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PROJECT

WP3

Widening value recognition

UNISG, DIL, FAO, AUA, UCP, JHI, UNIVPM, CONAT, DIKOT, IAI, CRPA, ILU, HiW

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What is an underutilised crop?

Valuable species, landrace, variety or cultivar that has limited current use in a given geographic, social, and economic context and that holds great promise to diversify agricultural systems, create resilient agroecosystems, diversify diets, and create economically viable dynamic value chains (for feed, food, and non-food uses).

WP3 Objectives

- O3.1 Promote the role and work of farmers and farming communities to expand the value of UCs
- O3.2 Evaluate the Ecosystem services (ES) of UCs
- O3.3 Optimise small-scale technologies for UCs for farmers to develop and market new products
- O3.4 Formulate product prototypes using the most promising fractions and ingredients
- O3.5 Characterise the nutritional value and sensory quality evaluation of UC food products
- O3.6 Transfer technology of novel food and technical uses and conduct quality safety assessments

Deliverables for WP3.1

Videos, brochures and report



The videos and brochures

Selection of AURORA candidates

- starting from an initial list of 6, reduced to 4 farms rather than research centers
- coordinate with UNISG
- budget constraints

The purpose of the deliverables

- raising awareness about underutilized crops
- highlighting the role of farmers
- highlighting the role of traditional knowledge
- raising awareness about potential uses of UCs

Simple language to address the general public

Interviews and footage obtained on site

Editing and post processing to prepare videos and brochures



Bere Barley
Orkney Islands



Videos shot in July 2022





T3.2

Recognizing the environmental and societal value of UCs

Lead: UNISG

Participants: AUA, UCP, JHI, UNIVPM, CONAT, DIKOT, IAI, CRPA M1-M48

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AIM

To evaluate the role of ecosystem services delivered by UCs in order to identify resilience and benefits of UCs.

Giovanni and Caio in a field of local landraces of common wheat in Piedmont, Italy

METHODOLOGY AND ROADMAP



2022

Literature review process to draft the framework for the assessment of ESs provided by UCs

2 Participatory workshops to gather feedback on the framework, carried out with researchers, farmers and other food chain stakeholders:

- June 2022 in Athens, Greece
- July 2022 in Orkney, Scotland

Definition of the framework to be tested in case studies

2022 - 2023

Testing of the framework in 7 farms across Europe

Adaptation of the framework to be used as a self-assessment tool

24 Selected Ecosystem services



Provisioning	Food
	Feed and fodder
	Fibre and raw materials
	Cosmetics and medicines
	Timber
	Energy
Regulating and supporting	Increase C sequestration
	Reduce C emissions/ <u>mineralisation</u>
	Increase N fixation
	Reduce N emission
	Enhance soil fertility (biological, physical, chemical)
	Minimise soil erosion
	Water quantity and quality
	Nutrient cycling
	Pest and disease control
	Climate regulation
	Pollination
	Wind protection
	Fire protection
	Biodiversity at landscape, specie and genetic dimension

