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Payment for environmental results in the
Portuguese Montado:
progressing in local co-construction

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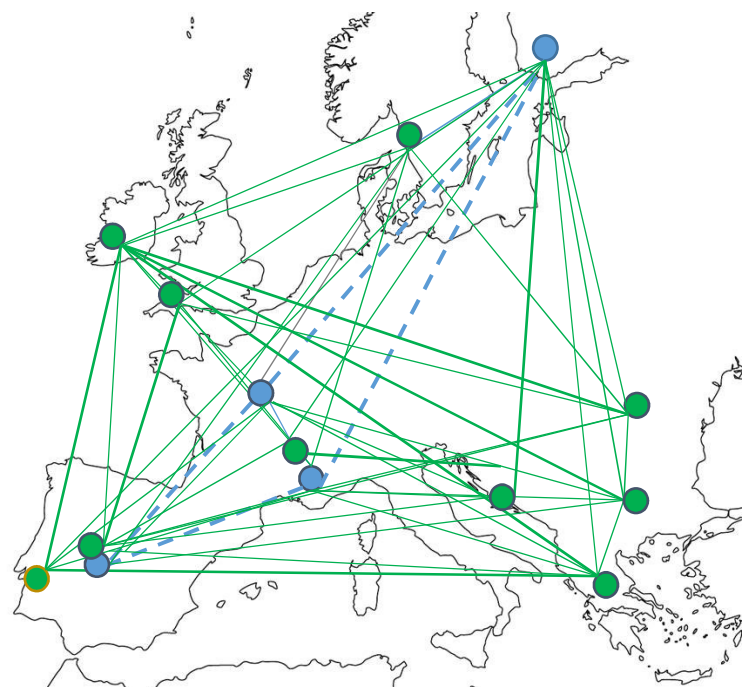
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The HNV-Link project (H2020-CSA) 2016-2019



- Focus on HNV: High Nature Value Farming
- Development and sharing of innovative strategies and practices which support HNV farming systems and the communities that interact with them

10 Learning Areas (specific sites):



Western Stara Planina, Bg *Eastern Hills of Cluj, Ro*
Dalmatian Islands, Hr *La Vera, Extremadura, Es*
Thessalia, El *Vastra Gotaland, Se*
Causses & Cévennes, Fr *Dartmoor, UK*
Sítio de Monfurado, Pt *The Burren, Ie*



improving economic viability
& environmental efficiency

multi-actor clusters

participatory methods for co-construction

cross-visits to the
Learning Areas

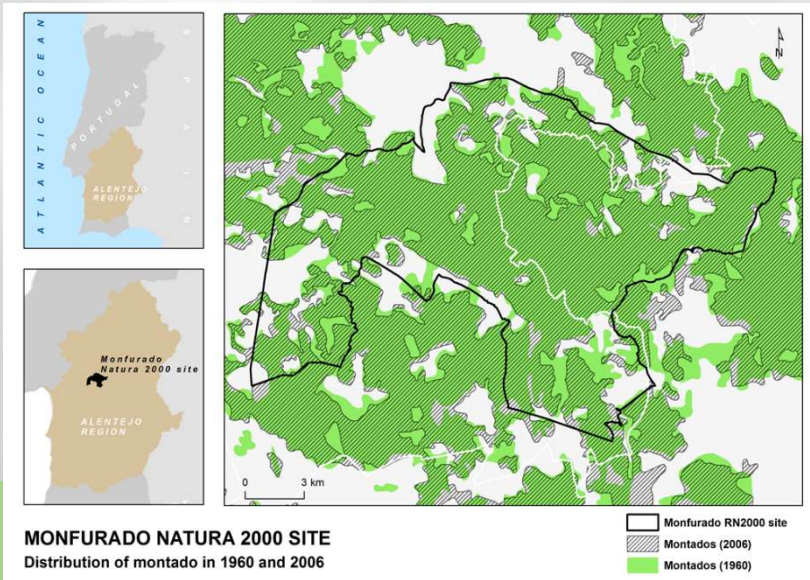


Portuguese Learning Area: Monfurado Natura 2000 site

Montado

priorities

- Regeneration of **tree cover**
- Conservation of **biodiverse pastures**
- Conservation of healthy and functional **soil**
- Preservation of **diversity and habitats**
- Promotion and branding of specific and unique **products**



which tools ?... result-based agri-environmental schemes



»» a more flexible and performance based CAP

»» **HIGHER** the ambition on environmental and climate action

https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/future-cap_en#working



» Farmers play a key role: they have the possibility to **contribute further & be rewarded for going beyond mandatory requirements**

