



**INTERCROP
VALUES**



Developing Intercropping for agrifood Value chains and Ecosystem Services delivery in Europe and Southern countries



WWW.INTERCROPVALUES.EU





IntercropVALUES aims to exploit the **benefits of intercropping** to design and manage **productive, diversified, resilient, profitable, environmentally friendly cropping systems** acceptable to farmers and actors in the agri-food chain.

As a multi-disciplinary and multi-actor project, it brings together scientists and local actors representing the food value chain.

It includes 27 participants from 15 countries (3 continents) from a wide diversity of organizations and stakeholders.

Goals



1

Support the design of **locally relevant, legitimate, and innovative agrifood chains, through 13 Co-Innovation Case Studies (CICS).**

Co-innovation Case Studies

2

Understand, through 15 meta-experiments, the functioning and interactions of intercropping to **maximise productivity and the provision of ecosystem services.**

Meta experiments

3

Generate **knowledge, methods, and tools** for the management of associated crops and the evaluation of their performance and profitability.

Intercrops management



Goals

4

Understand intercropping performance by **modelling** (simulation studies providing novel information).

Modelling

5

To generate **novel knowledge** on the quality of grains harvested from cereal-legume intercroops in comparison with those of sole crops.

Quality of grains

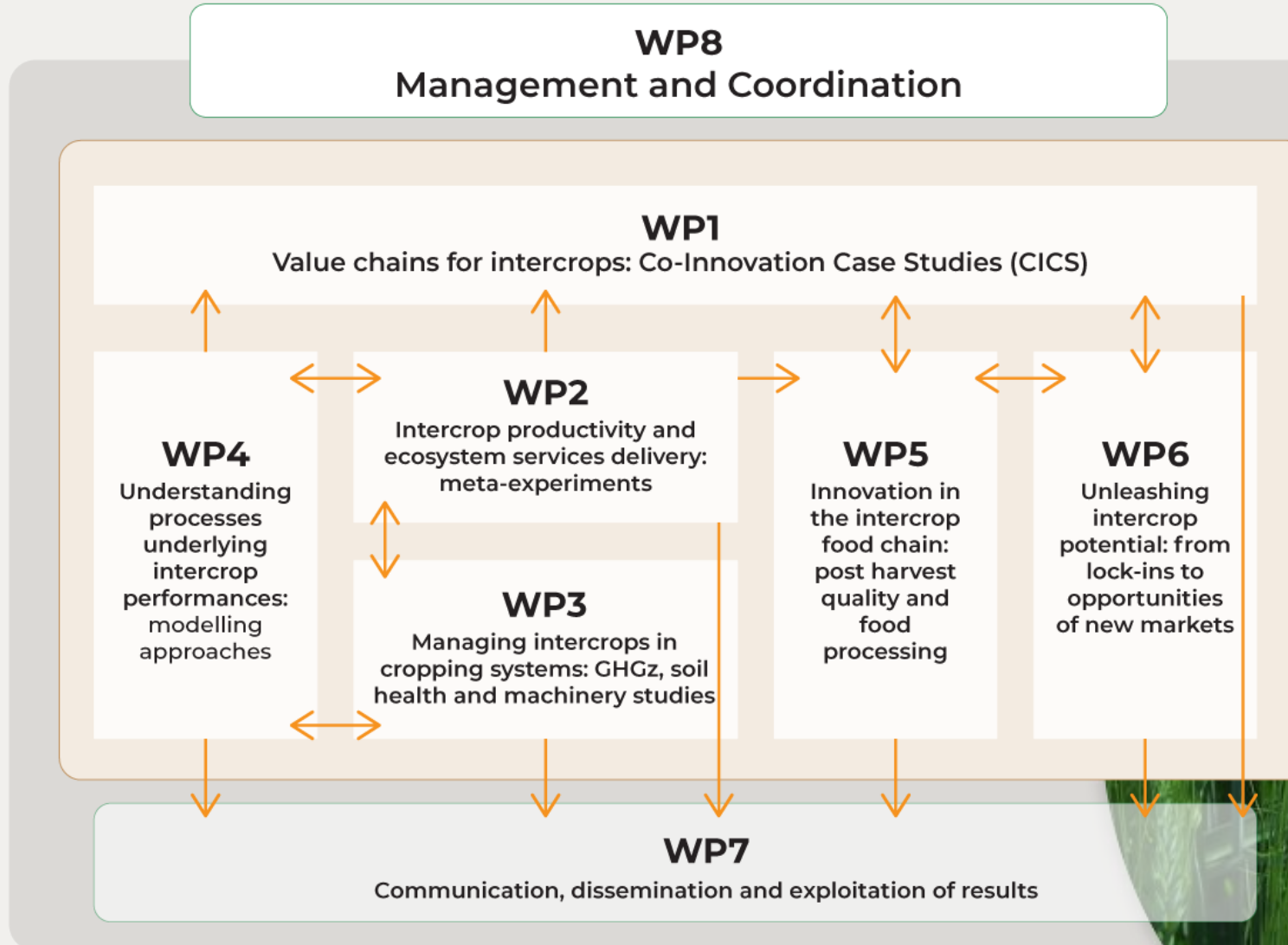
6

To uncover **key barriers** and levers at the value chain level to **boost the transition** towards intercropping practices throughout EU agriculture.

Barriers and levers

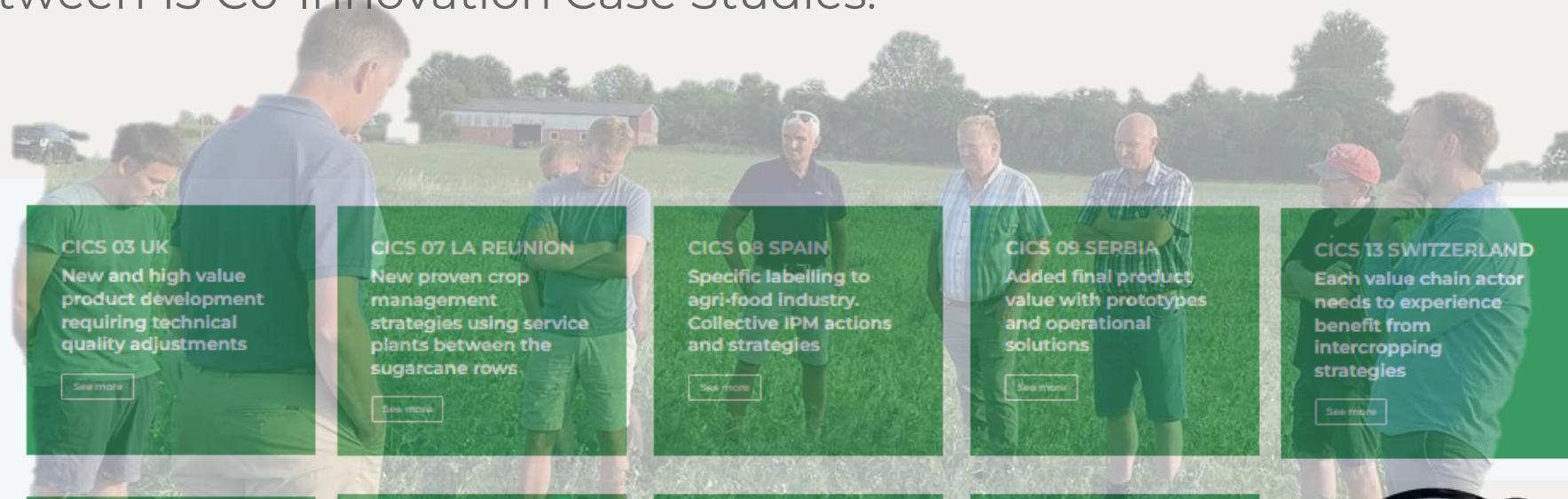


Structure



Work package 1

This team aims to **meet contextualized value chain goals to ensure sustainable agroecological transitions** while analysing and monitoring coupled innovation processes through iterative actions and learnings within and between 13 Co-Innovation Case Studies.



