

Integrating High Nature Value Farmland and novel approaches to agri-environment payments for sustainable agriculture

James Moran



Outline

- **HNV farmland**
- **Results based agri-environment payment schemes**
- **Projects and Lessons Learnt**
 - **RBAPS initiatives**
 - **FARMECOS**
 - **EIP Locally led Opportunities**
 - **EU Innovation Network project: HNV LINK**
- **The Future of Sustainable Agriculture—Innovation, partnership, locally adapted and results orientated solutions**



HNV Farmland in Ireland

- Natural constraints- soils, topography, climate and remoteness
- High biodiversity, landscape and socio-cultural values
- Legal nature designations (Natura 2000), common land
- c.40% of UAA

www.high-nature-value-farmland.ie

<http://hnvlink.eu/what-is-hnv/>

Predicted distribution of High Nature Value farmland in the Republic of Ireland

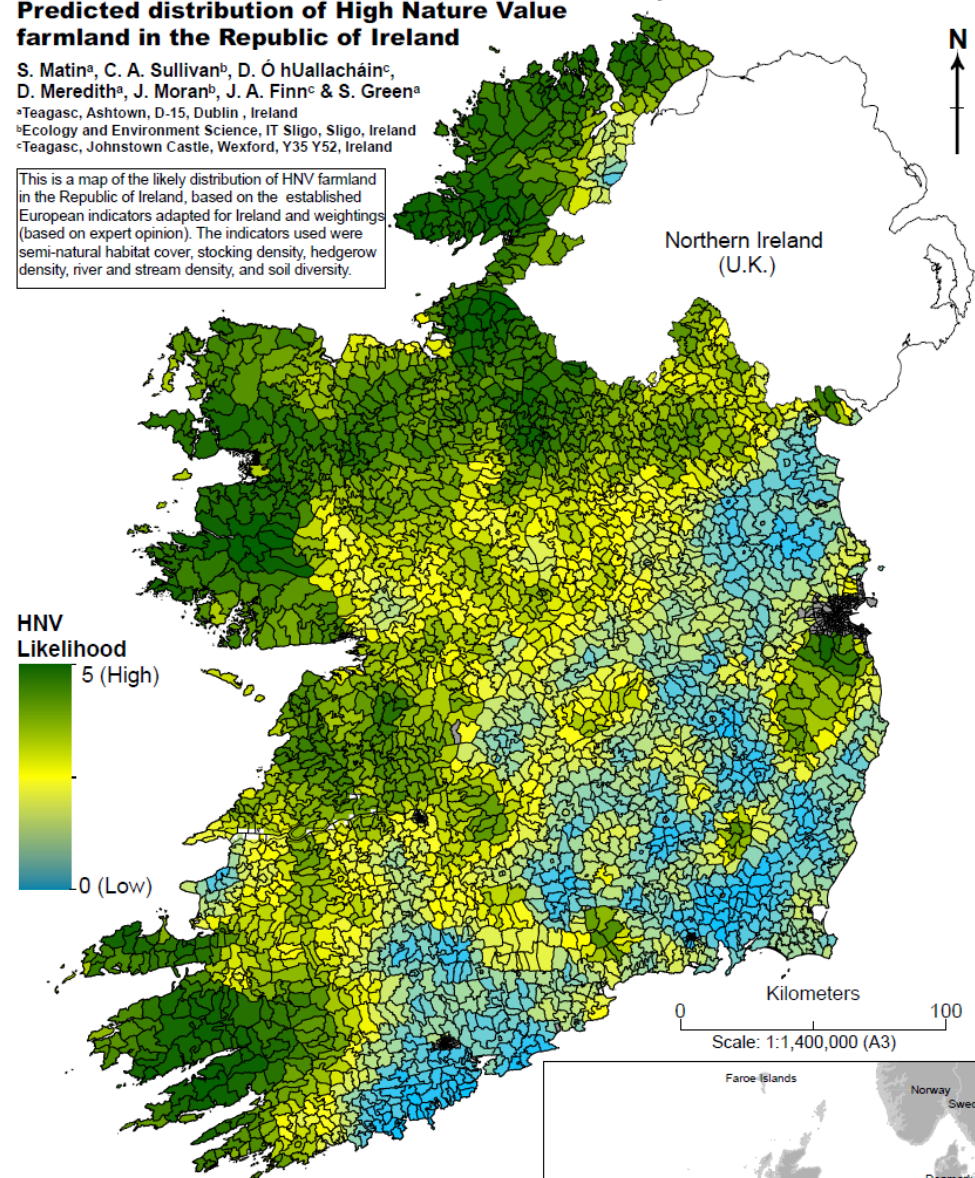
S. Matin^a, C. A. Sullivan^b, D. Ó hUallacháin^c, D. Meredith^a, J. Moran^b, J. A. Finn^c & S. Green^a

^aTeagasc, Ashtown, D-15, Dublin, Ireland

^bEcology and Environment Science, IT Sligo, Sligo, Ireland

^cTeagasc, Johnstown Castle, Wexford, Y35 Y52, Ireland

This is a map of the likely distribution of HNV farmland in the Republic of Ireland, based on the established European indicators adapted for Ireland and weightings (based on expert opinion). The indicators used were semi-natural habitat cover, stocking density, hedgerow density, river and stream density, and soil diversity.



© Journal of Maps, 2016

Map Co-ordinates based on:
Projection: Transverse Mercator
Coordinate System: TM65_Irish_Grid
Datum: D_TM65

Likelihood of HNV farmland occurrence at election at electoral district (ED) scale. A dark green colour (indicating a score of 5) shows EDs with a very high likelihood of HNV farmland occurrence, a blue colour (indicating a score of 0) shows EDs with a very low likelihood of HNV farmland occurrence. A grey EDs indicate urban areas.



Extensive upland areas



Drumlin-wet grasslands



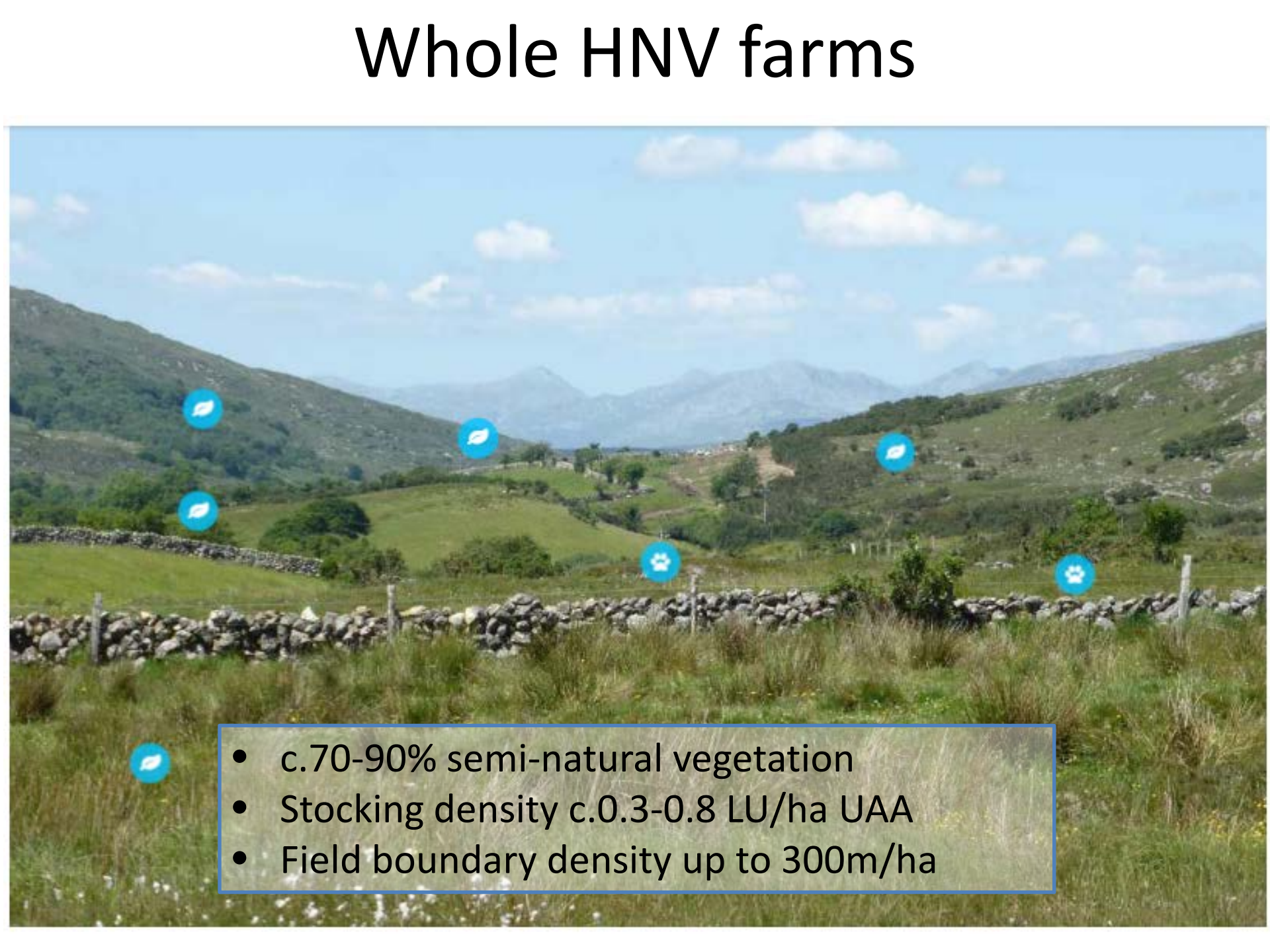
Calcareous grasslands, heaths and limestone pavement



