# PAVER

**PAVER**

PRIMA RESEARCH PROJECT



**SMART GREENHOUSES.
SOLAR ENERGY.
SUSTAINABLE FOOD.**

## Precision AgriVoltaics for Carbon Neutrality Enhanced Production and Reduced Environmental Impact in Greenhouse



PAVER develops an intelligent AIoT-agrivoltaic platform for cascade hydroponic greenhouses, combining renewable energy, smart monitoring and efficient use of water and nutrients.

## PAVER « Section 2 »

1 **Thematic Area**
*Farming Systems*

2 **DURATION**
*36 Months*

**Budget**
*790,100,00 €*

## OUR OBJECTIVES

**01** **Optimize the performance of photovoltaic panels**

Implement AI algorithms to maximize energy generation under variable climate and location conditions.

**02** **Control crop actuators in real time**

Automate irrigation, ventilation, lighting, and other systems to improve greenhouse efficiency.

**03** **Monitor physical parameters through sensors**

Integrate sensor networks to collect real-time data on climate, soil, water, and crop conditions.

**04** **Enhance crop efficiency and photovoltaic performance**

Achieve a balance between agricultural production and renewable energy generation.

**05** **Promote the adoption of agrivoltaics in cascade hydroponic greenhouses**

Facilitate the implementation of sustainable systems in agricultural contexts with resource limitations

**06** **Advance towards carbon neutrality in food production**

Reduce the environmental footprint of greenhouses through solar energy and intelligent resource management.

## Key exploitable results (KERs)

- KER 1 : AI-Powered Irrigation and Energy Management Prototype
- KER 2 : Research Data Sets and Future Research Roadmap on Sustainable Agriculture
- KER 3 : Sustainable Agriculture Policy Briefs and Training Materials

## A MEDITERRANEAN PARTNERSHIP

7 Organisations • 4 countries • Spain, Morocco, France and Egypt

UPV (Spain) — UNIVERSITAT POLITÈCNICA DE VALÈNCIA

UPCT (Spain) — Universidad Politécnica de Cartagena

INRA (Morocco) — المعهد الوطني للبحث الزراعي

USMS (Morocco)

REOWA (Morocco) — REOWA

UHA (France) — UNIVERSITÉ HAUTE-ALSACE

GPAI (Egypt) — Green Power for Agriculture & Irrigation Systems

## DISCOVER PAVER

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PRIMA PARTNERSHIP FOR RESEARCH AND INNOVATION IN THE MEDITERRANEAN AREA

PAVER | PRIMA Research Project

Explore the project, its objectives, partners and latest updates.

https://jlloret.webs.upv.es/PAVER/

SCAN TO VISIT THE PROJECT WEBSITE