



This project is part of the PRIMA Programme supported by the European Union



# INTEL-IRRIS

Intelligent Irrigation System for Low-cost Autonomous Water Control in Small-scale Agriculture

# PITCH

Prof. Congduc Pham  
<http://www.univ-pau.fr/~cpham>  
Université de Pau, France



**FUTURE4PRIMA – PITCHING WORKSHOP**  
Online  
May 7th, 2025

# INTEL-IRRIS

Intelligent Irrigation System for Low-cost Autonomous Water Control  
in Small-scale Agriculture

# INTELLIGENT IRRIGATION IN-THE-BOX

---

OPEN TO NEW MARKET  
OPPORTUNITIES



WATER IN  
AGRICULTURE  
AND WHAT'S  
AHEAD

70% OF WORLD'S  
FRESHWATER IS USED FOR  
AGRICULTURE

CLIMATE CHANGE WITH  
EXTREME EVENTS INCREASE  
WATER SCARCITY – EVERY  
DROP COUNTS!





IRRIGATED VS  
RAINFED

IRRIGATED AGRICULTURE  
PRODUCES TWICE THAN  
RAINFED AGRICULTURE

ONLY ABOUT 20% OF  
AGRICULTURE LAND ARE  
IRRIGATED



SMALLHOLDER  
FARMERS IN THE  
WORLD

SMALLHOLDERS: FIVE OF  
EVERY SIX FARMS IN THE  
WORLD CONSIST OF LESS  
THAN TWO HECTARES

THEY PRODUCE MORE THAN A  
THIRD OF WORLD'S FOOD ON  
ABOUT 12% OF AGRICULTURE  
LAND



SMALLHOLDER  
FARMERS ARE  
OPENING TO  
SMARTER  
AGRICULTURE

USE OF DIGITAL SOLUTIONS IS  
STILL LOW BUT ...

... INTERNATIONAL PROGRAMS  
HAVE RAISED AWARENESS AND  
INTEREST IN THE LAST DECADE

→ MORE PRODUCTIVITY &  
INCOME, OPTIMIZE RESOURCE  
USE, INCREASED RESILIENCE



DON'T MISS THE  
SMALLHOLDER  
MARKET  
OPPORTUNITY!

SMALL FARM SIZE ALLOWS FOR  
IRRIGATED SCHEMES

DEMAND FOR SMART IRRIGATION  
SYSTEMS WILL EXPLODE

GOVERNMENTS & NGOs CAN  
PROVIDE HUGE SUBSIDIES TO  
INCREASE ADOPTION



WHAT CAN GO  
WRONG?

DEVELOPED SOLUTIONS ARE  
NOT ADAPTED TO  
SMALLHOLDER FARMER  
COMMUNITIES

ADOPTION WILL BE LOW AND  
REPUTATION OF THE  
COMPANY CAN BE IMPAIRED



WHY WE CAN  
HELP YOU?

A DECADE OF R&D PROJECTS  
WITH SMALLHOLDER FARMER  
COMMUNITIES AND LARGE-  
SCALE PILOTING PROGRAMS

A DEEP UNDERSTANDING OF  
THE TECHNOLOGICAL  
BARRIERS AND SYNERGIES  
BETWEEN LOCAL ACTORS



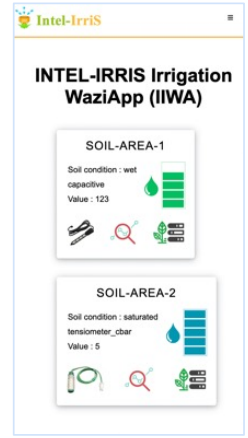
PoC OF COST-EFFECTIVE INTELLIGENT IRRIGATION IN-THE-BOX APPROACH

# INTELLIGENT IRRIGATION IN-THE-BOX



Small-scale Farms, Smallholder Farmers

## FULL EDGE MODE





OUR TEAM CAN PROVIDE  
CAPACITY-BUILDING AND  
SUPPORT TO DESIGN &  
DEVELOP COST-EFFICIENT  
SENSING SOLUTIONS FOR  
SMARTER IRRIGATION  
SYSTEMS ADAPTED TO  
SMALLHOLDER COMMUNITIES



**Intel-Irris**