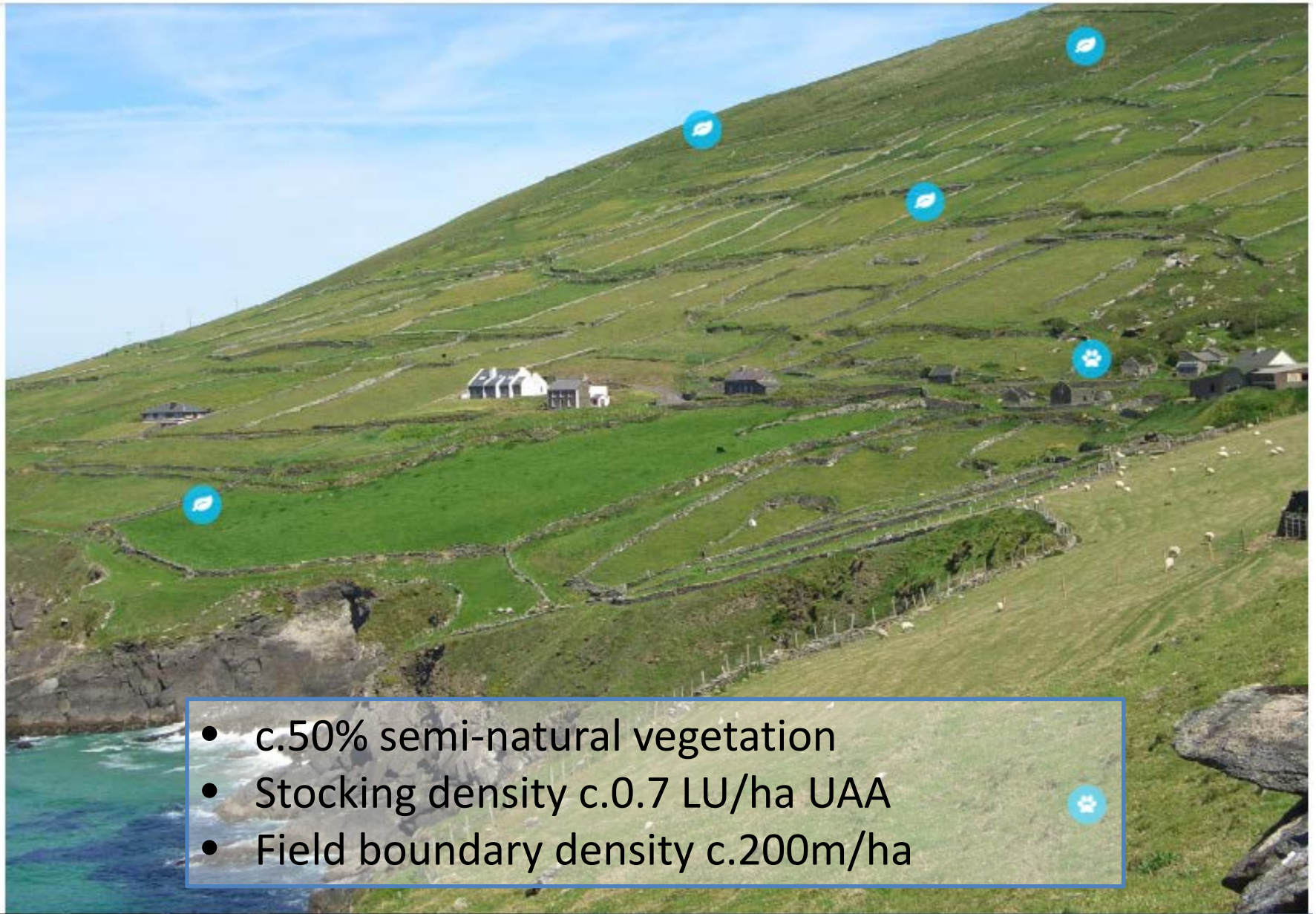
Off Shore Islands



Whole HNV farms

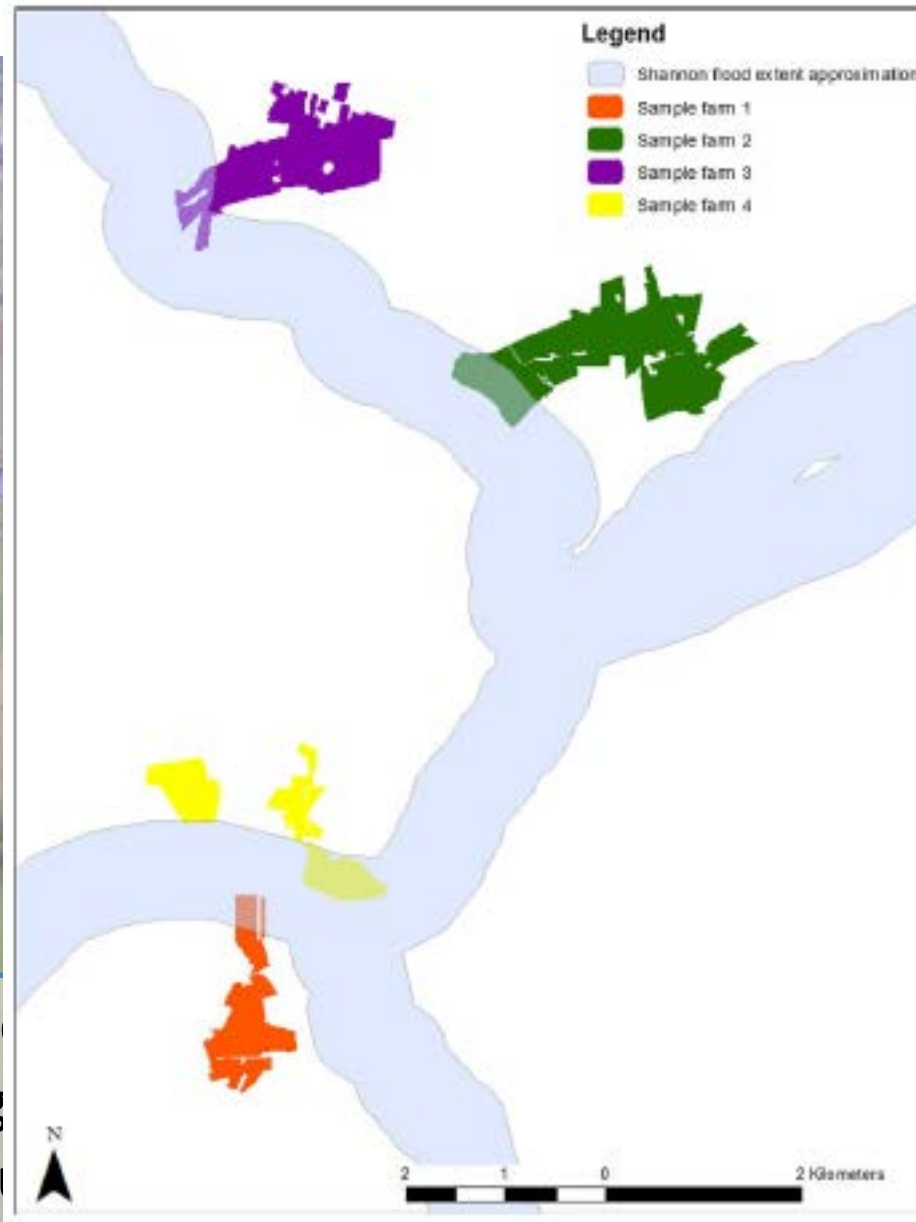
- 
- c.70-90% semi-natural vegetation
 - Stocking density c.0.3-0.8 LU/ha UAA
 - Field boundary density up to 300m/ha

