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High Nature Value farming throughout EU-27 and its financial support under the CAP

Annexes 2 to 8

European Forum on Nature Conservation and Pastoralism

Disclaimer: The arguments expressed in this report are solely those of the authors, and do not reflect the opinion of any other party.

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Table of Contents

Please note: Annex 1 (maps) is a separate document

Annex 2 Overview of main HNV farming systems and types by Member State

Source: individual Member State case studies

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
AUSTRIA						
Mixed	Mosaic of low intensity agriculture and natural and structural elements	Mainly extensive farming practices	2	25-60%	Grass or arable crops, shrubs, hedgerows, trees	Many Bird species, mammals, invertebrates, reptiles
Livestock	Alpine meadows and pastures (including larch meadows/pastures)	Cattle stays on the pastures from ~May to September, meadows are mowed maximally one time per year for fodder production	1	5-35%	Mosaic of pastures and structural elements eg single trees, shrubs, stones	Specific alpine plant communities, birds that need open spaces (eg *Anthus spinoletta, Oenanthe oenanthe*)
Arable	Arable cropland with specific nature conservation measures	Specific nature conservation measures (eg implementation of fallows, low input of tenure) or organically farmed	1	5-20%	Fallows; crops other than root crops, rapeseed, maize or vegetables; herbs and grass species on boarders between field parcels	Birds (eg *Vanellus vanellus*)
Livestock	Semi-intensively cultivated meadows and pastures	Mowed at most twice a year, or more intensively but with specific nature conservation measures		~10%	Ecologically valuable herbs and grass species	Poor grassland, species rich fertile meadows
Livestock	Traditional orchards	Fruits are often used to produce juices, jams, etc. Meadows for fodder production.	1	1-5%	Less trees per hectare, traditional fruit varieties, extensively or semi-intensively cultivated grassland under and between the trees	Birds (eg *Upupa epops, Jynx toryuilla*), small mammals, invertebrates
Permanent crops	Vineyards in terraces	No detail	1	<1%	Wine, apricot trees, grassland	Species-rich dry meadows; insects
BELGIUM (Flanders)						
Livestock	Mainstream intensive farmland neighbouring Type 1 and Type 2 used by farmland birds and migrating geese	Intensively managed grasslands, of otherwise poor biodiversity value	3	94,000 ha including arable type (below)	Rare farmland birds nest in intensive grasslands, eg along the coast and rivers, often neighbouring Type 1 and Type 2. Overwintering and migrating geese use the intensive grasslands	Considerable populations of rare farmland birds eg black-tailed godwit and common redshank nest in these intensive grasslands eg in coastal areas and along the River Schelde and Noorderkempen. Migrating and over-wintering white fronted geese and pink footed geese
Arable	Mainstream intensive farmland neighbouring Type 1 and Type 2, used by farmland birds	Intensive arable systems of otherwise poor biodiversity value. Management includes winter stubble used by geese	3	[within 94,000 ha above]	Rare farmland birds (and European Hamster?) nest and feed on intensive arable land. Overwintering and migrating geese use the stubbles.	Yellow hammer, Skylark and Corn bunting, hamsters, migrating and over-wintering white fronted geese and pink footed geese on stubbles.
Mixed	Small-scale mosaic landscapes	No detail	2	55,280 ha	Degraded former semi-natural grasslands with low livestock densities; field boundaries (hedgerows, pollarded trees,	No detail