CICS 01 DENMARK
New business opportunities along local food value chains – including educational aspects

[See more](#)

CICS 02 SWEDEN
Increased market demand for locally produces, value addition, unlocking from local to national

[See more](#)

CICS 03 UK
New and high value product development requiring technical quality adjustments

[See more](#)

CICS 07 LA REUNION
New proven crop management strategies using service plants between the sugarcane rows

[See more](#)

CICS 08 SPAIN
Specific labelling to agri-food industry. Collective IPM actions and strategies

[See more](#)

CICS 09 SERBIA
Added final product value with prototypes and operational solutions

[See more](#)

CICS 13 SWITZERLAND
Each value chain actor needs to experience benefit from intercropping strategies

[See more](#)

CICS 04 FRANCE (SW)
Develop mixtures of species for food innovations adapted to original low productivity contexts

[See more](#)

CICS 05 GERMANY
New product development including technology and adjustments/redefining regulations

[See more](#)

CICS 06 GREECE
New sustainable products for local markets including new machineries and adaptation

[See more](#)

CICS 10 FRANCE (W)
Local/regional values chains, up to national to bring out other groups in FNCUMA network

[See more](#)

CICS 11-ITALY
Environmental service clarifications including technical equipment optimization and investment

[See more](#)

CICS 12 MOZAMBIQUE
“Global south” model building with the transition from subsistence to commercial family farming.

[See more](#)

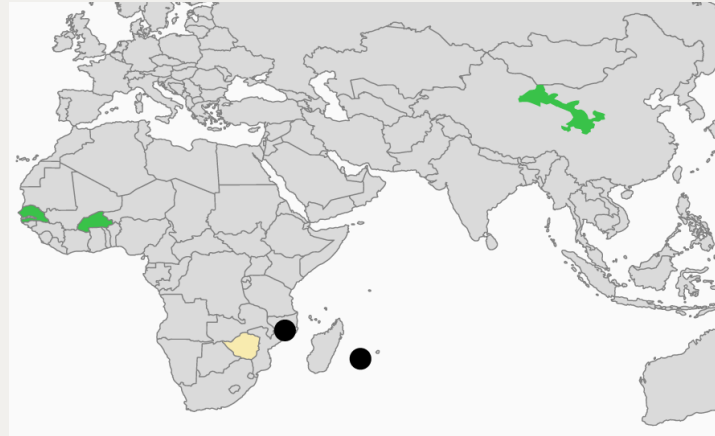


Work package 2

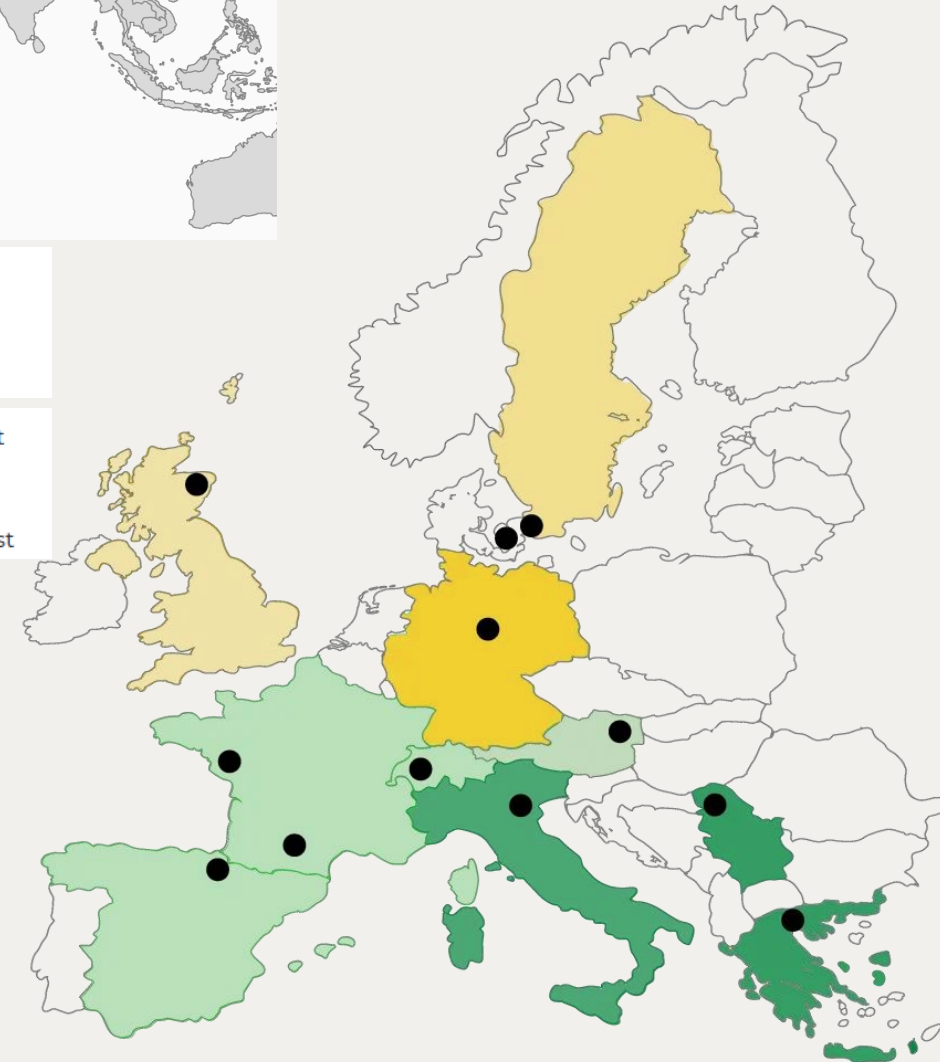
This WP will **assess yield performance and yield stability of intercrops vs. sole crops** and identify determining pedo-climatic conditions as key factors, which explain results and performance variation under local conditions.