Partial HNV farms



- c.50% semi-natural vegetation
- Stocking density c.0.7 LU/ha UAA
- Field boundary density c.200m/ha

Aggregate HNV farms



- Low-me
- Stocking
- Field bo

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Cattle and sheep grazing

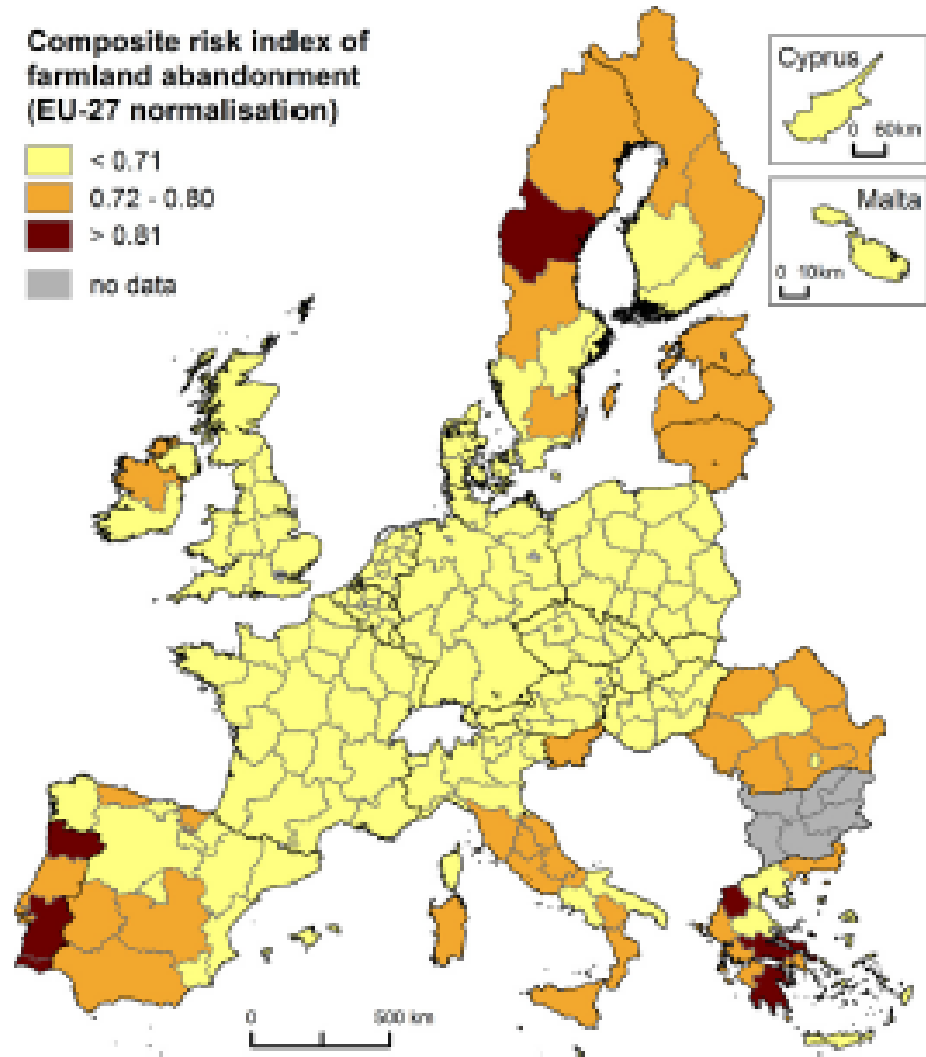


HNV Farmland Policy Context

- Critical importance to achieving the EU 2020 Biodiversity Strategy
- Formally recognised in CAP since 2006
- 2007-2013 RDP “preservation and development of high nature value farming systems” a priority
- HNV farming is included as an impact indicator, and a context indicators in CAP CMEF 2014-2020
- RDP must have measures to support, restore, preserve and enhance biodiversity including in N2000 areas, ANC and HNV farming

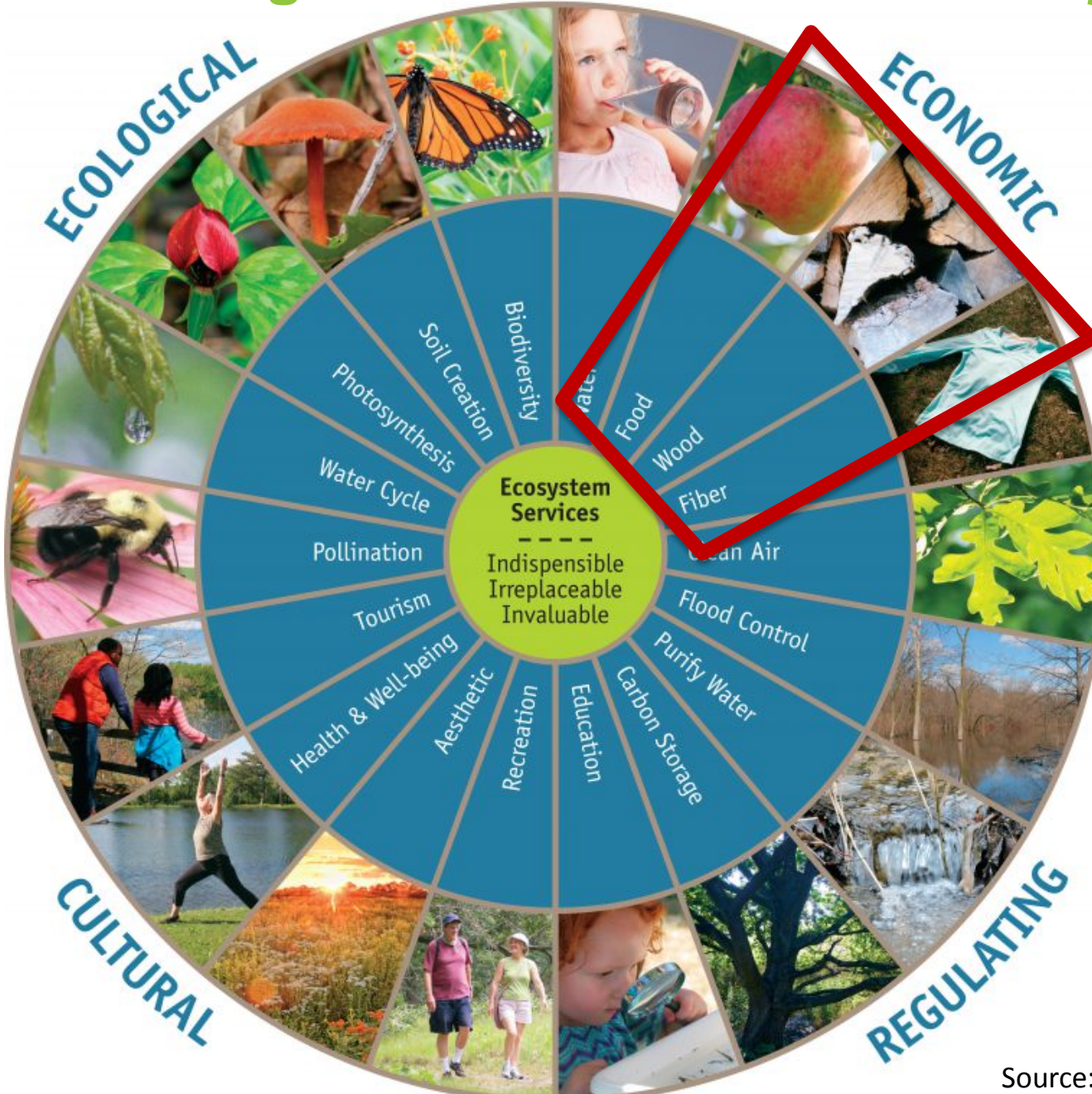
HNV farmland in Ireland – Need for Support

