pasture	Livestock	2
Changes in tourism demand	Tourism	2
Increase in invasive species	Agriculture / Livestock / Forestry	1

0 = low vulnerability *10 = high vulnerability*

WHAT IS THE DEGREE OF VULNERABILITY OF EACH SECTOR?

AGRICULTURE AND LIVESTOCK SECTORS

The principal risk is that farms will become abandoned due to the loss of economic profitability which will result in the progressive replacement of agricultural and livestock activities for forestry. Other risks are higher incidences of disease and pests outbreaks and an increase in the cost of livestock feed due to the loss of summer pasture.

However, livestock husbandry practices can be promoted that will contribute to the mitigation of the effects of climate change and favour adaptation, together with a more integrated vision of the agrosilvopastoral system, the production-distribution-consumption cycle and the value of locally sourced products.

FORESTRY SECTOR

The increase in temperature and reduction in precipitation will increase the risk of fire and affect mortality, productivity, diversity and species distribution in the forest massif. These risks together with low economic profitability and the lack of recognition of the value of forestry products and services can accelerate the abandonment of forest management in the Montseny and magnify its effects to a much greater extent.

Forest management focused on increasing a forest's resistance to drought and improving its recovery capacity against threats – promoting tree species or forest formations that are better able to adapt –, is a key tool in order to guarantee the viability of forest massif management and conserve its economic, natural and social values.

TOURISM SECTOR

Increases in temperature and a decrease in water resources are the two main factors that will affect the tourism sector and its associated values. Both changes will negatively affect the quality of the landscape, the risk of fire, biodiversity and agro-food activity.

An important element in the generation and fostering of opportunities for the adaptation of the tourism sector in the massif is the European Charter for Sustainable Tourism (ECST), a meeting place where consultants and agents of the tourism sector and of the region, participate and contribute in order to continually improve the development of tourist activity while taking into account the needs of the environment and local communities.