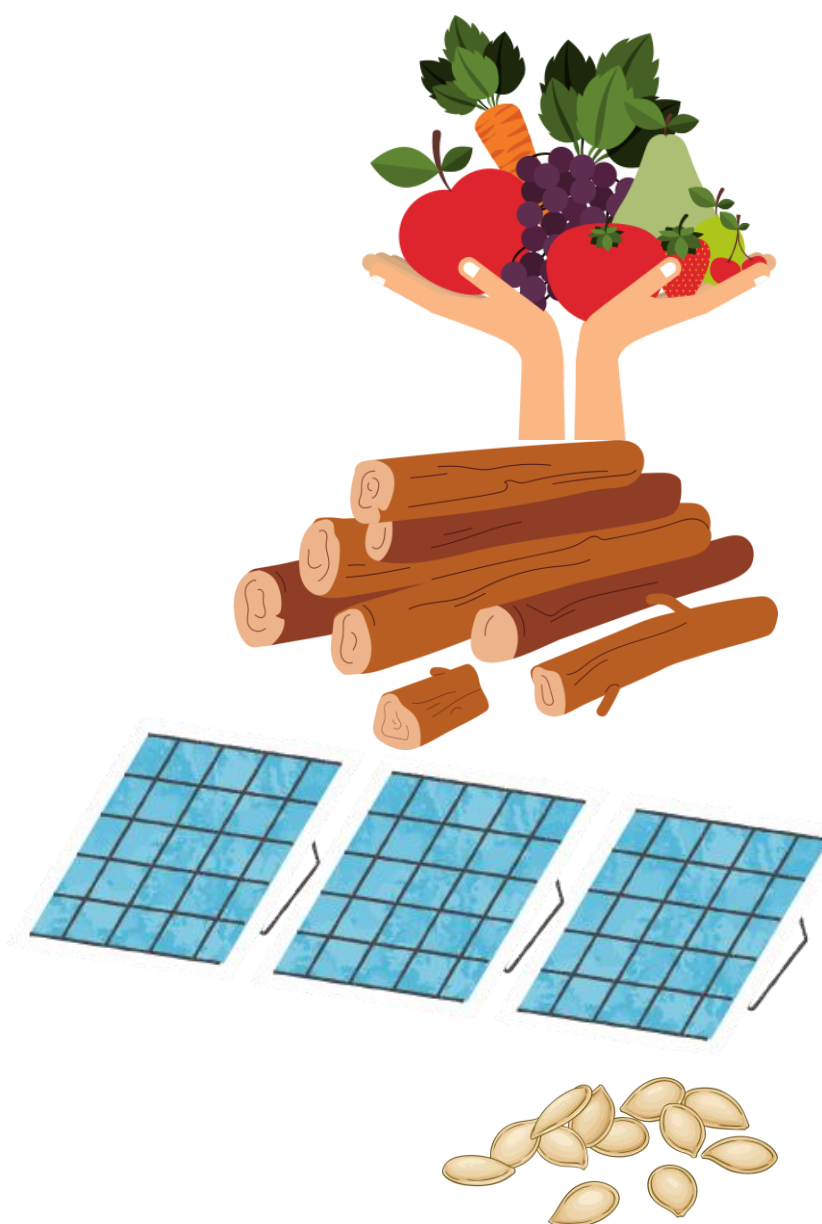
Cultural	Aesthetic value
	Cultural heritage
	Recreation and tourism
	Education and science



Selected Indicators



For Provisioning ESs:



Indicators to assess the Provisioning Ecosystem Services	
Indicators	Value (1-5)
Food: legumes, grain, vegetables, fruit, meat and animal products	According to the perspective of the farmer on the yield. It can be 1 - not satisfied, 3 - average satisfied, 5 - very satisfied
Feed and fodder	1 - not satisfied, 3 - average satisfied, 5 - very satisfied
Fibres and raw materials	1 - not satisfied, 3 - average satisfied, 5 - very satisfied
Cosmetics and medicines	1 - not satisfied, 3 - average satisfied, 5 - very satisfied
Timber	1 - not satisfied, 3 - average satisfied, 5 - very satisfied
Energy	1 - not satisfied, 3 - average satisfied, 5 - very satisfied
Genetic resources (number of species)	According to the number of crops adopted at farm level: 1- 1 crop, 3 - 3 or more crops, 5 - 6 or more crops
Genetic resources (number of varieties)	According to the number of varieties adopted at farm level: 1- 1 variety per crop, 3 - 2 varieties per crop, 5 - 3 or more varieties per crop



