



NATIONAL DISTRIBUTION AND TYPOLOGY OF HNV FARMLAND IN IRELAND AND HOW THESE CAN AID TARGETING



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What is High Nature Value (HNV) farmland?

- ▶ Farmland with a high proportion of semi-natural vegetation that supports a range of wildlife species
- ▶ Conservation of this type of farmland will conserve habitats and the plants and animals associated with them
- ▶ Ensuring vibrant rural communities



HNV farmland

- ▶ HNV farmland identification is a priority in Europe as it this type of farmland produces important EPGs
 - ▶ Stable climate
 - ▶ High quality air
 - ▶ High soil quality
 - ▶ Biodiversity
 - ▶ Aesthetic landscapes
- ▶ The production of EPGs gives strong justification of value for CAP monies



HNV farmland

- ▶ Europe wants to support these areas
- ▶ Supports are not already in place because we don't know exactly where these farms are (throughout Europe, not just Ireland).
- ▶ We don't know the characteristics that make these farms HNVf systems.
- ▶ Makes design of adequate support systems very difficult
- ▶ The IDEAL-HNV project aims to answer some of these questions

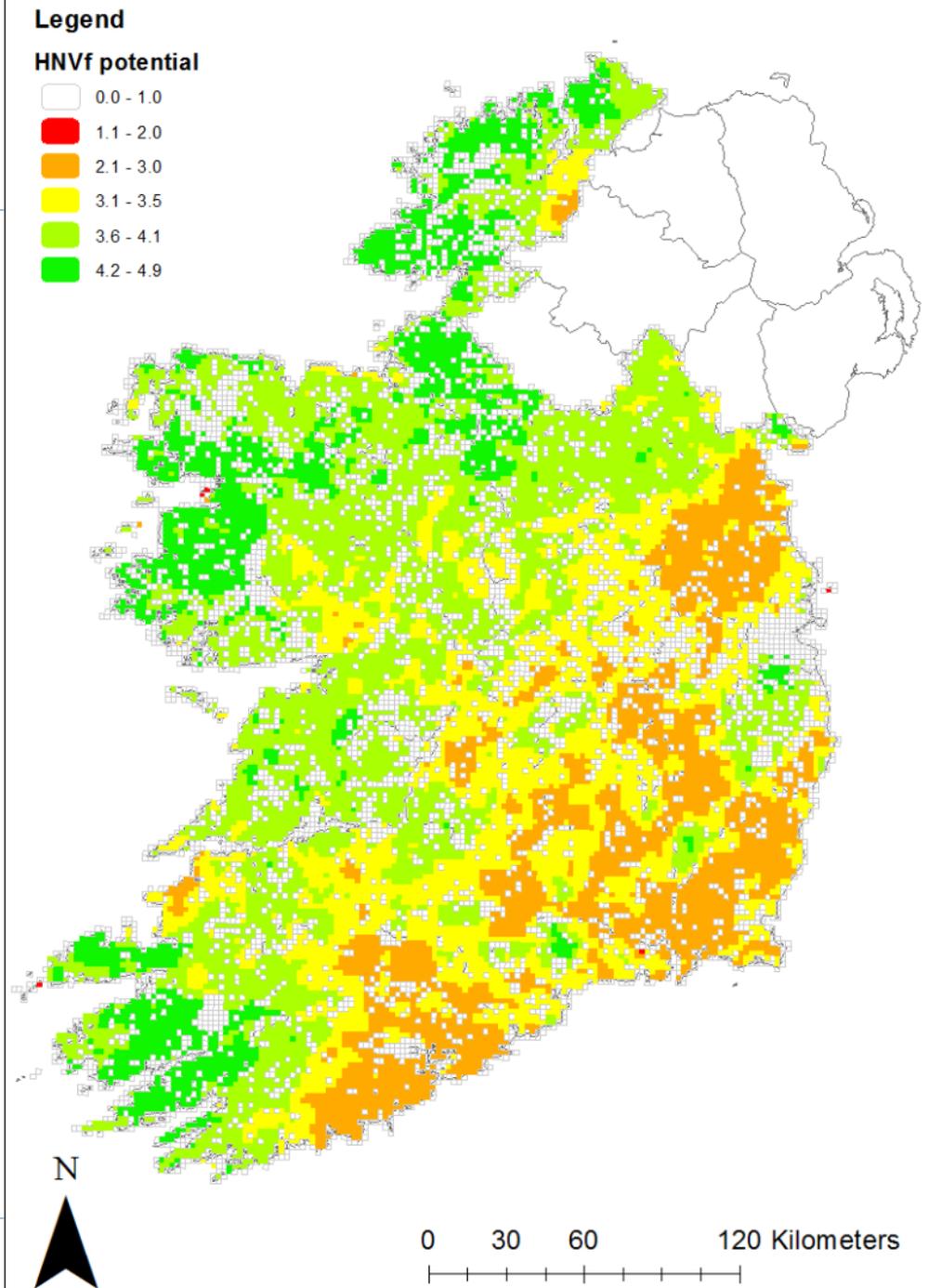


National distribution of potential HNV farmland

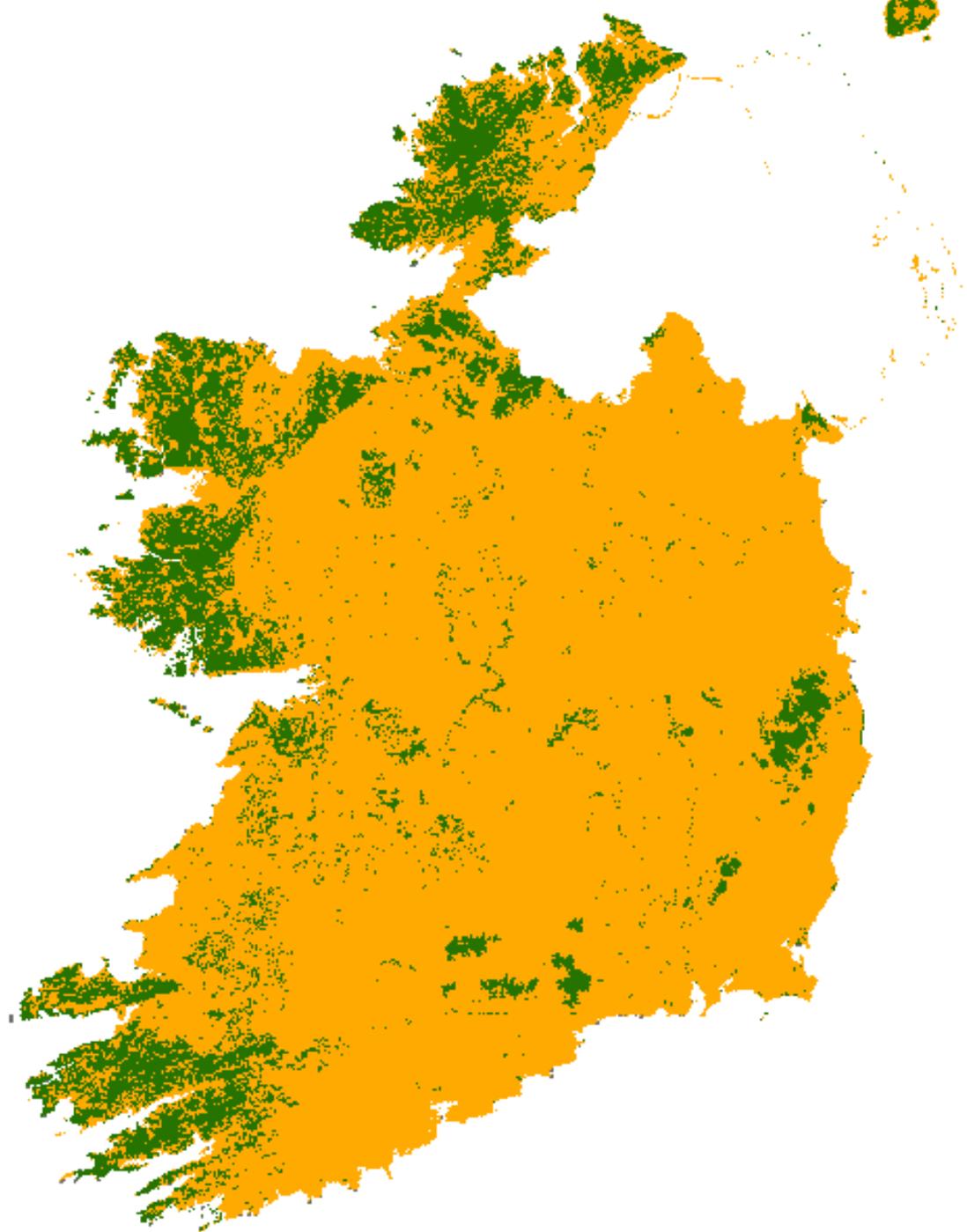
- ▶ Map of potential HNV distribution was developed at tetrad scale (2x2km)
- ▶ Parameters used:
 - ▶ 1. Corine Land Cover (40%)
 - ▶ 2. Stocking density (LPIS) (30%)
 - ▶ 3. Hedgerow cover (10%)
 - ▶ 4. River and stream length (10%)
 - ▶ 5. Soil diversity (10%)
- ▶ Parameters selected based on expert knowledge and opinion and Sullivan et al 2011
- ▶ Weights based on Boyle et al 2015