»» place to innovate and experiment

»» calls for **NEW** ways to incentivise farmers to deliver environmental benefits



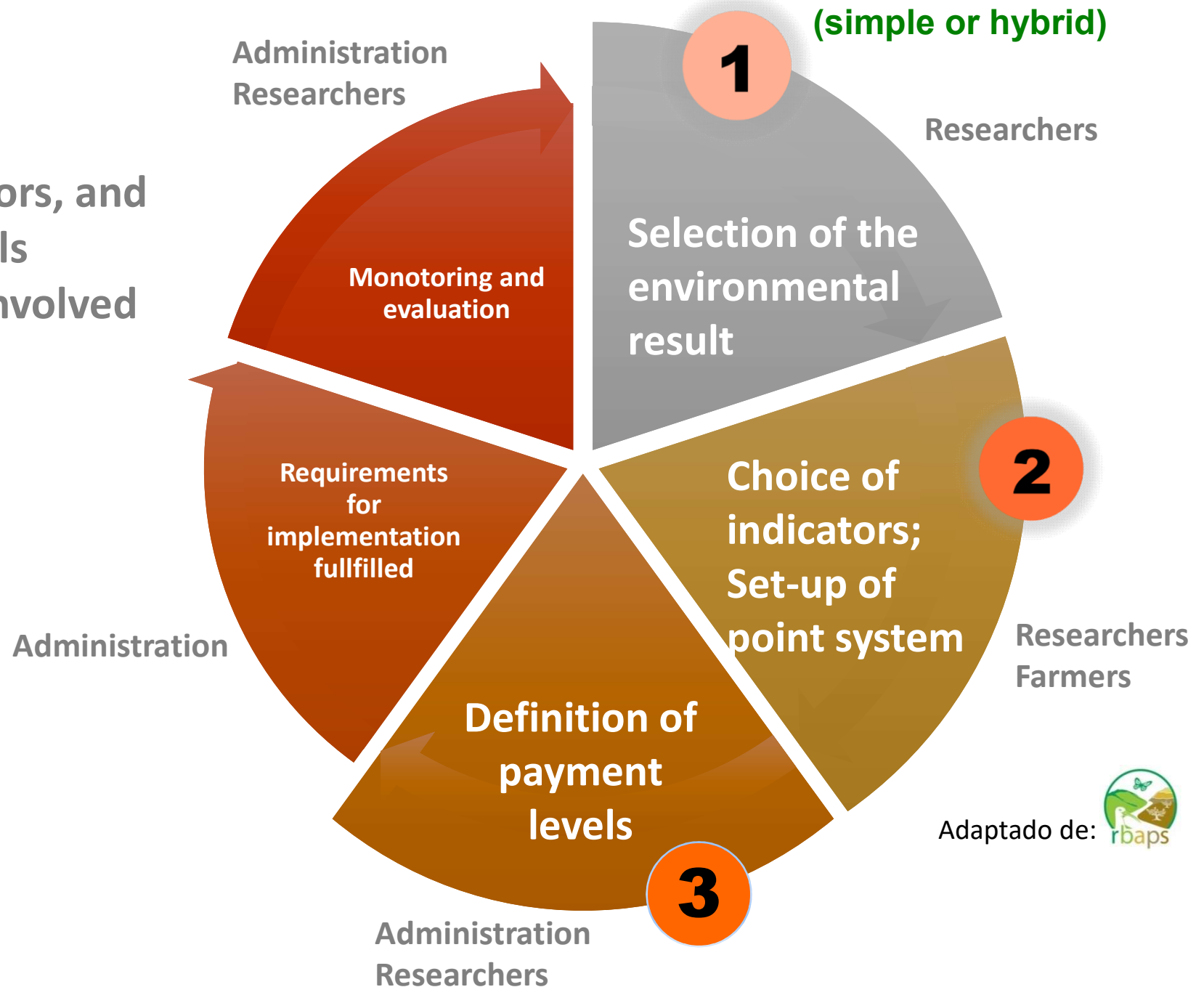
Monfurado / HNV-Link farmers

- * Willing to experiment
- * Co-construction with research and administration
- * Aiming for a pilot scheme