- Threats to HNV farmland include
 - Land abandonment and afforestation
 - Intensification
 - Polarisation (intensification and abandonment on the same farm)
- FADN: Market returns
 - Hill sheep (0.36 LU/ha) -€6,329 (Income €9,252)
 - Hill Cattle Rearing (0.66LU/ha) -€11,562 (Income €5,219)



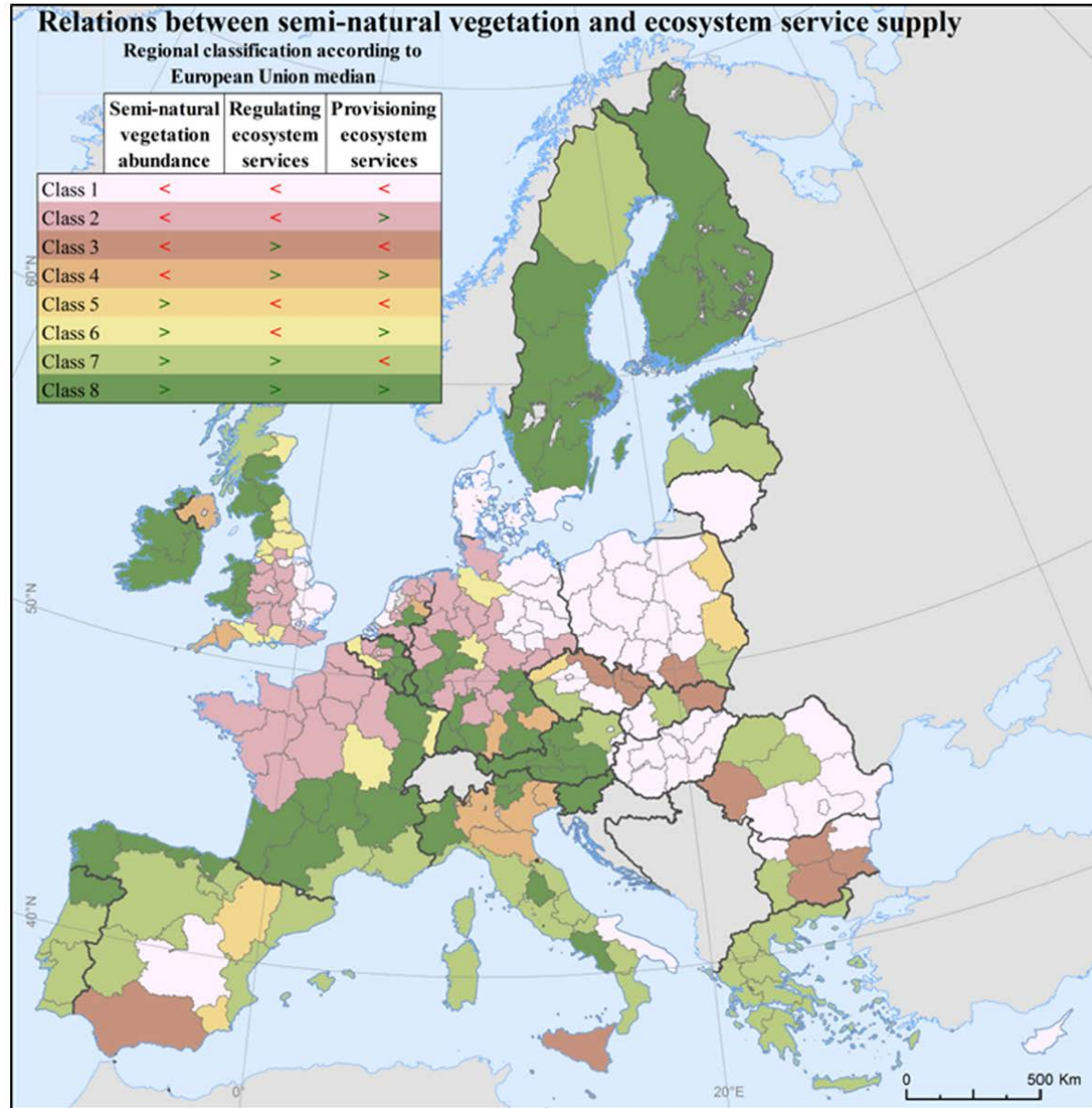
Source: Terres et al. 2015

Sustainable agriculture -much more than just food

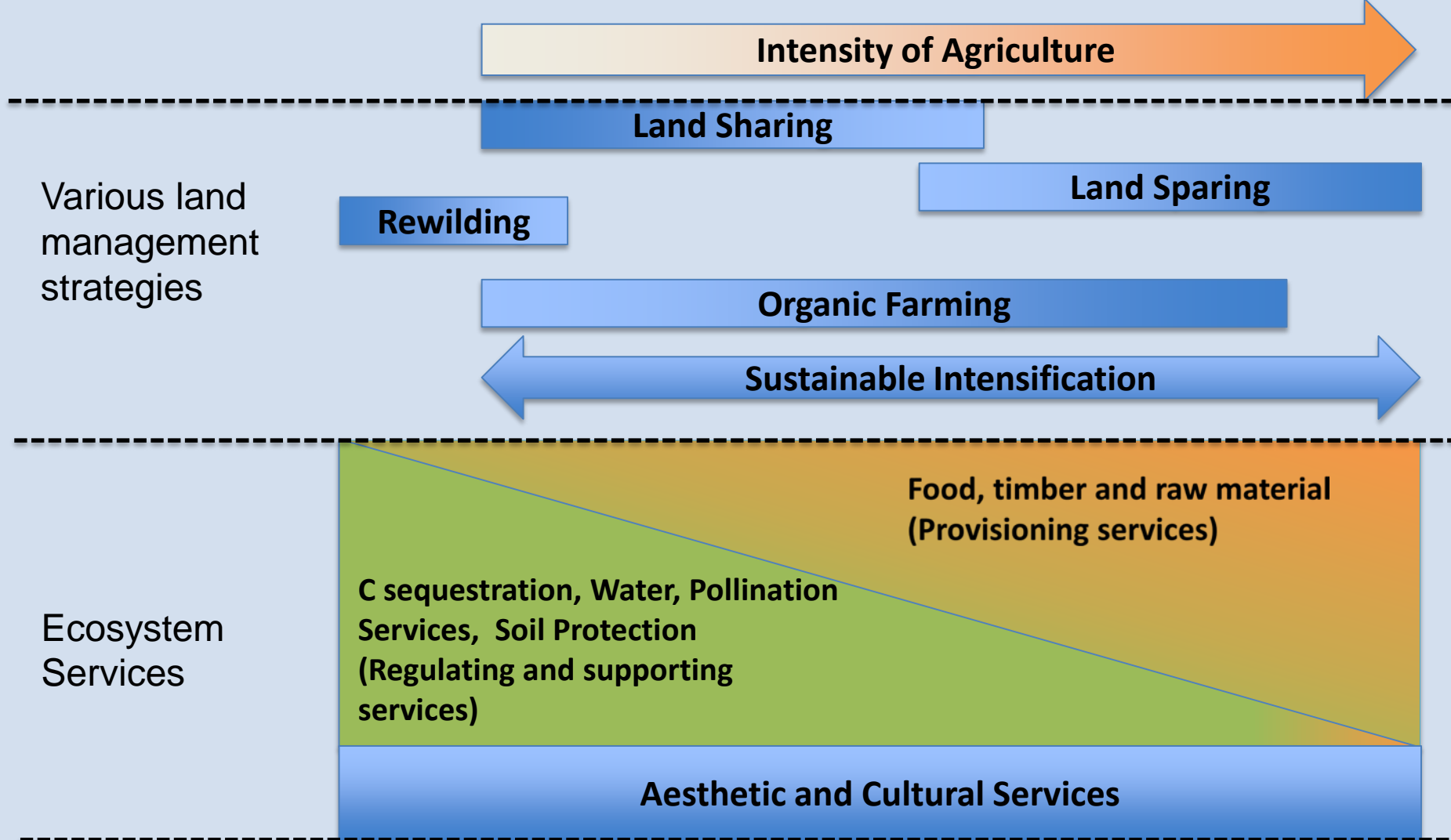


Ecosystem Services – Significant Potential

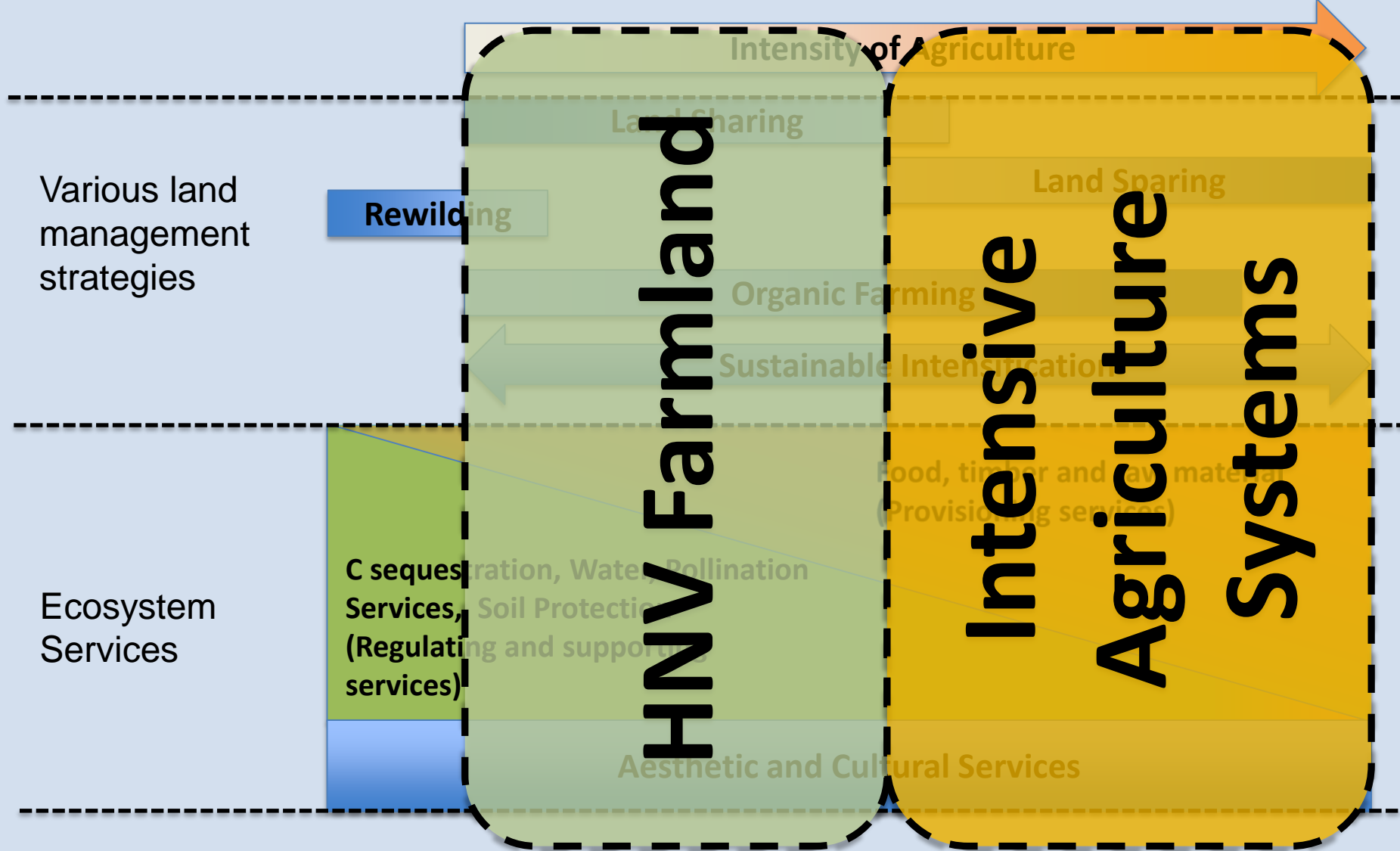
- Regional: a good balance in Ireland between provisioning and regulatory ecosystem service?
- Masks serious threats to HNV farmland, polarisation of agriculture and consequences for ecosystem service supply



Source: Garcia-Feced et al. 2014



Conceptual relationship between HNV farmland, intensive agriculture and various land management concepts



Conceptual relationship between HNV farmland, intensive agriculture and various land management concepts

Various land
management
strategies

Ecosystem
Services

**Can we come up with
an integrated
approach to manage
land, water and living
resources to ensure
conservation and
sustainable use?**

**Conceptual relationship between HNV farmland,
intensive agriculture and various land management
concepts**

What are RBAPS

- Results versus action based AES
- RBAPS pilot
 - Shannon Callows (Natura 2000): Floodplain grasslands
 - Leitrim: Lowland grassland areas
 - Navarra: Mediterranean Uplands