IDEAL-HNV map of potential HNVf distribution in Ireland

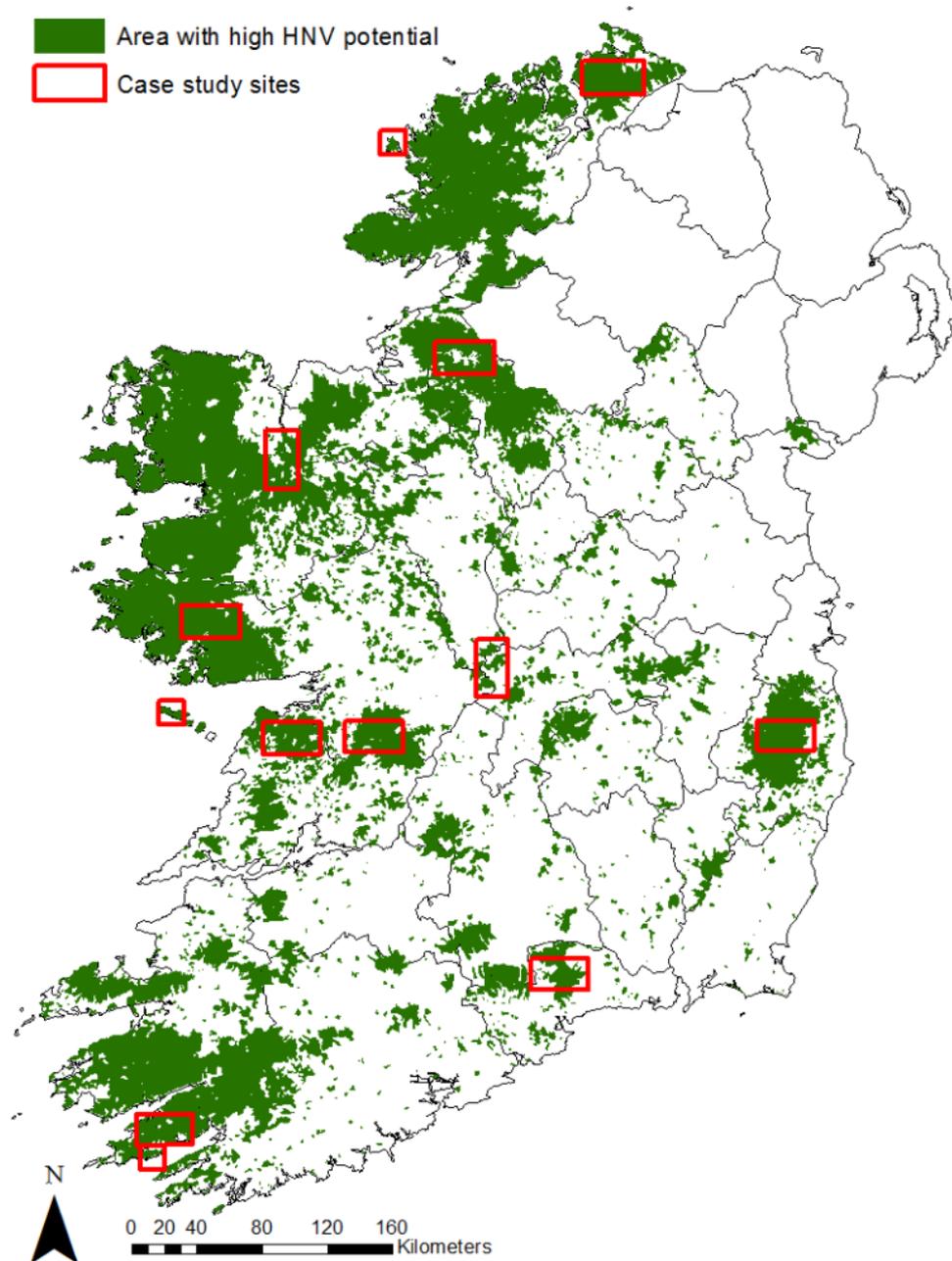


EEA (2006)map of
potential HNVf
distribution in Ireland



Fieldwork

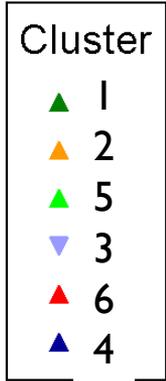