How to build a scheme: Result Based Payments

Different steps
Different » actors, and
» skills
are primarily involved



1

Selection of the environmental result

The environmental result has to be clear:



Be dependent on the farm practices



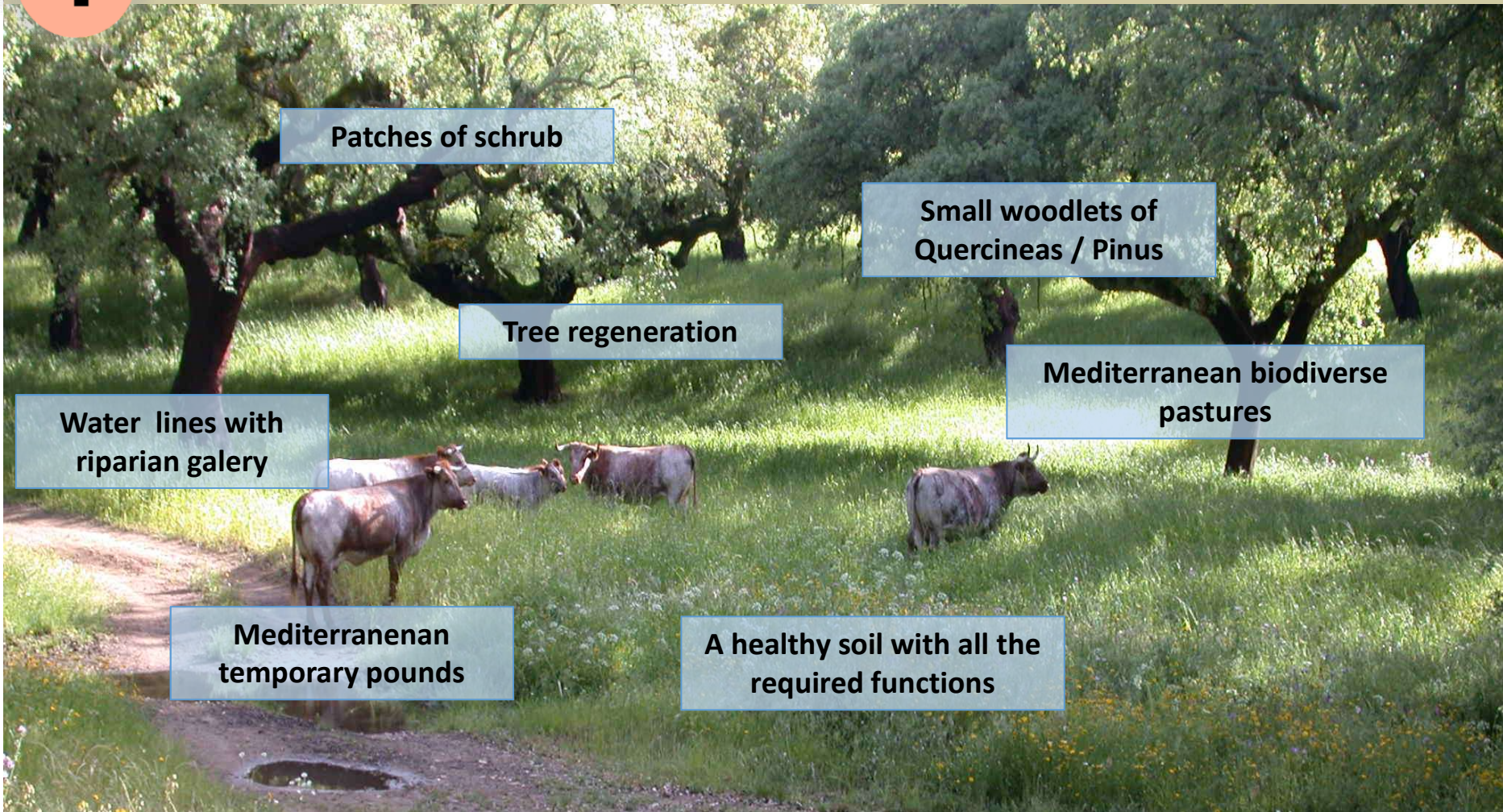
Be an objective of a known conservation state
(conservation priority at Nacional ou Regional level)



Be object of scientific knowledge that allow the
selection of indicators for its evaluation.