It will also evaluate the efficiency of abiotic resource use and determine factors of grain nutrient composition.

Finally, it will evaluate the Ecosystem Services delivered by intercropping in terms of weed, pest, and disease control and associated reduction of yield gaps or reduction of pesticide use.



- 4 Hypotheses test
- 4 Hypotheses test + C*G*E*M interactions test
- 4 Hypotheses + N2O emissions test
- 4 Hypotheses + C*G*E*M interactions and N2O emissions test



Work package 3

This WP aims to **produce and deliver more widespread, original, and relevant practical knowledge** on the management and assessment of practices at different levels of the cropping system.

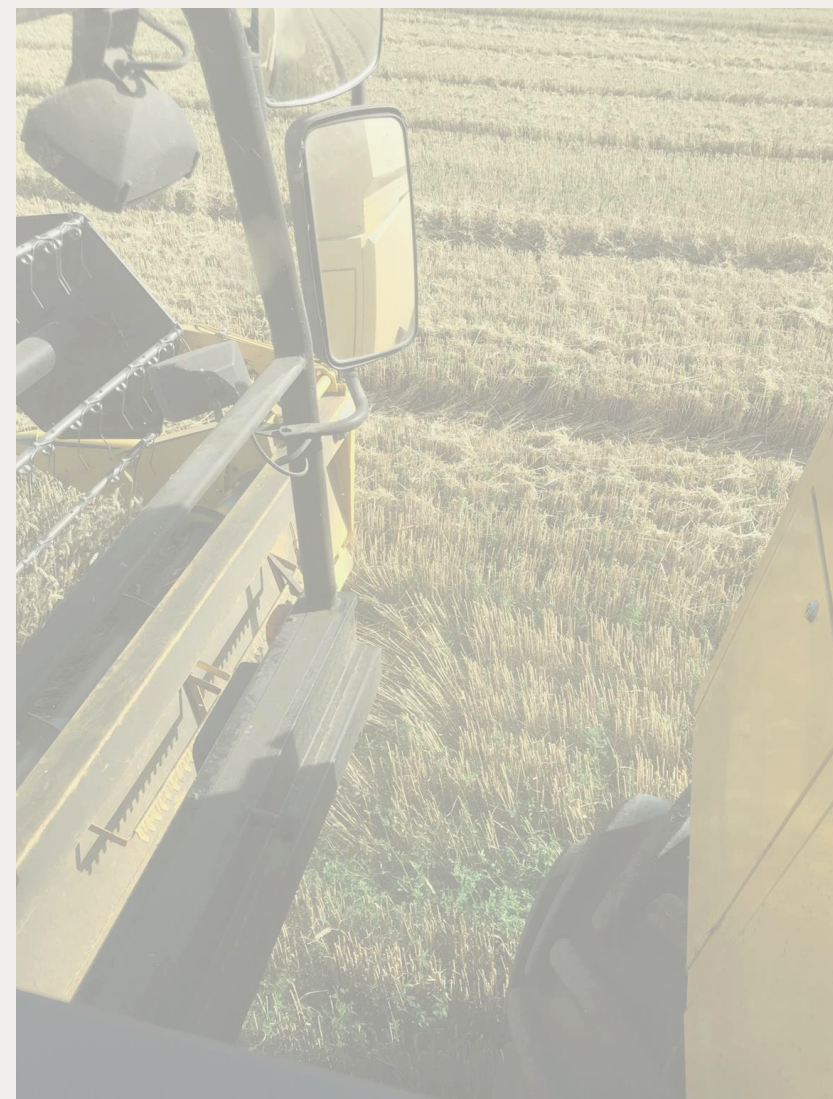


Soil health as an indicator of the value of intercroops in cropping systems

GHG (nitrous oxide) emissions from intercroops and succeeding fallow period

Evaluating intercrop performance, ecosystem services, and disservices

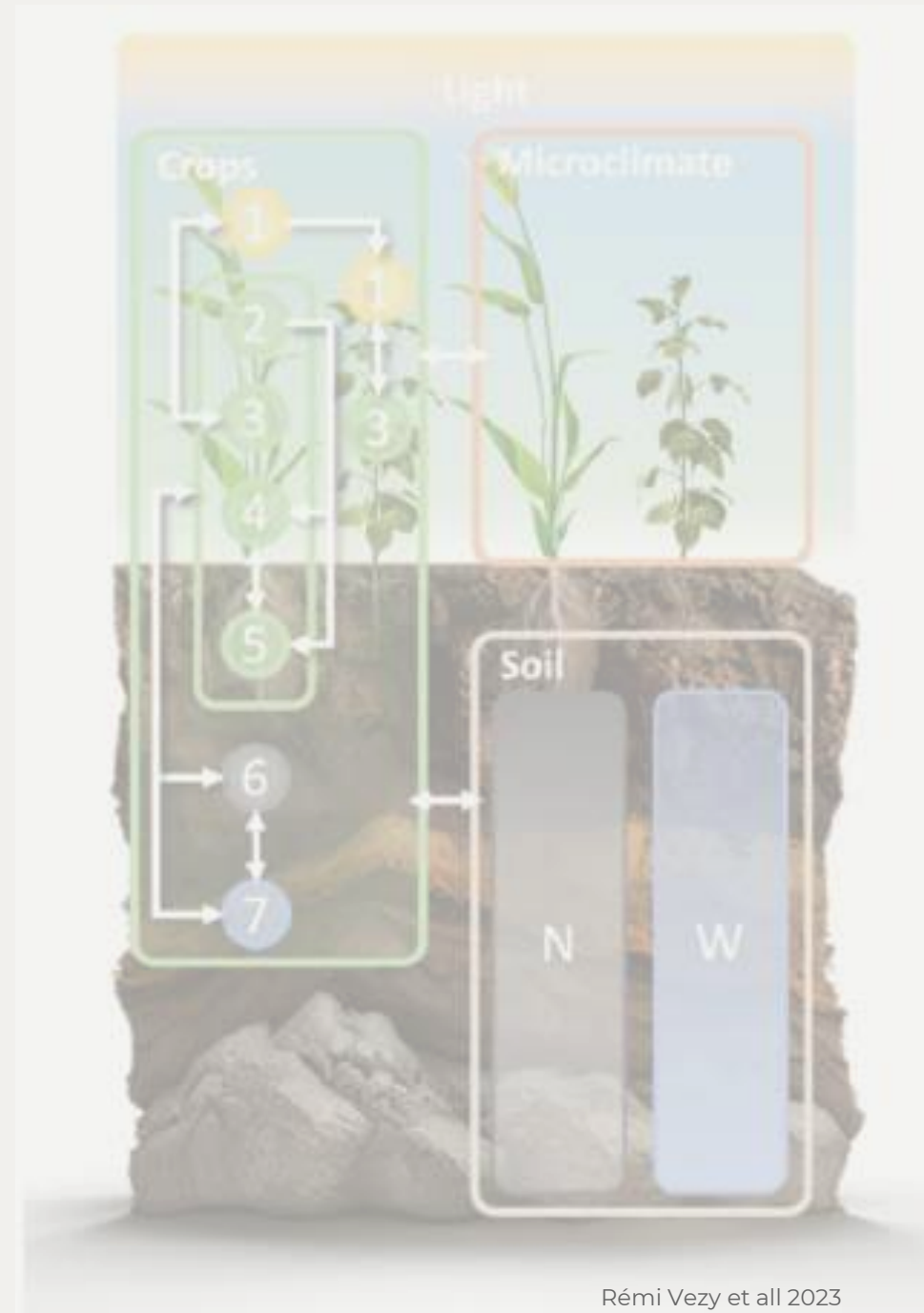
Tracking **innovative machinery** designed by farmers, and studying their use for the production and for cleaning/sorting of grains after harvest



Work package 4

This team will **use models to estimate the performance of intercrops for specific field designs and conditions.** With such information trade-offs between performance optimization and farm management will be analysed.