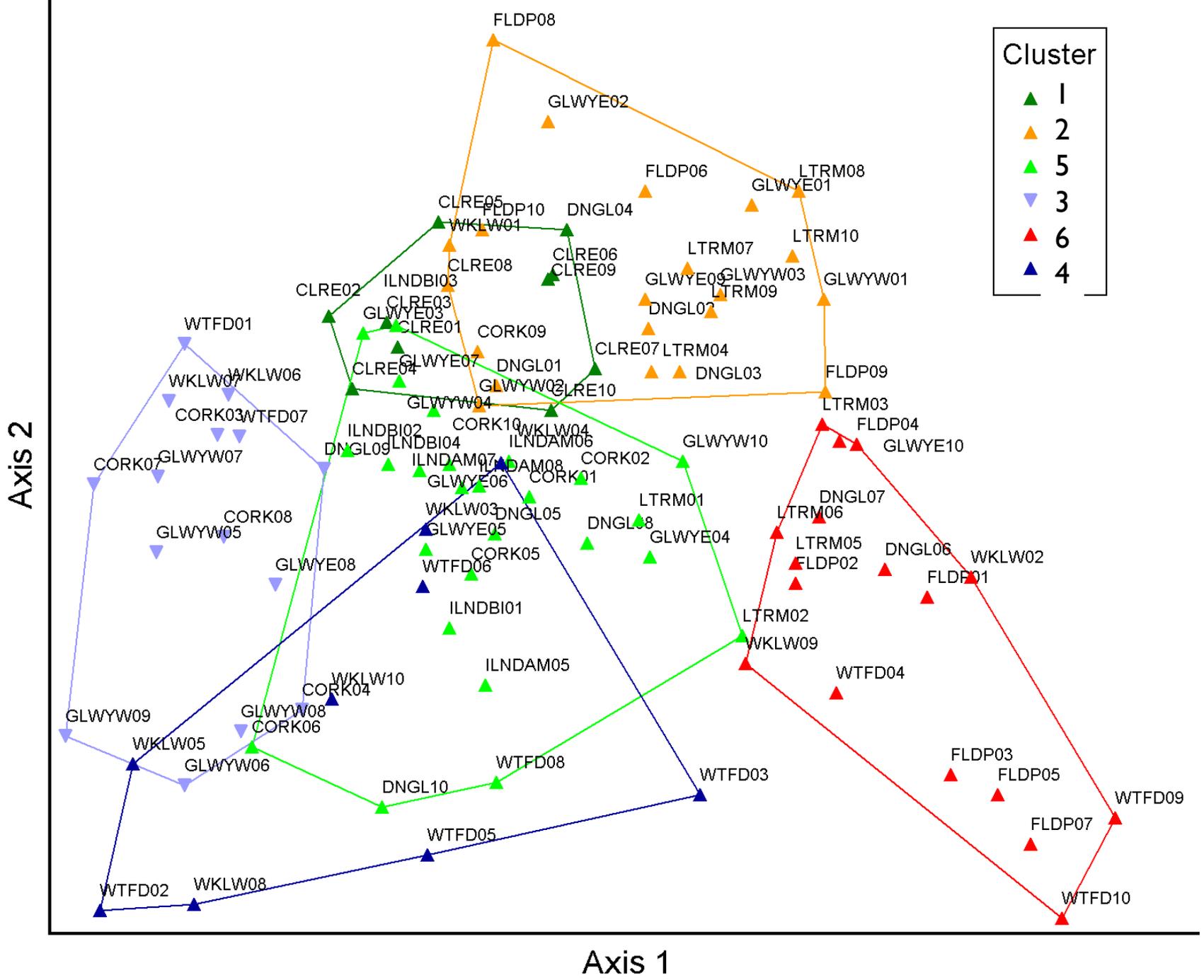
- ▶ 102 farms surveyed in area
- ▶ Farms were selected thro contacts where necessary
- ▶ Habitat surveys were carr
- ▶ Farmer questionnaires-12 management