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
					ditches, sunken roads); ponds; small woodlands; traditional orchards with grass under storey	
Livestock	Heathland, coastal dunes and semi-natural grassland in N2000 areas	HNV type 1 land in Flanders is predominantly not in productive agricultural use (managed instead by nature conservation bodies). Where used for agricultural purposes this is low intensity grazing, low or no fertiliser use, hay meadows and aftermath grazing with livestock. Farmers are obliged to have lower stocking densities and are prohibited to alter vegetation without permission	1	1,350 ha	Heathland, coastal dunes and semi-natural grassland. Very few of these Type 1 areas are in productive agricultural use, most are managed by nature conservation bodies	Annex 1 Habitat Directive, habitats include: Heathland, coastal dunes and extensive grassland.
Livestock	Relict semi-natural grasslands (in nature protected areas)	Where used for agricultural purposes this is low intensity grazing, low or no fertiliser use, hay meadows and aftermath grazing with livestock. Farmers are obliged to have lower stocking densities and are prohibited to alter vegetation without permission	1	820 ha	Semi-natural grasslands. Almost all in good/very good habitat condition	For example: *Molinion, Eu-Molinion, Juncus spp, etc.* Almost all in good/very good habitat condition
BULGARIA						
Livestock	Subsistence, semi-subsistence or small family farms	Grazing on semi-natural and common grasslands. Use of common pastures near the villages for grazing and hay-making.	1	58%	Predominantly grazing on semi-natural grasslands, transhumance in summer months; Farms produce their fodder and some low intensity crops; Use of common grasslands; No artificial fertilizers use on the grassland Subsistence, semi-subsistence Semi-natural grassland, common grasslands, small family farms; Semi-natural grassland, common grasslands, alpine mountain grasslands + small scale fodder crops	Grasslands vary from alpine pastures to wet meadows with very high floral diversity.
Mixed	Mixed small-holding with low intensity cropping.	Grazing on semi-natural and common grasslands. Some improved grasslands exists. Owning or leasing grassland and a relatively low number of livestock units. Farms produce their own fodder and some low intensity crops. Small scale organic and honey production. No or very limited use of fertilisers.	2 and 1	38%	Semi-natural grassland, common grasslands, small scale low intensity annual and permanent crops. Fine-grained mosaic landscape. Small scale arable plots and orchards, combined with semi-natural vegetation in the plains and lowlands. Located near or in the villages. Limited use of agro-chemicals. Sometimes combined	No detail

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
		Transhumance in the summer months			with honey production	
Permanent crops	Traditional orchards and vineyards.	Subsistence, semi-subsistence or small farms. Small plots 0.1-0.3 ha. This traditional orchards and vineyards are situated in the family garden or near the villages. Most of them are unmanaged or abandoned Usually combined with honey production	2	2%	Grass cover under the trees. Mainly abandoned ort unmanaged. Fruits for own consumption or homemade brandy Small plots of more than 20 years old orchards and vineyards. Grassland cover under the trees. Usually fine-grained mosaic landscapes present	No detail
Arable	Intensive farms (Intensive cereal and/or sunflower production).	Intensive farming practices - very mechanised production. Crop rotations between cereals and sunflower. Use of mineral fertilisers and plant protection materials	3 in some cases	2%	Large areas of cereals or sunflower production. In some cases landscape features like wind belts, field boundaries, single or group of trees exist	Imperial eagle (Aquila heliaca); pallid and Montagu's harriers (Circus macrourus , C. Pygargus); saker falcon (Falco cherrug); red-footed falcon (Falco vespertinus); roller (Coracias garrulous); red-backed shrike (Laniuscollurio); wintering red-breasted (Brantaruficollis) and lesser white-fronted geese (Anserervthropus) and white stork (Ciconiaciconia).
CYPRUS						
Livestock	Grazed scrublands/phrygana	Free-range grazing	1	53% 188,000 ha (CLC classes 323, 321, 231)	Semi-natural vegetation; woodland patches. Some recent abandonment	Annex 1 Habitat types, Priority bird species. Some areas within N2000 network.
Mixed	Farmland mosaics (HNV landscape)	Mixture of crops in a patchwork of small plots; low intensity systems, though pesticide inputs can be high, but not consistently so or across all of landscape.	2	30% 110,000 ha (CLC classes 243, 242, 241, not all)	Productive vines, olives, almonds, arable; areas semi-natural grazed vegetation; remnants of natural vegetation; dry-stone walls, seasonal streams.	Priority bird species. Some areas within N2000 network.
Arable	Cereals with olives/carobs	A few trees in cereal fields, which tend to be small. Low intensity management. Traditionally would be grazed after cereal harvest, now rarely.	2	2.5% 10,000 ha (CLC classes 241/243, not all)	Arable crops; productive trees; remnants of natural vegetation; dry-stone walls; seasonal streams	Priority bird species. Some areas within N2000 network.
Livestock	Grazed carob & olive groves	Free-range grazing	1	2.5% 10,000 ha (CLC classes 241/243, not all)	Semi-natural vegetation; productive trees. Much recent abandonment.	Annex 1 Habitat types, Priority bird species. Some areas within N2000 network.
Permanent crops	Olive groves	Sparse planting of trees, with low intensity management, though pesticide use has increased in recent decades.	2	1.5% 5,000 ha (CLC class 223, not	Productive trees; remnants of natural vegetation; dry-stone walls; seasonal streams. Some recent abandonment.	Priority bird species. Some areas within N2000 network.