Selected Indicators

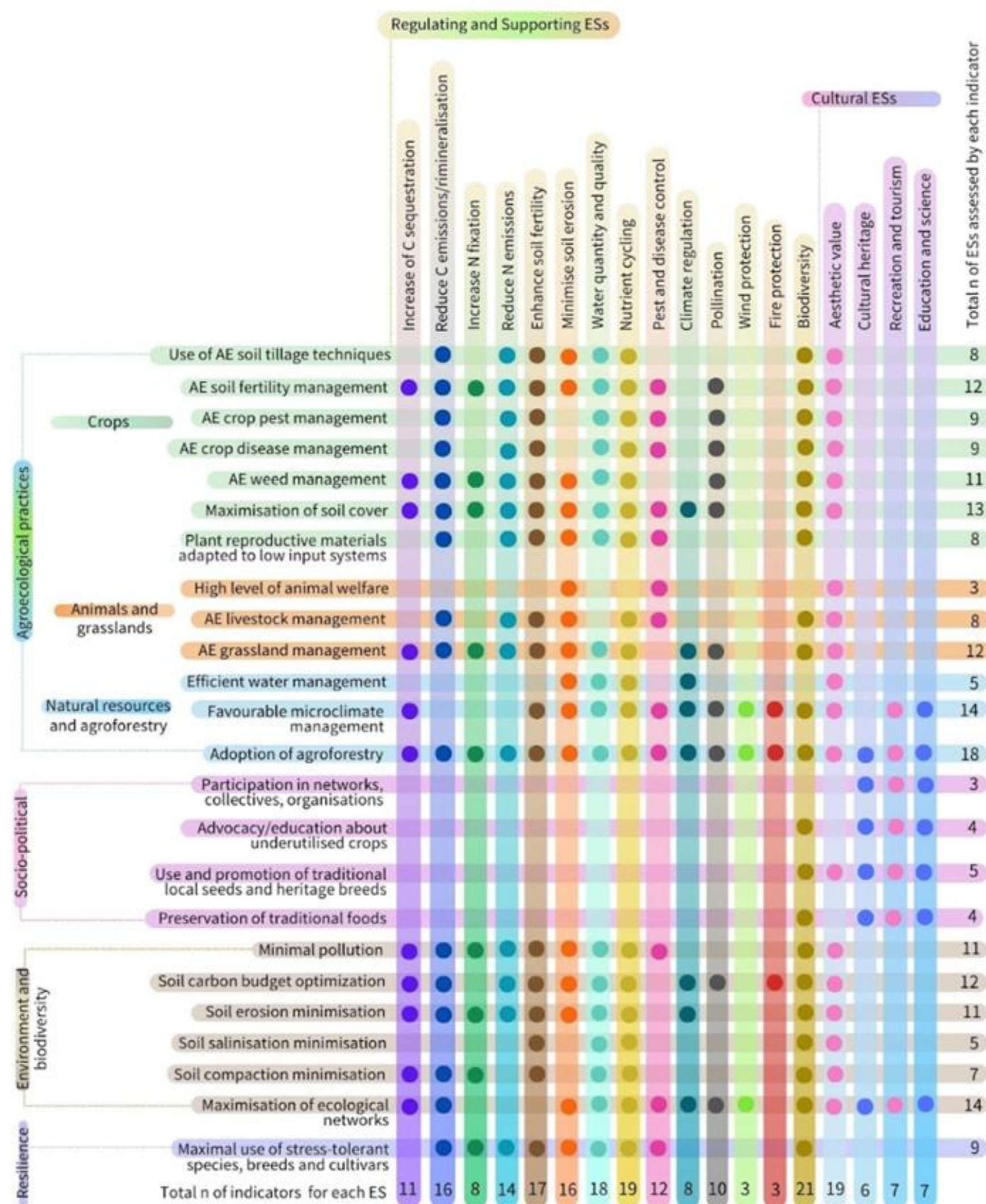
For Regulating, supporting and cultural ESs:

Indicators selected from **OASIS methodology**

25 indicators, 5 main categories:

- Agroecological farming practices
- socio-political aspects
- Environment and biodiversity
- Resilience

Each indicators had been connected to the ESs they contribute to



Scoring of the indicators



OASIS

THE ORIGINAL AGROECOLOGICAL SURVEY INDICATOR SYSTEM

Methodology and guidelines for the assessor.



