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/
Extensive upland areas
Drumlin-wet grasslands
Calcareous grasslands, heaths and limestone pavement
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-medium (c. 20-40%) semi-natural vegetation
- Stocking density – medium (c. 1.4 LU/ha UAA)
- Field boundary density – medium (c. 180m/ha)
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

Source: winnebagoforest.org
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.

Various land management strategies:
- Intensity of Agriculture
- Land Sharing
- Land Sparing
- Rewilding
- Organic Farming
- Sustainable Intensification

Ecosystem Services:
- C sequestration
- Water
- Pollination Services
- Soil Protection (Regulating and supporting services)

Food, timber and raw material (Provisioning services)

Aesthetic and Cultural Services
Conceptual relationship between HNV farmland, intensive agriculture and various land management concepts.

Various land management strategies:
- Intensity of Agriculture
  - Land Sharing
  - Land Sparing
- Organic Farming
- Sustainable Intensification
- Rewilding
- Aesthetic and Cultural Services
- C sequestration, Water Regulation, Pollination, Soil Protection (Regulating and supporting services)
- Food, timber and raw materials (Provisioning services)
- Aesthetic and Cultural Services

Ecosystem Services:
- HNV Farmland
- Intensive Agriculture Systems

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

3. Set Payment Levels
   - Rewards quality of product
   - Need for Non-Productive Investment?

4. Eligibility Criteria
   - Understood by farmers
   - Simple mgt. recommendations

5. Results Based AE Measure
   - Evolution and adaption

Monitoring and Evaluation
Leitrim: Species-rich grassland

Navarra: Traditional mosaic landscape

Callows: Breeding Waders

Callows: Species rich flood meadow

Leitrim: +Marsh Fritillary

+ 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

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...

Outputs

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

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...

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...
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 McGurn – 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

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

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

- Social & Institutional
- Regulation & Policy
- Products & Markets
- Farming Techniques/Management

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

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

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

www.hnvlink.eu
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
Complex Policy Demands

Heterogeneity of Land Base

Translation of Clear National Policy into Local Initiatives!
A pathway to a sustainable future

Innovation network, partnership, locally adapted and results orientated solutions
Thank You