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
				all)		
Permanent crops	Almond groves	Small plots, with low intensity management	2	1.5% 5,000 ha (CLC class 222, not all)	Productive trees; remnants of natural vegetation; dry-stone walls; seasonal streams. Much recent abandonment	Priority bird species. Some areas within N2000 network.
Permanent crops	Upland Vineyards	Small vineyard size, manual management (pruning, dusting with sulphur [oft mixed with pesticide in more recent years], harvesting and rotavation for weed control, or herbicide use, but this reduced in recent years thanks to relevant agri-environment measure)	2	2.5% 10,000 ha (CLC class 221, uplands only)	Productive vines; remnants of natural vegetation; dry-stone walls; seasonal streams. Much recent abandonment.	Priority bird species. Some areas within N2000 network.
CZECH REPUBLIC						
Livestock	Mountain and highland grasslands	Extensive grazing (usually below 1 LU/ha) and hay/silage making. Grazed mostly by suckle cows or young milking cattle breeds, sheep and goats numbers marginal, but growing. Part of suckler cows over winter on pasture, Large plots and advanced machinery allows for fast harvesting and leads to decline of invertebrate and some birds populations. Therefore timing is basically the same in region because decision making based on favourable weather. Some grasslands (in localities with sufficient moisture) could be used intensively, the proportion of intensively managed grasslands is not high.	1 and 3 (very limited area of Type 2)	65-85%	Extensive grasslands, some landscape features (are protected trough C-C) Type 1 is dominant because of remaining large structures – therefore a significant proportion of pastures and meadows is relatively large even in landscape with other landscape features these cannot be considered as Type 2	Lowland hay meadows (6510), Mountain hay meadows (6520), *Cynosurus* pastures, Aluvial *Alopecurus* meadows, Wet *Cirisum* meadows, Hydrophylous tall herb fringe communities of plains and of the montane to alpine levels (6430), Alluvial meadows of river valleys of the *Cnidian dubii* (6440), Molinia meadows on calcareous, peaty or clayey-silt-laden soils (6410),Species-rich *Nardus* grasslands (6230) – mountain areas, *Juniperus communis* formations on heath, or calcareous grasslands (5130), *Rupicolous* pannonic grasslands (6190), Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia* 6210), nesting sites of corncrakes
Mixed	Highland grasslands	Extensive grazing (usually below 1 LU/ha) and hay/silage making. Grazed mostly by suckle cows or young milking cattle breeds, sheep and goats numbers marginal, but growing. Part of suckle cows over winter on pasture, Large plots and advanced machinery allows for fast harvesting and leads to decline of invertebrate and some birds populations. Therefore timing is basically the same in region because decision making based on	1, rarely 2	20-30%	Extensive grasslands, without many landscape features (few remaining are protected trough C-C). Type 2 usually large farms with both intensive arable farming and extensive grassland management, on mixed farms also Type 3 is present (eg corncrake nesting sites)	Lowland hay meadows (6510), Mountain hay meadows (6520), *Cynosurus* pastures, Aluvial A*lopecurus* meadows, Wet *Cirisum* meadows, Hydrophylous tall herb fringe communities of plains and of the montane to alpine levels (6430), Alluvial meadows of river valleys of the Cnidian dubii (6440), Molinia meadows on calcareous, peaty or clayey-silt-laden soils (6410),Species-rich *Nardus* grasslands (6230) – mountain areas, *Juniperus*