They will perform in silico explorations with different species, genotypes, designs and environments to quantify interactions between crops, ecosystem services and disservices, and to find optimal field designs and ideotype combinations.



Work package 5



WP 5 will **assess the qualities of grains harvested from cereal-legumes intercrops**, to evaluate the possibilities for original development in different value chains.

It will analyse the co-innovation processes and the impact of cropping modalities on some processing operations within some CICS.

Finally, it will analyse the possibility, and consequences, of incorporating a certain percentage of the second species into the main crops.

Work package 6

This team aims to **uncover the key lock-ins and potential levers, at the food system level**, to transition towards intercropping practices and provide a set of potential market avenues for products resulting from intercropping practices across several European countries and **Southern countries**.



Work package 7

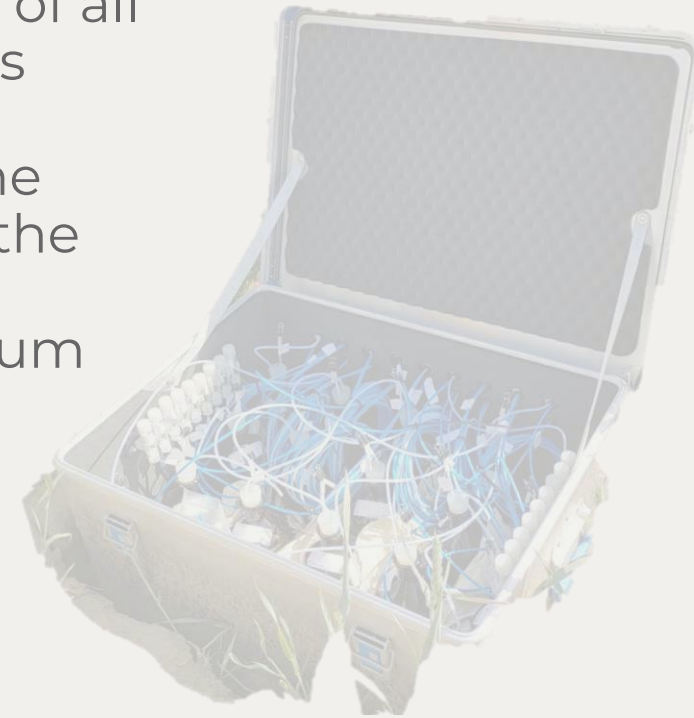
Responsible for the **dissemination of intercropping among the general population**, it will transfer the knowledge acquired during the project to the various value chain groups and to consumers, through digital tools adapted to each group according to their knowledge, interest, language, and usual media source.

It will also strengthen the communication between value chain actors involved in the project and jointly identify the most appropriate exploitation routes and strategies for the results.

Work package 8

WP 8 will ensure the proper management of data **coming from the project and shared by the partners**.

This team also ensures proper management of all the gender and ethics aspects and the implementation of the project according to the work plan, Grant Agreement, Consortium Agreement, and all financial aspects.





Participants



27 participants

15 countries

3 continents: Europe, Africa, Asia



In a nutshell



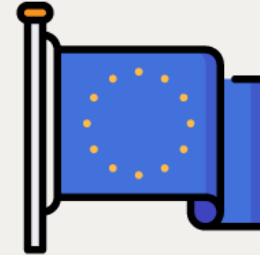
Duration

4 years (01/11/22 – 30/10/26)



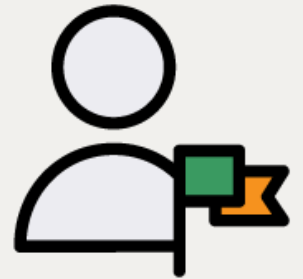
Budget

8 million euros



Funding

European Union
(HORIZON-CL6-2022-BIODIV-01)



Coordination

CIRAD (France)



Outputs:

32 practice abstracts, 4 policy briefs, 13 country final events, 2 conferences, scientific publications, workshops, 13 project videos, 25 partner videos, 6 infographics, 100 popular articles,



INTERCROP VALUES

 Funded by
the European Union