<https://www.agroecology-europe.org/oasis-brochure/>



1.1.1

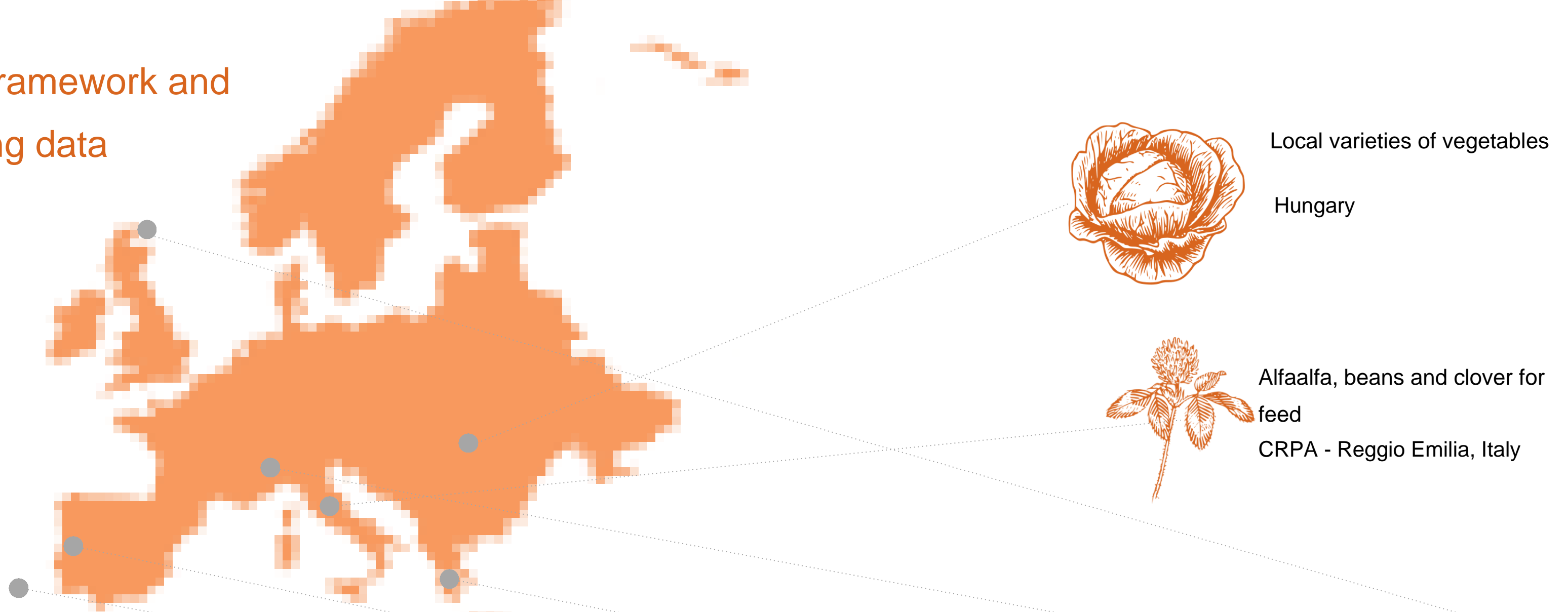
Use of agroecological soil tillage techniques

SCALE

- 1 deep ploughing (more than 30 cm in depth) or rotavating several times per year
- 2 rotavating or deep ploughing once a year
- 3 ploughing maximum 30 cm in depth and/or using power harrow once a year
- 4 reduced tillage up to 5 cm (e.g., superficial disc-harrowing, wide-cutter or rotary hoe), strip tillage, ridge tillage
- 5 no-till