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
		favourable weather. Some grasslands (in localities with sufficient moisture) could be used intensively, the proportion of intensively managed grasslands is not high.				*communis* formations on heath, or calcareous grasslands (5130), *Rupicolous* pannonic grasslands (6190), Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia* 6210), nesting sites of corncrakes
Mixed	Lowland grasslands	Rarely grazed, usually hay making but extensively (but rather productive) because animals are fed mostly by forage from arable land and hay is used only as a additional supplementary fodder forming small proportion of daily uptake of cattle. These meadows are could be threatened by intensification	1	1-2%	Usually extensively managed wet grasslands	Alluvial meadows of river valleys of the Cnidian dubii (6440), Lowland hay meadows (6510), Aluvial *Alopecurus* meadows, Wet *Cirisum* meadows, Hydrophylous tall herb fringe communities of plains and of the montane to alpine levels (6430), Alluvial meadows of river valleys of the *Cnidian dubii* (6440), *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (6410),
Arable	Lowland grasslands	Rarely grazed, usually hay making but extensively (but rather productive) because animals are fed mostly by forage from arable land and hay is used only as an additional supplementary fodder forming small proportion of daily uptake of cattle. These meadows are could be threatened by intensification	1	1-2%	Usually extensively managed wet grasslands	Alluvial meadows of river valleys of the Cnidian dubii (6440), Lowland hay meadows (6510), Aluvial *Alopecurus* meadows, Wet Cirisum meadows, Hydrophylous tall herb fringe communities of plains and of the montane to alpine levels (6430), Alluvial meadows of river valleys of the *Cnidian dubii* (6440), Molinia meadows on calcareous, peaty or clayey-silt-laden soils (6410),
Arable	Arable nesting sites	Intensive management of arable land with regular and frequent operations, using heavy and effective machinery (the most common commodities are wheat, barley, maize)	3	<1%	Arable land – regularly managed	Nesting of several species, especially lapwing (formerly nesting on meadows) but also skylarks
DENMARK						
Livestock	Open semi-natural grasslands	Low-intensity grazing by cattle and/or sheep. Mowing. Where the land is used for grazing, the quality of forage tends to be poor.	1	No detail	Coastal meadows, damp meadows, dry grassland, often small areas (0.25 to 5ha in size)	At risk from scrub invasion and lack of grazing/mowing management
Livestock	Open heath and bog	Low-intensity grazing by cattle and/or sheep. Quality of forage tends to be poor.	1	No detail	Heath and raised bog often small areas (0.25 to 5ha in size)	At risk from scrub invasion and lack of management

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
Arable	Permanent grassland on arable farms	Low-intensity grazing by dairy heifers or hardier suckler cattle (Angus, Galloway and Highland) Sheep grazing?	1	No detail	Permanent grassland accounts for only around 7-8 per cent of farmland, often as small areas of within intensively managed arable farms growing fodder crops and cereals only	No detail
Arable	Semi-natural unfarmed features on arable farms	No detail	2	No detail	Ponds, hedgerows, small woodlands, burial mounds	No detail
ESTONIA						
Arable	Arable land dominant organic farming	Extensive land management. Diverse crop rotations, very often this group is characterised by vegetable and herb growers	2	~8% of total organic farms are classified as plant production farms according to FADN in 2011, figure about % land they manage not known	All over the Estonia Areas usually have relatively low soil fertility Diverse crop rotations with high share of legumes, quite often relatively small fields	If located in N2000 areas, in some cases specific additional nature values can be recorded (protected species/habitats), also more frequent occurrence of common farmland biodiversity species (bird, bumblebees) In general chemical-free farming will support lot of species of common farmland (especially important in intensive farming regions)
Arable	Mosaic landscape: Arable land farming in mosaic landscapes	Simpson diversity index > 0.41. Areas where >5 agricultural field parcels present in 1x1km grid cells	2 (potentially also 3)	No detail	All over the Estonia High Simpson diversity index Heterogeneous location of fields in mixed landscapes (forests, wetlands, agricultural land) Relatively high number of field parcels and small field sizes High proportion of farmland related landscape elements	In general low intensity farming will support lot of species of common farmland + landscape mosaics can 'compensate' some farming intensity related potential negative trends Higher occurrence of common farmland birds
Livestock	Management of coastal meadows (1630)	Regional and habitat variations in grazing and cutting. More grazing takes place on islands. Grazing by beef cattle, sheep and horses Negative trend is that coastal meadows are grazed less and mown more	1 (potentially also 3)	~25-30% of total 1 area	Extensively managed coastal areas mainly in Western Estonia and islands Habitat usually covers large areas (averagely >10ha), which can be managed by several farms Most of areas are also LFA areas	Annex 1 habitats eg coastal meadows (1630), and habitat related species eg Natterjack toad (*Epidalea calamita*), Baltic dunlins (*Calidris alpina schinzii*) 390 plant species (>20 protected species)
Livestock	Management of wooded meadows (6530), wooded pastures (9070) and other meadows	Regional and habitat variations in grazing and cutting eg wooded pastures only grazed. Grazing by beef cattle, sheep and horses. Traditional management practices	1 (potentially also 3)	N/A Habitats 6530 and 9070 form 8-10%, other meadows 25-30% of total	All over the Estonia (but mainly in Western Estonia and islands) Wooded meadows and pastures very often are classified as non-UAA (more than 50 trees/ha etc.) Usually areas are small in size (average size	Annex 1 habitats eg wooded meadows (6530), wooded pastures (9070) + habitats 4030, 5130, 6210, 6270, 6410, 6430, 6510 and all habitat related species