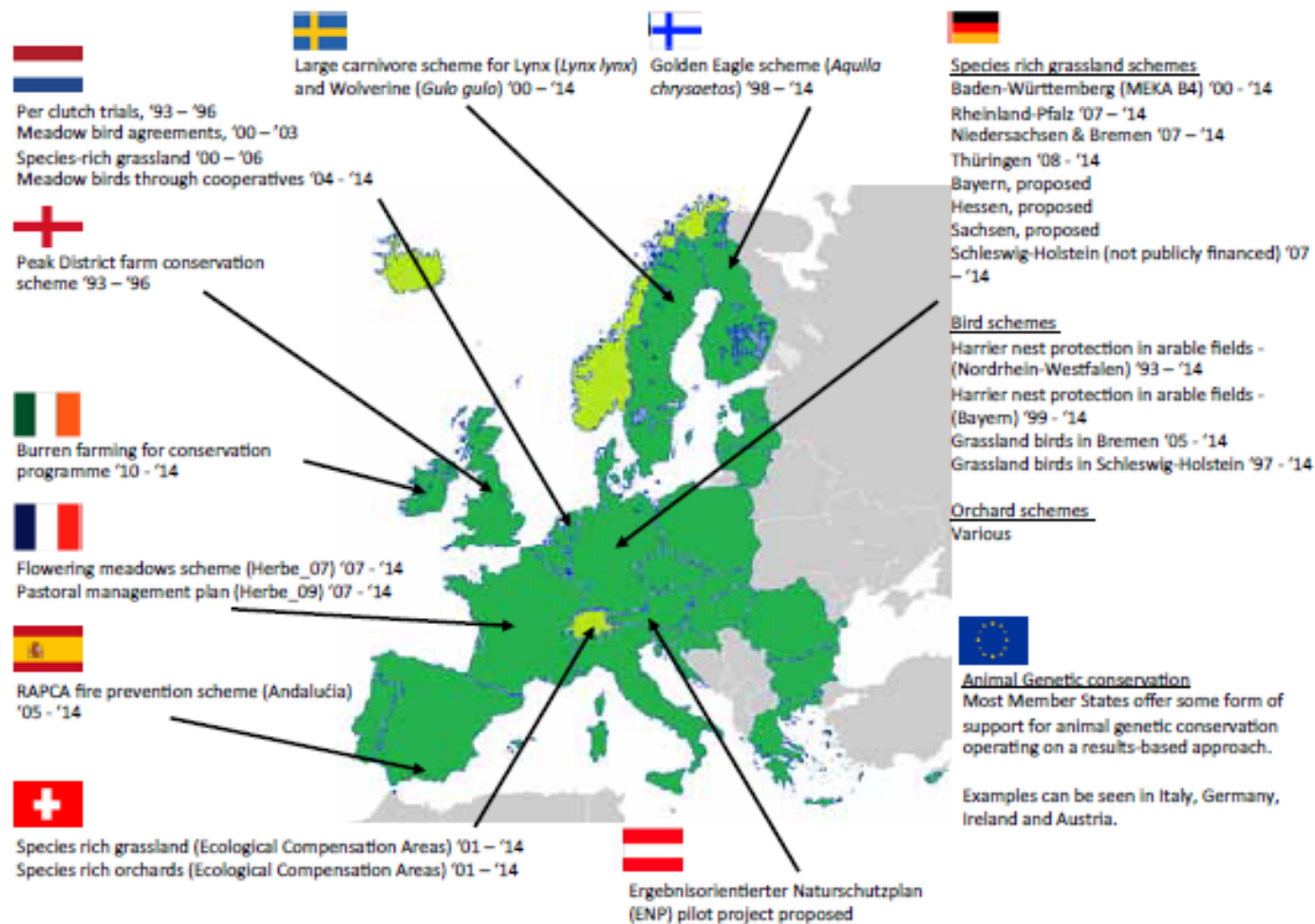


Results versus action based AES



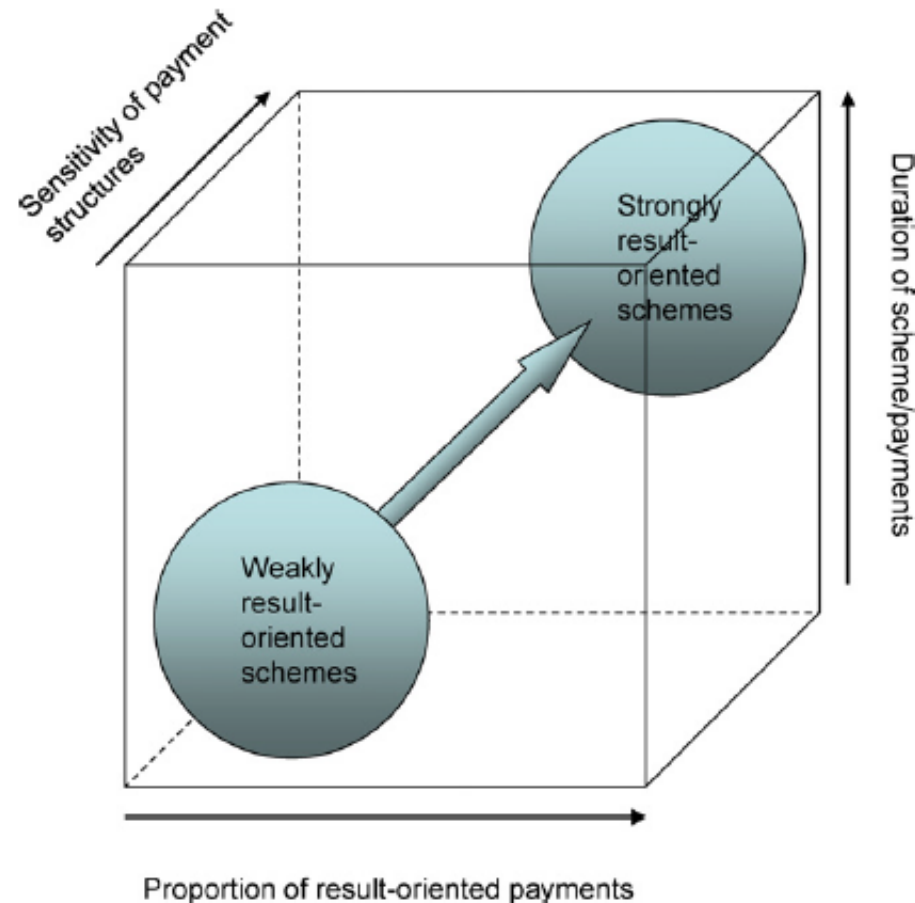
- Continued questions about effectiveness of AES for Biodiversity and associated ecosystem services
- Prescription/Action-based AES pay for compliance with actions or prescriptions assumed to lead to desired result
- Results/outcome based AES directly link payments to the production of the desired result





Source: Guidance Handbook for Results Based Payments for Biodiversity

Continuum of Pure Results to Hybrid to Action Based



Source: `Burton and Schwarz 2013

RBAPS 2015-2018

- Testing and developing results based AES
- €1.4 million budget
- 70% EU funded
- 30% from partners, & support from Heritage Council, DAFM & Teagasc
- 3.5 year project

www.rbaps.eu



Overarching Design Principles

- Common design approach in 3 pilot areas
- Locally adapted, practical and results focused
- Balance incentivising higher quality output and overall scheme complexity
- Facilitate flexible and adaptive management on farm
- Build local trust and capacity
- Enable co-creation and innovation
- Accounts for factors outside the farmers control





Design Model

*Pure results or
Hybrid/Blended*

1. Select Biodiversity Target

Use Existing data; reference levels

Conservation
Priorities/
Concerns

Responds to
agriculture practices

2. Scoring System

Understood by
farmers

Simple mgt.
recommendations

Evolution and
adaption

5. Results Based
AE Measure

Monitoring and
Evaluation

4. Eligibility
Criteria

3. Set Payment Levels

Rewards quality of product

Need for Non-Productive
Investment?



Navarra: Traditional mosaic landscape



Leitrim: Species-rich grassland



Callows: Breeding Waders



Leitrim: +Marsh Fritillary



Callows: Species rich flood meadow



+ Ground nesting birds

Scoring System and Hybrid Approach

- 10 point scoring system
- Indicators of ecosystem health (biodiversity indicators and habitat condition indicators)
- Payment increments carefully designed incentivise farmers to strive for higher scores AND ensure that medium scores were sufficient to cover cost of participation
- Combined with restorative actions in a hybrid approach



Ireland's Flagship HNV/Results Based Programme Burren LIFE www.burrenlife.com

[The Burren](#)[The Programme](#)[Impact](#)[Resources](#)[News](#)[Contact](#)

Impact

[Home / Impact](#)

The Burren Life ('Burren Farming for Conservation') Programme divides its annual farmer payments roughly equally between payments for actions and payments for outputs. Here we look at the cumulative impact of 5 years of funding for farm-level actions – a total investment of c.€2.3m.



Actions

The actions supported by Burren Life vary from farm to farm and from year to year, allowing the farmer the flexibility to tailor these actions to the needs of his/her farm at that point in time...

[READ MORE](#)

Outputs

The Burren Life ('Burren Farming for Conservation') Programme divides its annual farmer payments roughly equally between payments for actions and payments for outputs...

[READ MORE](#)

Socioeconomic

The Burren is best known for its bare limestone landscape, rare flowers and iconic archaeological sites. But many people forget that the Burren is a living landscape...

[READ MORE](#)

Reaching Out

The concept of high nature value farming developed from a growing recognition that the conservation of biodiversity in Europe depends on the continuation of low-intensity...