Testing of the framework and collecting data

2022-2023



Leafy greens
Biofontinhas -
Azxores islands



Acorns
Freixo do Meio -
Portugal



Beans and lentils
Feneos - Greece



Local landraces of Wheat
Papavero Rosso - Piedmont, Italy



Bere Barley
Orkney -
Scotalnd UK

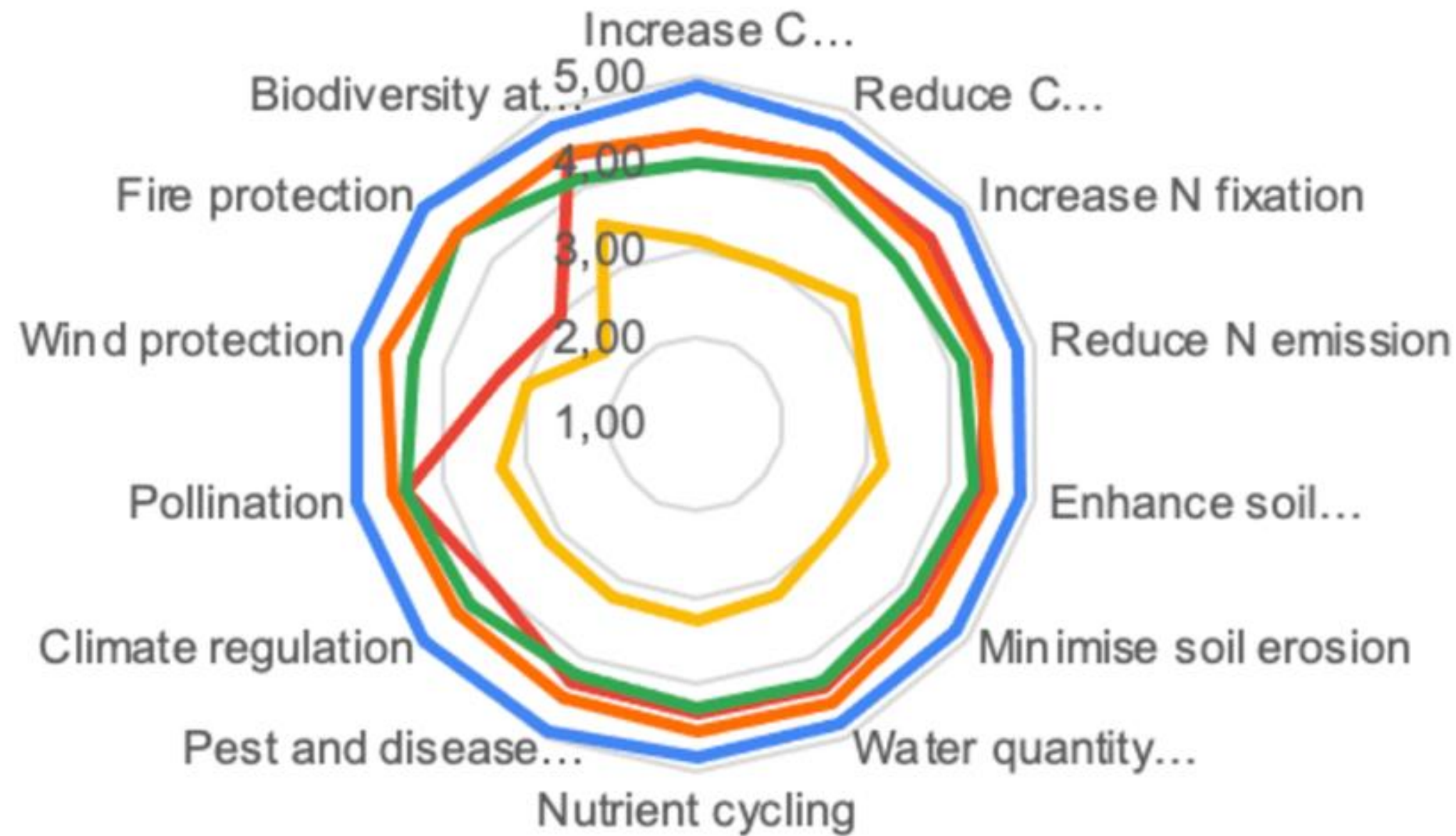
Results



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Regulating and Supporting ESs