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
				Type 1 area	2-5 ha), usually have minor significance in production (usual animal husbandry farming type) Most of areas are also LFA areas	More than 600 plant species have been found on 6530 eg *Cephalanthera longifolia, Cypripedium calceolus,Dactylorhiza spp., Epipactis helleborine, Gymnadenia conopsea, Orchis ustulata, Malus sylvestris.*
Livestock	Management of Nordic alvars (6280)	Regional and habitat variations in grazing. Mainly by sheep. Grass production very low Main problem is natural succession with junipers	1, (potentially also 3)	~10% of total Type 1 area	Northern and Western Estonia including islands. Soil cover very shallow/thin. Areas are very often part of farm as "islands" Most of areas are also LFA areas	Annex 1 habitat 6280 + habitat related species eg *Saxifraga adscendens, Cerastium pumilum* >270 plant species (~30 protected species)
Livestock	Management of semi-natural grasslands where habitats are mainly mown (and grass sold) and not grazed -floodplain meadows (6450)	Regional and habitat variations in management Usually no direct linkage with arable land management systems	1 (potentially also 3)	~20-25% of total Type 1 area	Often around flooded main rivers of Estonia. Habitat usually covers large areas (averagely >10ha). Most of areas also LFA areas	Annex 1 habitat eg floodplain meadows (6450), partly also wooded meadows (6530) and those habitat related species >350 plant species found (~22 protected species) on 6450. ~30 bird species eg *Vanellus vanellus,Gallinago gallinago, Gallinago, Numenius arquata, Tringa totanus, Crex crex, Porzana porzana* etc.
Livestock	Grassland dominant organic farming (OF) which is not covered by two previous types	Extensive land management. RDP organic farming support requires grazing, high share of sheep grazing. Relatively low animal density, usually 0.2-.0.8 LU. Share of permanent grasslands >20%	2 (potentially also 3)	~48% of total OF farms are classified as animal husbandry farms (dairy farming excluded) according to FADN in 2011, figure about % land they manage not known	All over the Estonia Areas usually have relatively low soil fertility Usually extensively managed grasslands combined with fodder areas Share of legume-rich short-term grasslands in crop rotation is high Occurrence of patches of semi-natural grasslands	If located in N2000 areas, in some cases specific additional nature values can be recorded (protected species/habitats), also more frequent occurrence of common farmland biodiversity species (bird, bumblebees). In general chemical-free farming will support lot of species of common farmland (especially important in intensive farming regions)