1

Selected results for the Montado



Patches of schrub

Small woodlets of
Quercineas / Pinus

Tree regeneration

Mediterranean biodiverse
pastures

Water lines with
riparian galery

Mediterranean
temporary pounds

A healthy soil with all the
required functions



ENVIRONMENTAL RESULT

2

Selection of indicators

Healthy soil with all its functions

FARM PRÁTICE

grazing management

toxicity correction

rational fertilization

no tillage

soil mobilization

Floristic composition below and outside the canopy

☹️ Differences in the floristic composition indicate low levels of fertility

😊 Similar composition



Indicator species

☹️ Presence of Rumex/Margaça indicate low levels of fertility and possible toxicity

😊 Diversity



Erosion

☹️ Presence of uncorvered soil and depressions indicate erosion

😊 Absence of signs of erosion





ENVIRONMENTAL RESULT

2

Selection of indicators

Tree Regeneration

FARM PRACTICE

grazing management

soil mobilization

tree protection

tree plantation

Number of regeneration layers

☹ No regeneration

☺ Different layers of regeneration
30 a 80 cm
80 - 150 cm
>150 cm





ENVIRONMENTAL RESULT

2 Selection of indicators

Mediterranean biodiverse pastures

FARM PRACTICE

grazing management

pastures improvement

rational fertilization

soil mobilization

cultivation of pastures

Floristic composition

☹️ Dominated by one species

😊 Species diversity in grass legumines and other herbaceous



Indicator species

☹️ Presence of thistles/nettles indicate over-grazing

😊 Presence of *Poa bulbosa*/*Trifolium subterraneum*



Degree of soil cover

☹️ Presence of uncovered soil indicate over-grazing
Dry grass at the end of summer indicate under-grazing