[READ MORE](#)

AranLIFE Project

News

Aran Island habitats

Farming on the islands

Reports and Publications



<http://ec.europa.eu/environment/life/>

Seeking to develop best conservation management practices of local farmers on designated Natura 2000 sites while harnessing local knowledge with scientific expertise of Project partners

The Project Team

The day-to-day operation of the project is being run by a project team, who are based in an office on Inis Oírr. They report to a project steering committee which operates under The Department of Arts, Heritage and the Gaeltacht who oversee, guide and support the work of the project team. The members of the project team are:

Louise Duignan - PhD Researcher
Dr. Patrick McGum – Project Manager
Dr Amanda Browne – Scientific/ Technical Officer
Gráinne Ní Chonghaile – Administration & Finance Officer



“Steeping Stones” to wider roll out

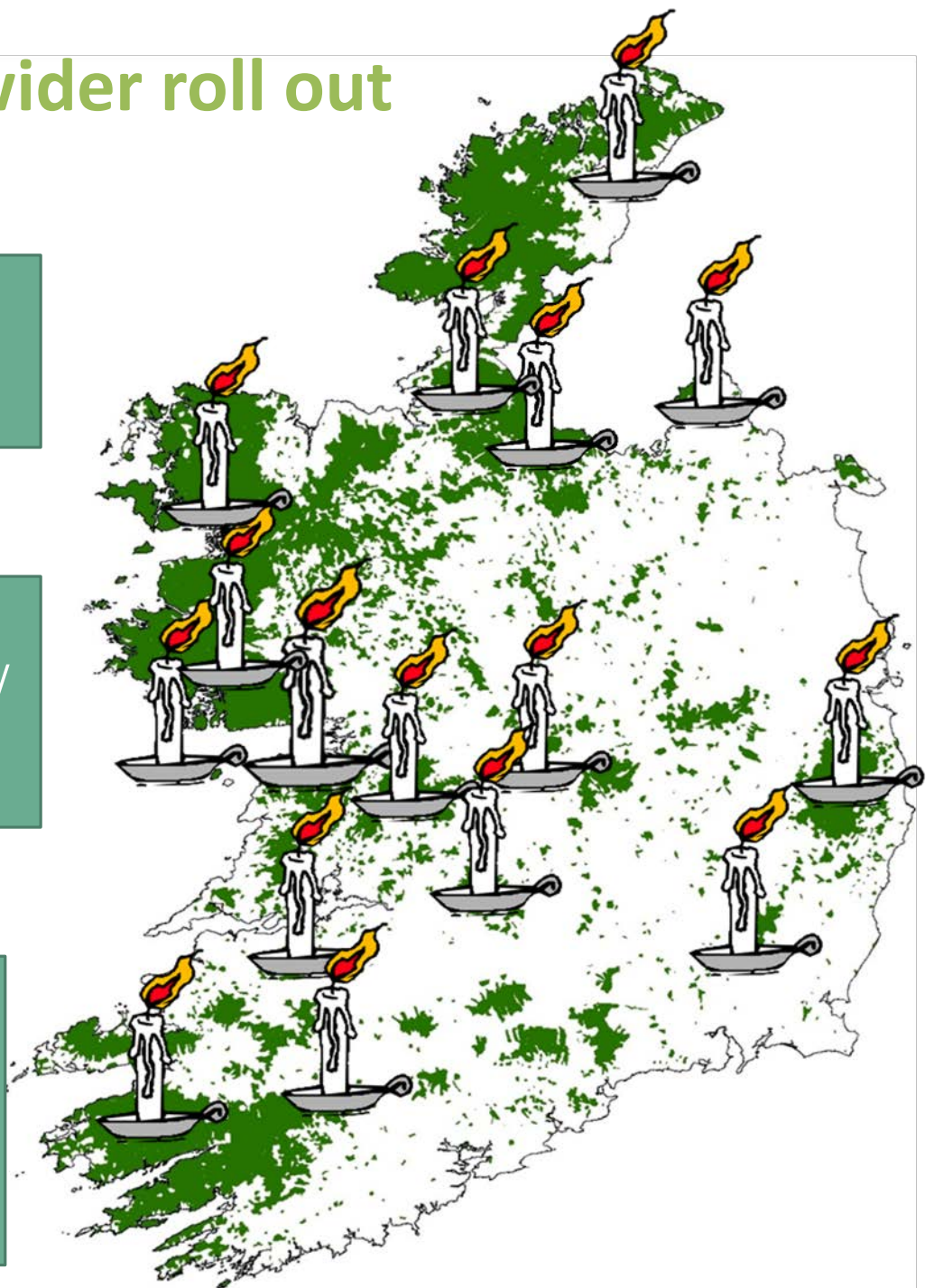
LIFE (Aran and Burren); RBAPS (Leitrim, Shannon Callows; Navarra); INTERREG-CANN



EIP Hen Harrier: European Innovation Partnership locally led project for Hen Harrier Special Protection Areas



EIP-Open Call: European Innovation partnership operational groups with specific objectives for HNV farmland



Aim for local partnerships part of wider innovation network

Innovation and efficient knowledge transfer

Farmers and food artisans ...

Researchers, educators, students ...

Advisory services, local administration

Rural nature and culture lovers

www.hnvlink.eu

HNV-Learning, Innovation and Knowledge

- Aims to link 10 HNV farmland Learning Areas (LA's) across Europe in order to find ways to improve socio-economic viability while improving environment efficiency
- Cataloguing innovations that works in each area so that lessons can be learned from each other and beyond

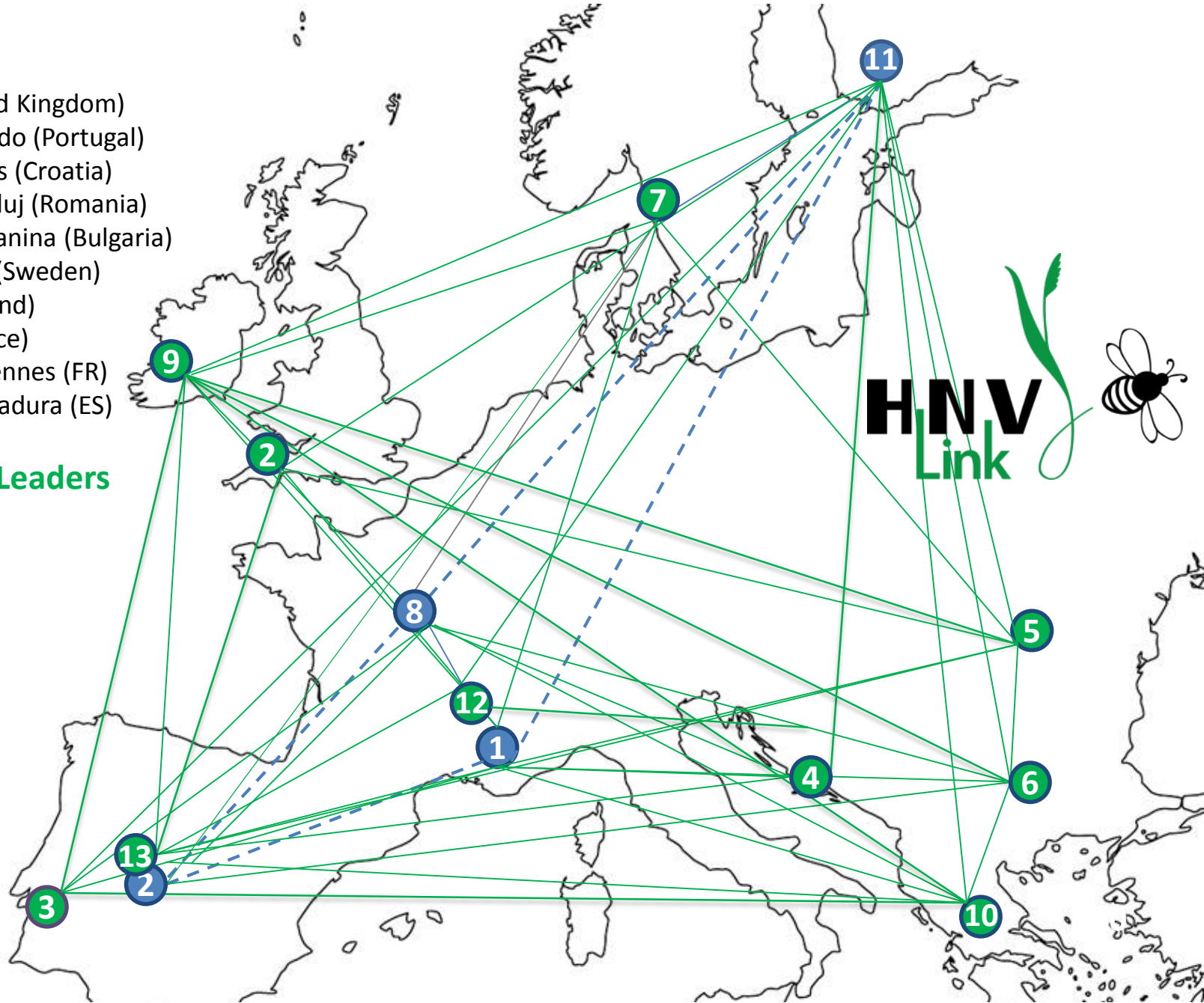


Learning Areas

- 2) Dartmoor (United Kingdom)
- 3) Sitio de Monfurado (Portugal)
- 4) Dalmatian Islands (Croatia)
- 5) Eastern Hills of Cluj (Romania)
- 6) Western Stara Planina (Bulgaria)
- 7) Västra Götaland (Sweden)
- 9) The Burren (Ireland)
- 10) Thessalia (Greece)
- 12) Causses et Cévennes (FR)
- 13) La Vera, Extremadura (ES)