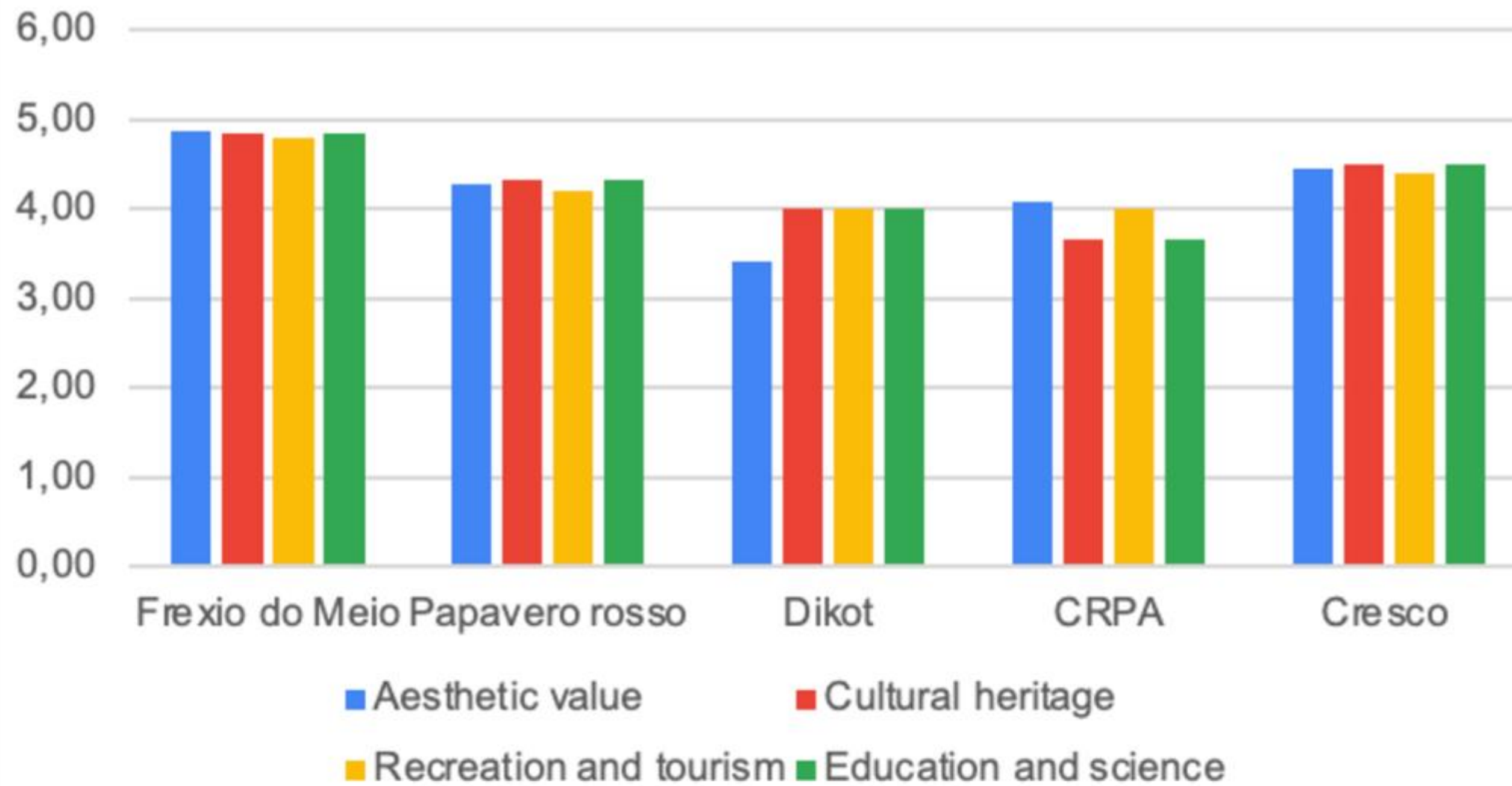
— Frexio do Meio — Papavero rosso — Dikot — CRPA — Cresco



Results



Cultural Ecosystem Services



Now we play!



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- Division in 2 groups
- Who we are? Name + underutilized crop (UC) I'm connected with/ I like
- Task: connect **Agroecological Practices** with **Ecosystem Services** thinking your UC: A0 with ES + cards with AP you have to put on each ES + 1 rapporteur

- We go back in Plenary
- the 2 rapporteurs explain and illustrate their choice

- **How to implement ES with AE?**
Individual in silence + sharing



T3.3

Fast toolkit to assess ESs delivered by UCs

Lead: UNISG;

Participants: AUA, UCP, JHI, UNIVPM, CONAT, DIKOT, IAI, CRPA, ESSRG

M1-M48

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From the work done in task 3.2