😊 High degree of soil cover

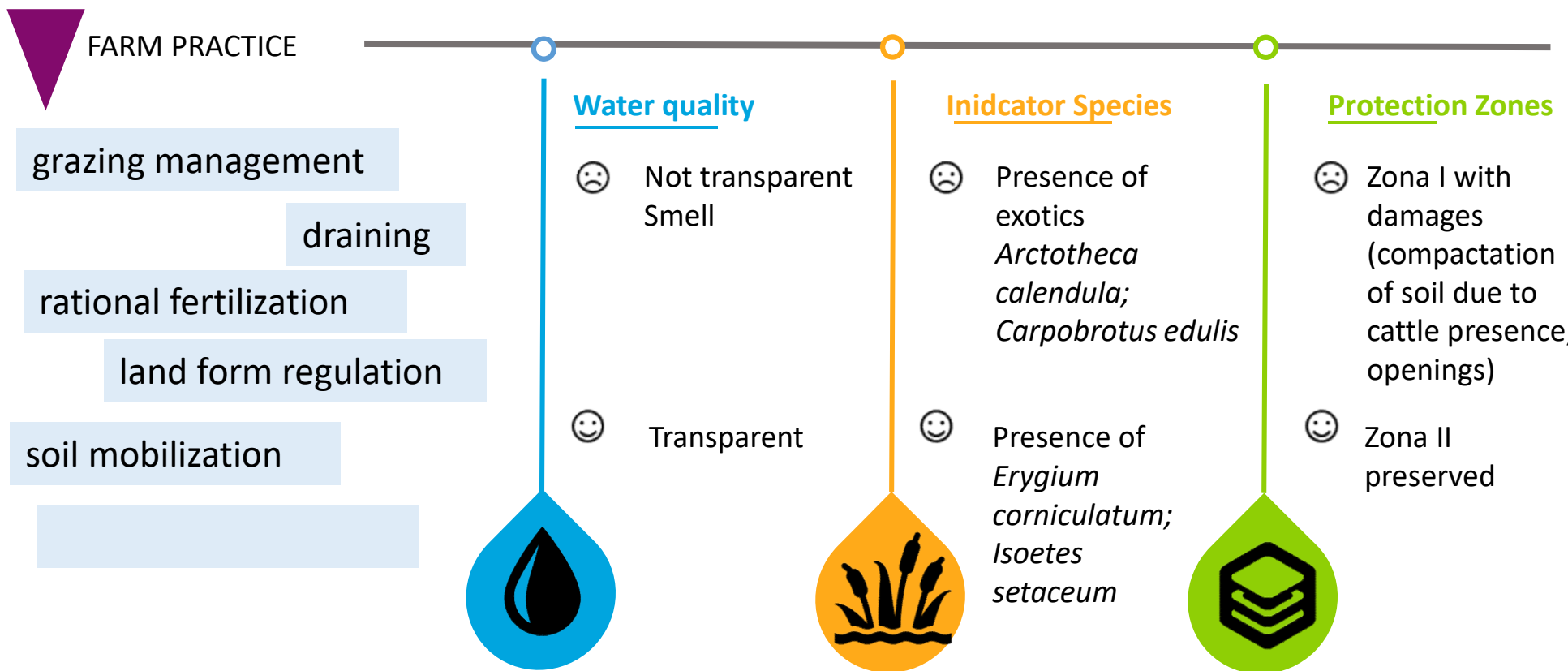




ENVIRONMENTAL RESULT

2 Selection of indicators

Temporary Pounds



2

Point System:

1 – 10

- ✓ Indicators have to be **quantifiable**
- ✓ Indicators must reflect the condition of the defined **Environmental Result**
- ✓ Need to check their applicability **in the field**



Programa Montado - Produzir e Conservar: uma proposta para a construção de um caso piloto de pagamentos por resultados

A. Healthy and functional soil

A1. Are there differences between the floristic composition under and outside tree canopies?

Very evident difference	Intermediate level	Some difference	Intermediate level	No difference
<i>There are clear circles under the canopies with different floristic composition from that outside canopies</i>		<i>There are some patches of resistant herbaceous species</i>		<i>No visible differences in herbaceous floristic composition under and outside tree canopies</i>

A2. What is the combined cover level of negative indicator species?

High	Intermediate level	Medium	Intermediate level	Negligible
<i>>75% Predominance of rumex and/or Anthemis cotula or others with survival capacity in low fertility soils</i>		25-75%		<25%

A3. Is there bare soil and erosion signs

Very high	Intermediate level	Medium	Intermediate level	Negligible
<i>Evident erosion, particularly in slopes.</i>			<i>No signs of erosion, or naked soil.</i>	

B. NATURAL REGENERATION

B1. Is there oak natural regeneration?

Absence	Intermediate level	Regeneration (< 1m)	Intermediate level	Regeneration (> 1m)
<i>Total absence of regeneration</i>				

B2. What is the density of regeneration?

Low	Intermediate level	Medium	Intermediate level	High

C. BIODIVERSE MEDITERRANEAN PASTURES

C1. What is the pasture specific diversity?

Low	Intermediate level	Medium	Intermediate level	High
<i>Absence of legumes species</i>		<i>Impoverished biodiverse pasture - dominance of other than grasses and legume families</i>		<i>Biodiverse pasture</i>

C2. Presence of overgrazing indicator species (cardos, urtigas)

High	Intermediate level	Medium	Intermediate level	Negligible
				<5%

C3. Level of soil cover?

Low	Intermediate level	Medium	Intermediate level	High

D. BIODIVERSITY PROMOTER UNIQUE ELEMENTS

3

Definition of payment levels

A Montado farm is a complex system, with plots and grazing inside and outside the Montado