Work Package Leaders

- 1) Ciheam-IamM
- 8) ASca (France)
- 2) EFNCP (Spain)
- 11) UH (Finland)



This project has received funding from the European Union Horizon 2020 research and innovations program under Grant Agreement No. 696391

Innovations required in range of areas

- Co-operation between farmers and with other local actors
- Catalysing farmer groups
- New Institutional structures enabling co-creation

Social & Institutional

- Legislation and policy reform that affects HNV farming, processing and marketing, favouring HNV innovations

Regulation & Policy

- Development of new products.
- Product processing,
- Marketing of products from HNV farming systems and areas

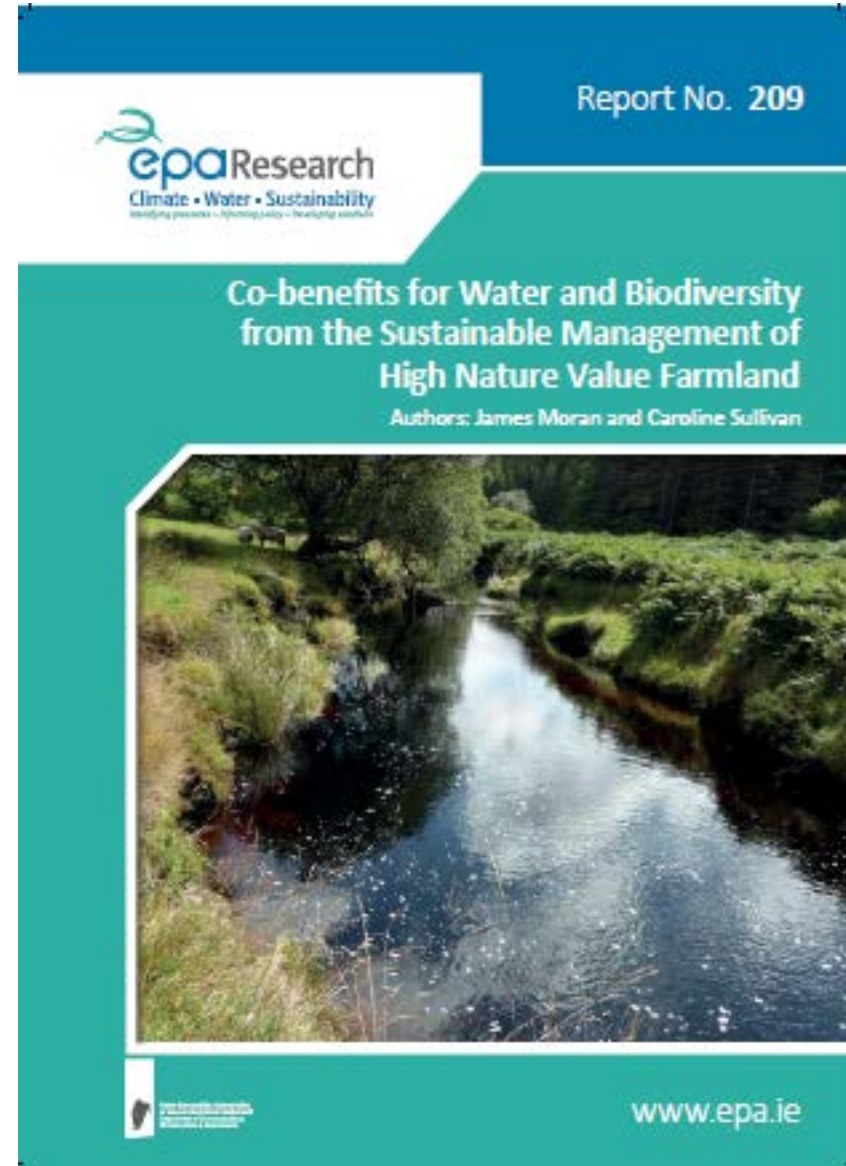
Products & Markets

Farming Techniques/ Management

- Development of appropriate technologies,
- Farming techniques (including locally adapted),
- Grazing management and monitoring,
- Organisation of labour

Wider Roll Out

- Results based approach are a key “foundation” innovation to deliver a range of ecosystem services from agricultural land
- Maximise synergies and minimise trade offs between different services
- Burren Programme example (2010-2020)
 - Biodiversity and HNVf
 - Water quality and water use efficiency
 - Landscape and cultural heritage



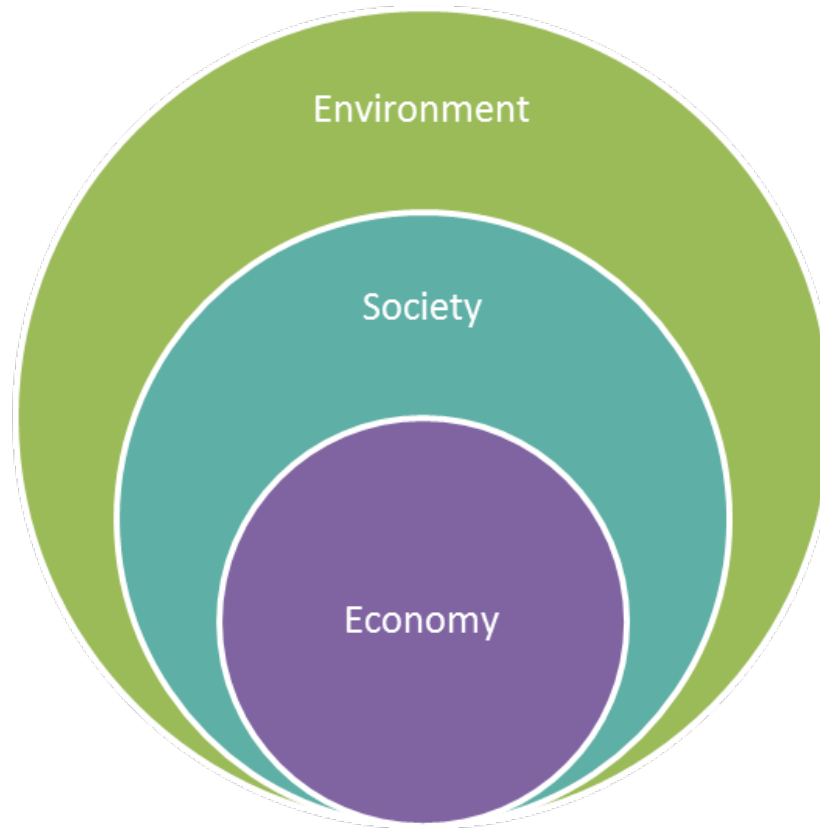
Conclusions

- Mgt. of HNV farmland needs to focus on range of ecosystem services which compliment the services provided by intensive agricultural systems
- Need improved co-ordination and spatial targeting
- Need framework for integrated approaches to management of land, water and living resources
- Diversity of land types-need locally adapted solution within broader framework
- Expand range of local landscape/catchment management initiatives





A pathway to a sustainable future



Innovation network, partnership, locally adapted and results orientated solutions

Thank You