Variable	Category
Total farm area (ha)	Management
Proportion of Improved agricultural grassland (%)	Management
Proportion of semi-natural habitat (%)	Management
Stocking density (LU/ha)	Management
Utilisable agricultural area (UAA) (ha)	Management
Stocking density per UAA (LU/UAA)	Management
Field boundary density (m/ha)	Landscape
Field boundary density of private land only (m/ha)	Landscape
Proportion of farm that is commonage (%)	HNV feature
Chemical fertiliser (tonnes)	Management
Chemical fertiliser private land only (tonnes)	Management
Total number of habitats	Management
Total number of semi-natural habitats	Management
Shannons habitat diversity (H')	Management
Shannons Evenness	Management
Proportion of dominant habitat on the farm (%)	Landscape
Proportion of the farm designated (%)	Landscape
Nature Value score	HNV feature
Maximum elevation (m)	Landscape
Elevation range (m)	Landscape
Distance to nearest town (km)	Landscape
Distance to furthest farm parcel (km)	Management
Proportion of semi-improved grassland (%)	Management
Field boundary diversity (H')	Landscape
Semi-natural habitat diversity (H')	Landscape
Proportion of farm with peatland habitats (%)	Landscape
Proportion of farm with semi-natural grassland habitats (%)	Management
Total feed inputs (silage, hay, concentrates) (kg)	Management
Straw (kg)	Management

characteristics in

↓Vf aside from whole
al 2014)?



Axis 2

Axis 1

HNV typology

Cluster	1	3	5	4	2	6
Number of farms	10	15	26	9	21	17
Farm size (ha)	160 (± 69)	208 (± 85)	44 (± 30)	208 (±86)	55 (±34)	59 (±31)
Commonage (%)	0 (± 0)	45 (± 33)	44 (± 28)	62 (±24)	8 (± 12)	4 (±12)
Stocking density (LU/ha)	0.58 (±0.27)	0.32 (± 0.21)	0.50 (± 0.32)	0.69 (± 0.44)	0.69 (± 0.29)	1.48 (±0.48)
Semi-natural habitat (%)	75 (± 13)	91 (± 8)	81 (± 12)	68 (± 22)	55 (± 16)	28 (±19)
Nature Value Score	6.9 (±0.75)	7.7 (± 0.5)	7.5 (± 0.8)	6.2 (±1.6)	6.6 (± 0.7)	4.2 (±1.13)
Field boundary density	93.1 (±27.2)	92.6 (±65.6)	273.1 (±128.6)	185.2 (±60.3)	216.4 (±71.5)	231.9 (±78.2)





