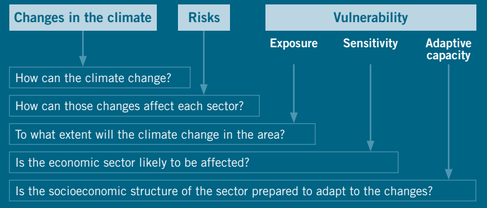
HOW HAS THE VULNERABILITY OF EACH SECTOR BEEN EVALUATED?

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.



LIFE CLINOMICS
LIFE15 CCA/ES/000102
"This project has been funded with support from the European Commission"

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 TOURISM SECTOR TO CLIMATE CHANGE

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.

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).

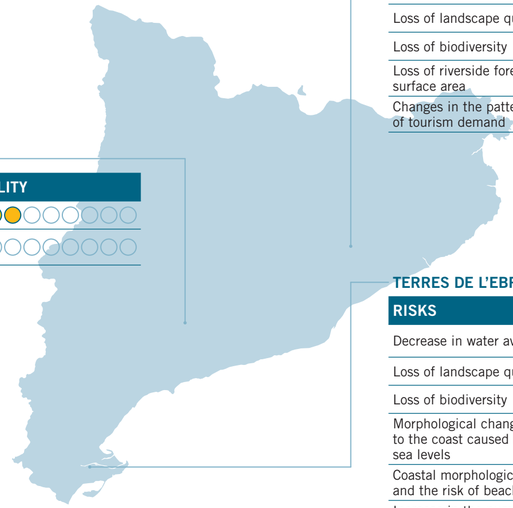
Therefore we must...

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.**

WHAT IS THE LEVEL OF RISK TO THE SECTOR IN EACH REGION?



ALT PENEDÈS

RISKS	VULNERABILITY
Loss of landscape quality	4.8
Changes in the patterns of tourism demands	1.3

MONTSENY

RISKS	VULNERABILITY
Decreased water availability	5.2
Reduced periods of snow cover	6.0
Loss of landscape quality	3.5
Loss of biodiversity	4.8
Loss of riverside forest surface area	1.6
Changes in the patterns of tourism demand	2.3

TERRES DE L'EBRE

RISKS	VULNERABILITY
Decrease in water availability	5.0
Loss of landscape quality	6.0
Loss of biodiversity	6.0
Morphological changes to the coast caused by rising sea levels	10
Coastal morphological changes and the risk of beach loss	6.0
Increase in the number of invasive species	5.0

0 = low vulnerability 10 = high vulnerability

WHAT IS THE OVERALL VULNERABILITY OF THE SECTOR?

The vulnerability of the tourism sector exhibits differences between the regional areas. Although l´Alt Penedès has a low risk, in the cases of the Montseny and the Terres de l'Ebre more significant impacts are predicted.

In the **l´ALT PENEDÈS**, the change of seasonality in tourism, its proximity to the cities of Barcelona and Tarragona, and tourism products related to the sustainable development of the region and the potential of enotourism combine to give the sector a good adaptive capacity.

In the **MONTSENY**, the decline in water resources and reduced duration of snow cover will affect tourist activity together with a loss of landscape quality and biodiversity. However, the loss of climate comfort can be an opportunity to deseasonalize the influx of visitors, and the existence of consolidated associations within the tourism sector will favour the adoption of climate change adaptation measures. The European Charter for Sustainable Tourism (ECST) states that the Montseny is an optimal framework for promoting this type of action.

In the **TERRES DE L'EBRE**, changes in the seasonality of tourist visits, improvements in the efficiency of water use, the environmental certification of companies, the redefinition of tourism products and changes in promotional strategies are all factors that will have a positive influence on the future adaptation of the sector. The proliferation of biting insects such as mosquitoes or the blackfly, may, however, affect the comfort of tourists.

However, sea level rises and the incidences of heat waves will affect sun and beach tourism - regenerating beaches or investing in cooling systems in tourist establishments can only be considered palliative measures - but, above all, it is the geographical configuration of the Delta itself, due to sea level rises, a reduction in surface area and land subsidence that represents the greatest vulnerability.