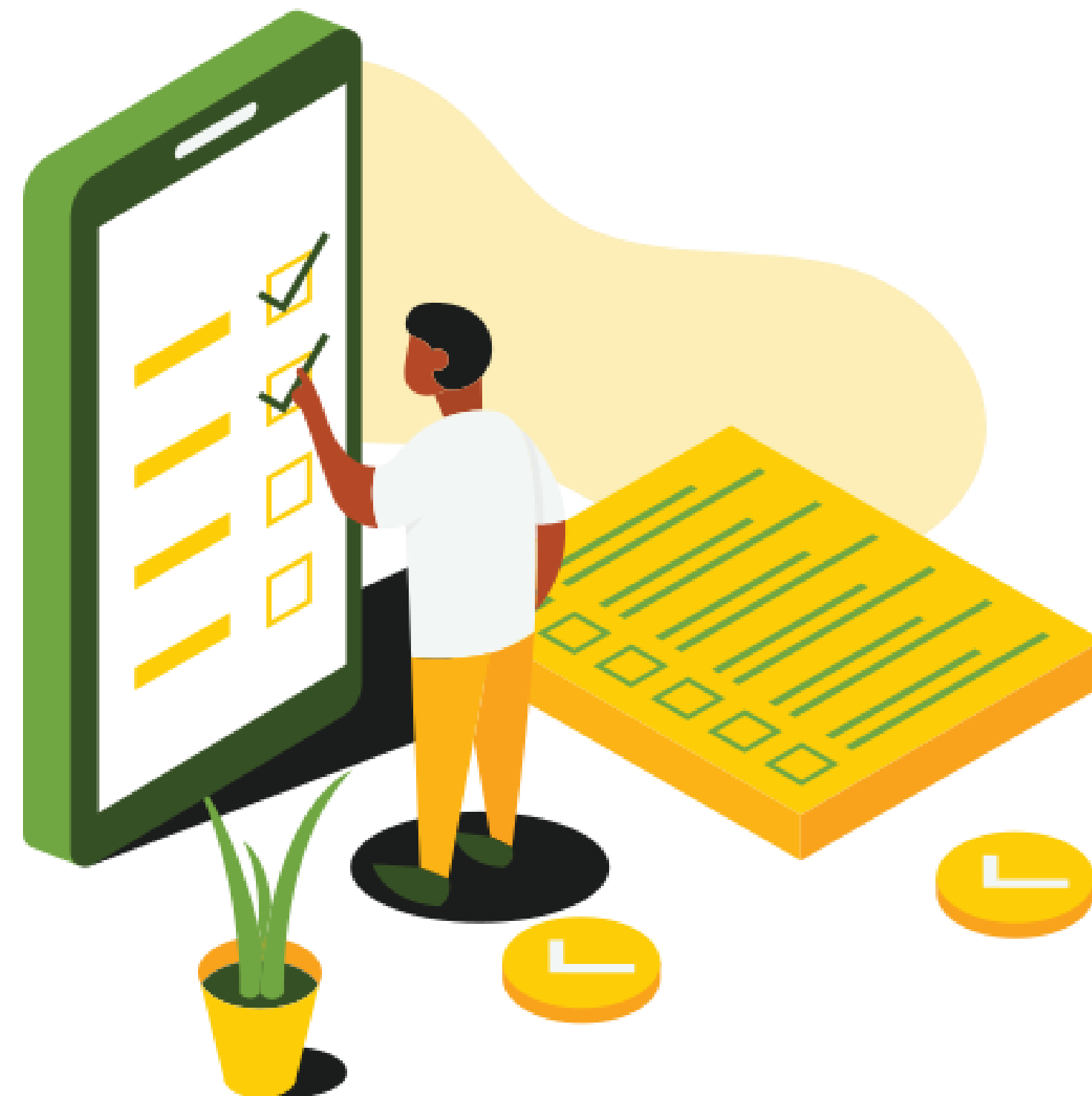
we will deliver a toolkit for farmers, translated into different languages that will help them capture the ESs offered by UCs



Time to answer some questions



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https://pollenzo.qualtrics.com/jfe/form/SV_0CWw8FxTjPIc1sq



Thank you!



Montado System at
Freixio Do meio

Videos shot in August 2022