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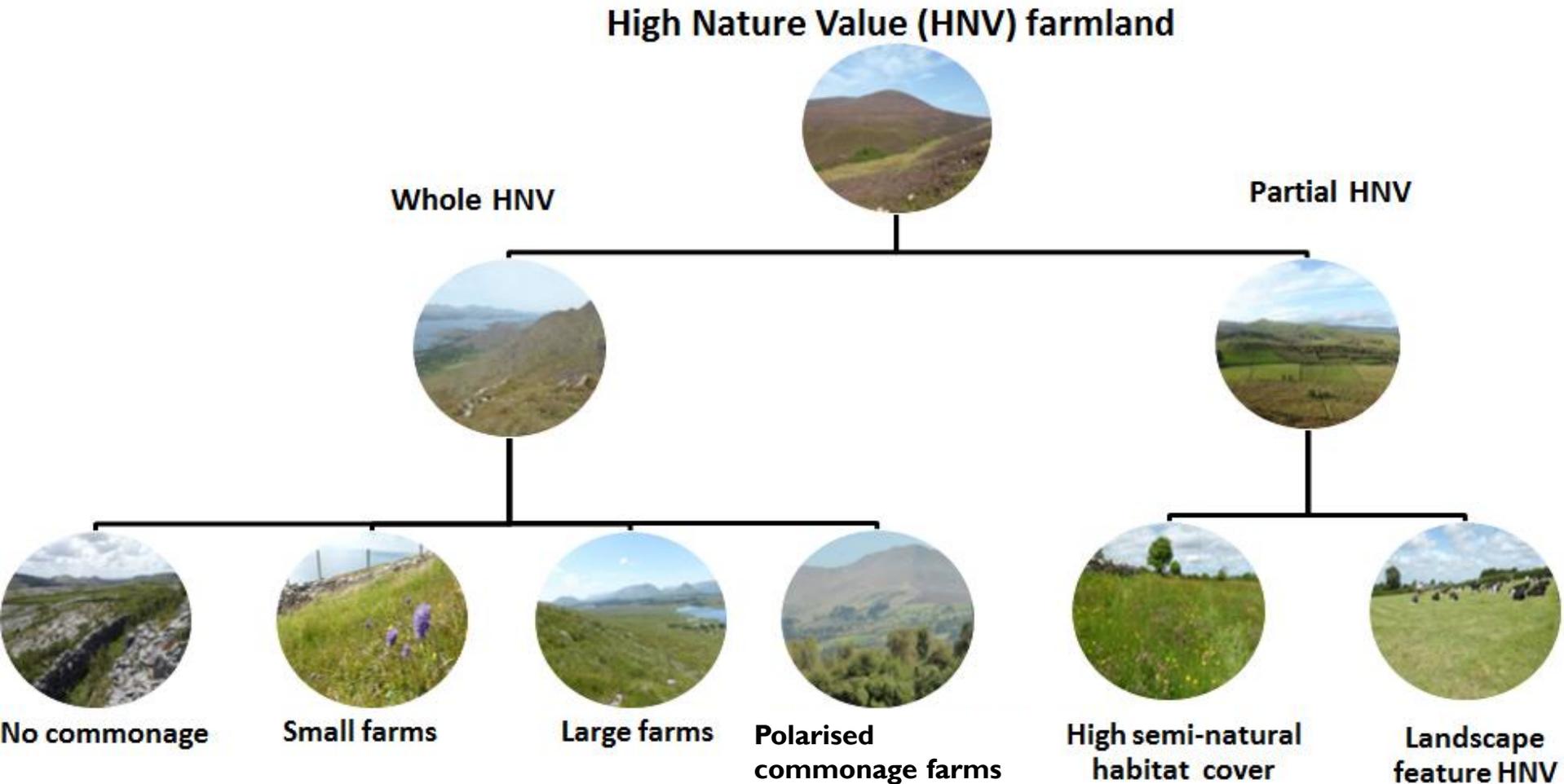


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HNVf types in Ireland



Conclusions

- ▶ Targeting HNVf support
- ▶ National maps are useful but too coarse for meaningful targeting at farm-level
- ▶ National typology complements the potential distribution map
- ▶ Quantifies HNVf types and highlights diversity
- ▶ Aids identification of farm-level threats that can inform national policies
- ▶ This information, coupled with training for agricultural advisors will enable better design and implementation of support



- ▶ This research was funded by the Department of Agriculture, Fisheries and the Marine Stimulus Research Funding Programme, grant award no. 11/S/108
- ▶ <https://idealhmv.wordpress.com/>
- ▶ Questions?

Types of HNV farmland

- ▶ Three types of HNV farmland occur in Europe.



Whole HNV farmland



Farmland with a high proportion of semi-natural vegetation



Partial HNV farmland



Farmland with a mosaic of semi-natural vegetation and cultivated land



Farmland that supports rare bird species



Brent geese on improved agricultural grassland

a) Farmland supporting rare species

or

b) Farmland supporting a high proportion of European
or world populations