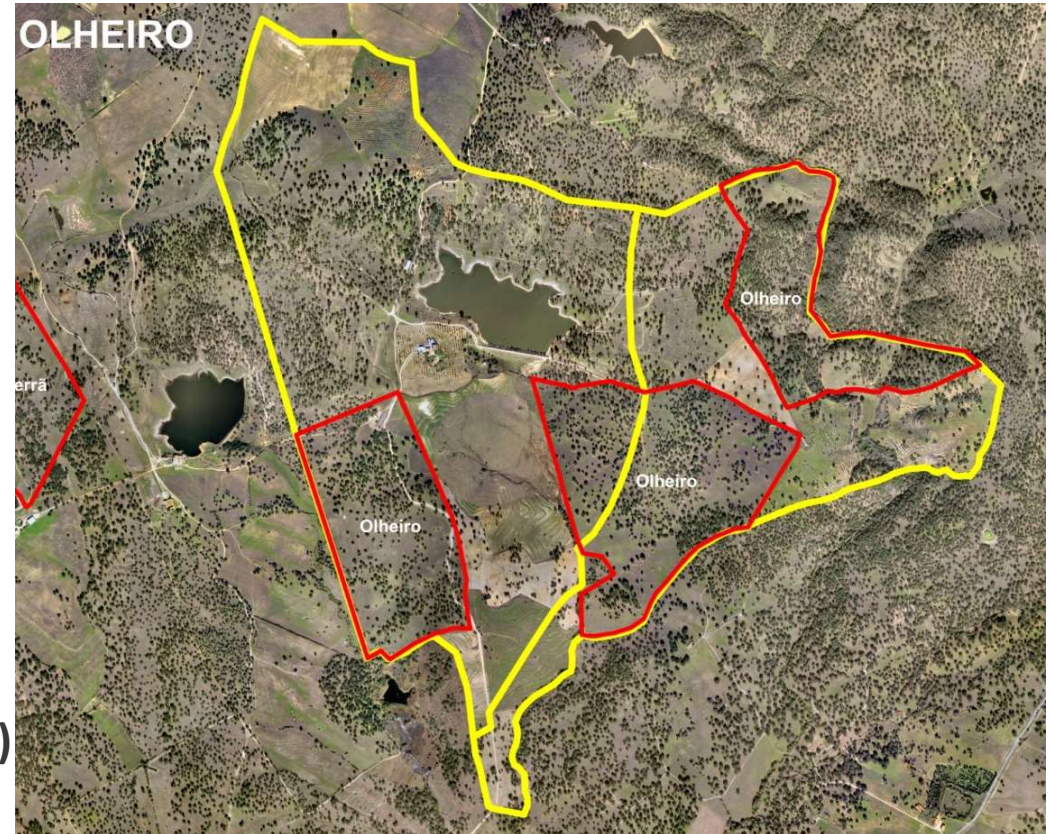
multiple interacting factors to play with

Payment calculated on basis of

- **Income loss**
- **Extra costs**
- **Costs of single investments**

Extra costs » estimations based on

- Total farm budget calculation : too complex
- **Value/price of pastures and grazing needs (UFs) per cow+veal : possible**



EXAMPLE: Monfurado region: grazing in Montado x days/year

Need to reduce grazing period to improve recovery index of pasture's biodiversity ?

Payment level »» estimated based on * extra feed needs and * value of pastures in another plot

**** reducing from 100 to 75 days of grazing in Montado so that the biodiverse pasture regenerate
payment covers cost/cow = 25 days grazing x 8,25 UFs/day**

BUT final payment always depends on RESULT

What have we learned so far ?

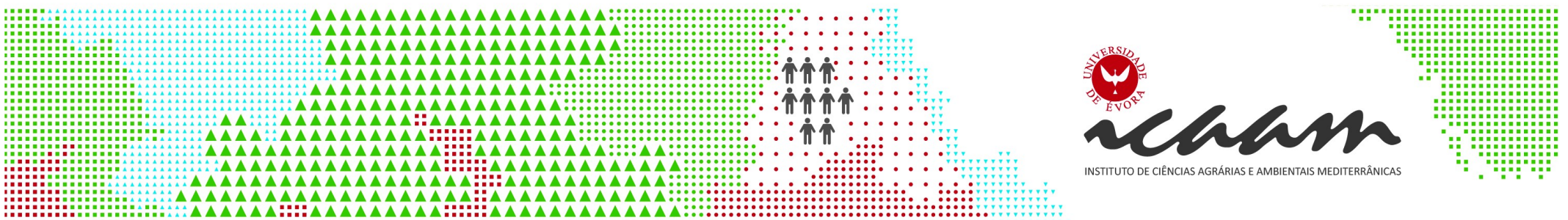
Innovation has good conditions to emerge when different knowledge, perspectives and skills are combined
in a process where actors involved **feel empowered**.

Farmers can act as key drivers: researchers took the lead as **initiators of the innovation process**, but the result-based proposal for the Montado has, step-by-step, been **appropriated by farmers**

Follow up and **constant knowledge transfer and exchange** is key to find adaptive solutions »» fundamental support for successful schemes

Competitive research funding is a supporting mechanism, but **long term investment** is a pre-condition for the co-construction of such a **result-based program**

»»» next step – experimental implementation » pilot



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Many Thanks for your attention
Muito Obrigado pela vossa atenção

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