Climpact Data Science

Climate resilience solutions business and territory

In a sea of uncertainty, the key of the game is to have the correct information to anticipate

Climpact
Data Science

Climate change effects:

- Floods
- Droughts
- Forest fires
- Extreme heat waves
- Diseases
- Plagues
- Storms

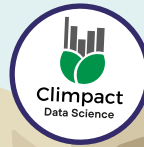# Risks for the private and public sectors

- Modification of production cycles and supply chain.
- Business and economic operations continuity due to physical and patrimonial risks.
- Changes in products and service demand.
- Investment uncertainty.
- Access and secure costs.
- Labor force migration.
- Governmental regulation modification.

Climpact Data
Value

1 How to adapt strategy, operation, value creation, and results?

2 How to give certainty to investors, stockholders and insurers?

**3** How to deal with laws and regulations on GHG emissions?

4 How to generate a better and sustainable land development?

Climate change

- Storms
- Droughts
- Fires

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Your project, field, or business.

Adaptive management

A **sea of confusing information** on climate change

Risks:

- Reduction of productivity
- Insurance costs
- Physical and patrimonial risks

The key?

Climate crisis and its multiple consequences have cast doubt on our resilience capacity, that leads to a critical need to anticipate the emergence of risks.

The key?

Prepare for the unpredictable!

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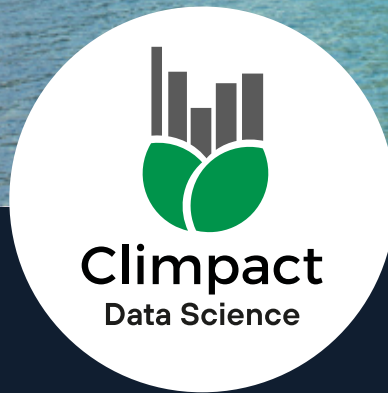
We help **companies and territorial organizations** reduce uncertainty, identifying risks and potential opportunities according to their project needs through evaluation and adaptive management.

Climpact data
Portal

The Climpact data Portal through its SDM and TLALOC tools, provides data and methods which uncover and anticipate climate change impact in a territory.

It explores ideal areas at a regional, country, or worldwide scale, according to present and future climate change periods, in order to assess the resilience of flora and fauna species, species communities, and landscape units.

Discover the climate change risks your company, project, or land might face in connection with productivity, investment, operations, health, and other variables to make an effective decision.
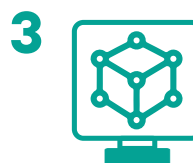
Service levels

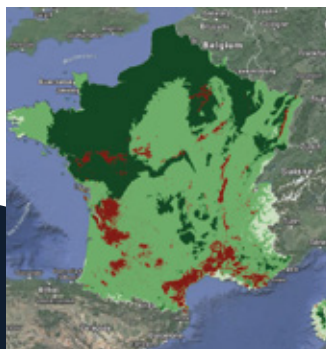**1**

Ready to use Data
(pre-modelling)

2

On Demand
Post-processing
data and modelling

3

Provision of scenarios
for entire territories

Potential zones adapted to Vitis vinifera L. in France according to climate baseline scenario (actual situation).

Potencial suitable areas for vine growing according to climate scenario RCP 4.5 to 2070.

1 Low probability level

2 Average probability level

3 High probability level

4 Current vine crops

Resilient business models to climate change

We help build **resilient business models** according to climate change including adaptation strategies along the value chain.

Ecological transition learning center

We design **learning experiences** to increase understanding of determinants of ecological transition to minimize risk factors and increase investment certainty.

Decision support for governance

Elaboration of **programs, mechanisms and public policies** for land development and management from a geoprospective view.

Assessment of alignment of infrastructure portfolios

and investments according to the Paris agreement

We assess the **alignment of infrastructure** and **investment portfolios** of low carbon emission scenarios.

Screening of physical risks induced by climate change

for financial and investment decision makers

We assess **exposure of infrastructure portfolios** to risks related to climate change for financial and investment decision making.

About CDS

Developed since 2011 in France by PhD's **Guillermo Hinojos Mendoza and Emmanuel Garbolino**, with more than 20 publications fulfilled from models and data produced by Climpact in different applications in France, México, South Africa, the Congo, and Ethiopia, it helped the private and public sectors to understand, analyze and make better decisions on climate change.

Key data:

- High level of spatial resolution (1km to 5m).
- High level of ecological precision (more than 200,000 species from around the world integrated in the models of biodiversity and dynamics of ecosystem services).
- Different climate change scenarios (RCP 2.6, 4.5, 6.0, 8.5).
- Different periods (2030, 2040, 2050 and more).

Guillermo Hinojos Mendoza is an ecology PhD in "Science and engineering of risk activities" from Mines Paris Tech (France). With 15 years of expertise in identifying risks of biodiversity loss due to climate change and territorial transformation. Dr. Hinojos is CEO of Ases, a company specialized in ecological engineering and developement of computer systems in this field.

Emmanuel Garbolino is a PhD in Geography and an HDR (accreditation to supervise research) in Geography, from the University of Nice. He has collaborated for the Joint Research Center (JRC) of the European Commission (Ispra, Italy). Dr. Garbolino spent 17 years in the field of public research at the Center for Risk and Crisis Research of MINES Paris Tech (France). He is currently director of Climpact Data Science (CDS).

Climpact Data

TLALOC
Climate Data

Some of our partners:

"We want to be a **guide** in a sea of confusing information and a concrete option that helps organizations adapt to **climate change**".

w w w . c l i m p a c t . s h o p