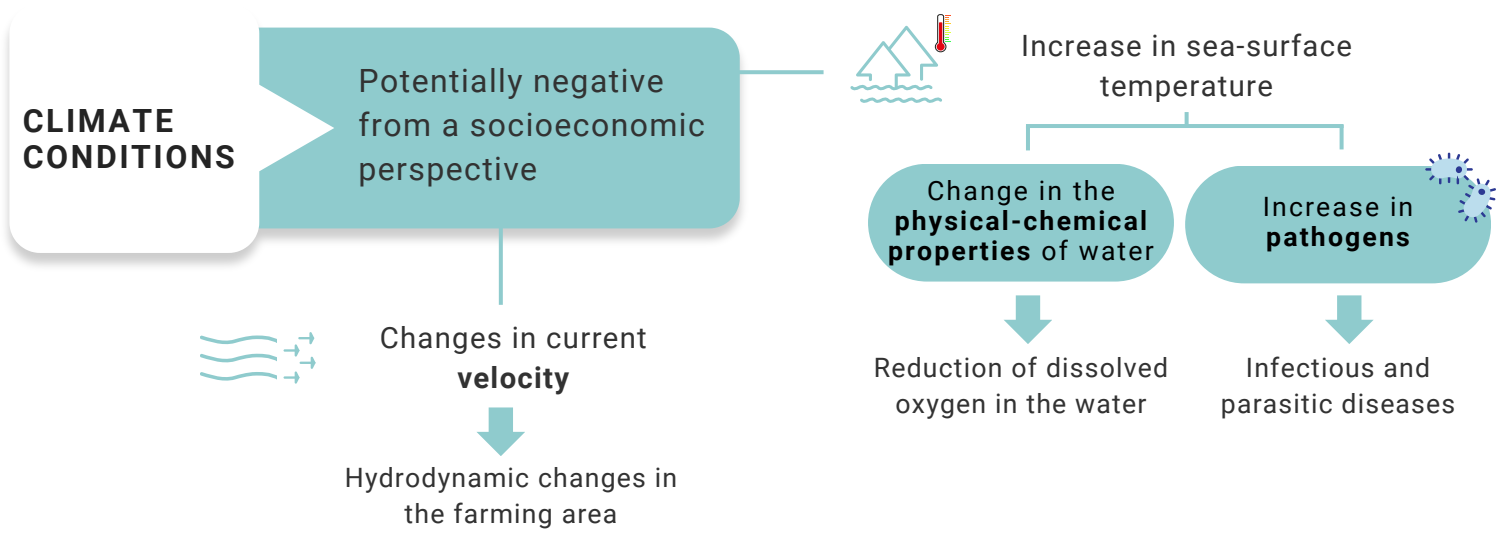# ECOAZUL-MED
Aquaculture

The ECOAZUL-MED project (2021-2024) aims to develop, for the first time, a publicly accessible web tool that provides climate information derived from high-resolution regional climate simulations. This tool will allow anticipation of the effects of climate change on aquaculture, fishing, and coastal tourism, considering different emission scenarios for the next 40 years along the Spanish Mediterranean coast.

WHY THE SPANISH MEDITERRANEAN COAST?

The Mediterranean region provides an amplified warm climate signal and is very prone to the development of extreme weather events such as heatwaves or heavy precipitation, which are expected to increase in frequency and/or intensity in the coming decades. This could negatively impact densely populated coastal areas, such as the Spanish eastern coast, leading to significant socio-economic losses. The blue economy, which is an important source of growth, employment, and investment in the region, will be affected. Therefore, it is crucial to adopt a strategic vision for sustainable development and implement adaptation measures to promote the blue economy in the current context of climate change.

DO CLIMATE CONDITIONS AFFECT AQUACULTURE? SOME EXAMPLES

CLIMATE CONDITIONS

Potentially negative from a socioeconomic perspective

Increase in sea-surface temperature

Change in the **physical-chemical properties** of water

Increase in **pathogens**

Reduction of dissolved oxygen in the water

Infectious and parasitic diseases

Changes in current **velocity**

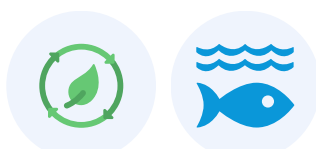Hydrodynamic changes in the farming area

HOW CAN THE CLIMATE TOOL HELP THE SECTOR?

The tool will provide graphs with data generated from high-resolution coupled regional simulations from the **MedCORDEX** coordinated modeling initiative. Specifically, the tool will provide information regarding changes in future climate.

Tool users will be able to select:

- The variable of interest (sea-surface temperature, marine heat waves, sea-surface salinity, velocity and direction of ocean currents up to a depth of 1000 m, maximum air temperature at 2 m, atmospheric heat waves, or relative air humidity)

- The greenhouse gas emissions scenario, between the two available options

- The time period of interest, which should be decadal

- The desired time frequency, either seasonal or monthly

RELEVANT CLIMATE INFORMATION FOR PLANNING THESE ACTIVITIES

ADAPTATION

SUSTAINABLE DEVELOPMENT

ECOAZUL - MED

MINISTERIO DE CIENCIA E INNOVACIÓN

Financiado por la Unión Europea NextGenerationEU

Plan de Recuperación, Transformación y Resiliencia

AGENCIA ESTATAL DE INVESTIGACIÓN

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