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
Livestock	Mosaic landscape: Animal husbandry/dairy farming in mosaic landscapes	Simpson diversity index > 0.41. Relatively low animal density, usually 0.2-.0.8 LU. Areas where >5 agricultural field parcels present in 1x1km grid cells	2	No detail	All over the Estonia High Simpson diversity index Heterogeneous location of fields (grazed grasslands and arable crops) in mixed landscapes (forests, wetlands, agricultural land) Relatively high number of field parcels and small field sizes High proportion of farmland related landscape elements	In general low intensity farming will support lot of species of common farmland + landscape mosaics can 'compensate' some farming intensity related potential negative trends Higher occurrence of common farmland birds such as Eurasian Skylark (*Alauda arvensis*), Whinchat (*Saxicola rubetra*), Northern Lapwing (*Vanellus vanellus*), Corncrake (*Crex crex*), Eurasian Curlew (*Numenius arquata*) and Grey Partridge (*Perdix perdix*)
Mixed	Organic farming	Extensive land management relatively low animal density, usually 0.2-.0.8 LU High share of sheep grazing. Share of permanent grasslands >20%, high share of short-term grasslands in rotation (>20%)	2	~24% of total OF farms are classified as mixed farms according to FADN in 2011, figure about % land they manage not known	All over the Estonia Areas usually have relatively low soil fertility Usually extensively managed grasslands combined with fodder crops Diverse crop rotations with high share of legumes, quite often relatively small fields in rotation Occurrence of patches of semi-natural grasslands, landscape elements	If located in N2000 areas, in some cases specific additional nature values can be recorded (protected arable plant species), also more frequent appearance of common farmland biodiversity species (bird, bumblebees). In general low intensity farming will support lot of species of common farmland
Mixed	Low-intensity conventional mixed farming (certain animal density, share of permanent grasslands, location on N2000 areas, occurrence of selected farmland bird species and protected species)	Low-intensity land management, relatively low animal density, usually 0.2-.0.8 LU. Grazing by beef cattle, sheep and horses. Share of permanent grasslands >20%, high share of short-term grasslands in crop rotation, occurrence of patches of semi-natural grasslands.	2	No detail	All over the Estonia Relatively low intensity animal husbandry Usually extensively managed grasslands combined with fodder crops, potential patches of SNH among permanent grasslands	If located in N2000 areas, in some cases specific additional nature values can be recorded (protected arable plant species), also more frequent appearance of common farmland biodiversity species (bird, bumblebees). In general low intensity farming will support lot of species of common farmland
Mixed	Mosaic landscape: Mix farming in mosaic landscapes	Simpson diversity index > 0.41. Relatively low animal density, usually 0.2-.0.8 LU. Areas where more than five agricultural field parcels present in 1x1km grid cells	2 (potentially also 3)	No detail	All over the Estonia High Simpson diversity index Heterogeneous location of fields in mixed landscapes (forests, wetlands, agricultural land) Relatively high number of field parcels and small field sizes High proportion of farmland related landscape elements	In general low intensity farming will support lot of species of common farmland + landscape mosaics can 'compensate' some farming intensity related potential negative trends. Higher occurrence of common farmland birds

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
Other: 'Detached grassland areas'	Farming detached permanent and short-term grassland areas which are only mown	Potential land-resource for production, currently in most cases grasslands are just chopped and grass not used for agricultural purposes (more money comes from SAPS than linking these areas with animals etc.) Without SAPS these areas would be left out of management completely and abandoned	2 (potentially also 3)	~33% of all permanent (SHN excluded) and short-term grasslands in 2010	33% of permanent grasslands (SNH excluded) and short-term grasslands in Estonia in 2010 have been recorded as just "mown areas" – owners/managers don´t have any agricultural animals (ARC, 2011) Soil fertility of those areas is low (acid soils, wet areas - no good conditions for production) Areas can be in remote areas (e.g. in the middle of forests) but more frequently in less-productive areas (in heterogeneous landscapes)	If located in N2000 areas, in some cases specific additional nature values can be recorded (protected species/habitats) Extensive management (although without grazing) can favour occurrence of common farmland biodiversity species (bird, bumblebees) and be 'buffer zone' in intensively managed areas
FINLAND						
Livestock	Farms that pasture their animals on semi-natural and permanent grasslands (includes farms with own livestock)	Extensive grazing in summer by mainly cattle but also sheep (May-Sept), no additional fodder on semi-natural grasslands managed under AE agreements	1 with some 3	over 90%	Semi-natural and permanent grasslands, with some areas also Type 3 (mainly coastal meadows used by migrating birds). Also includes: grazed forest and wooded pastures; and farms with livestock.	In case of Annex habitats, the area is within Natura2000; most of Annex species of plants and insects as well nationally endangered ones depend on these; on coastal meadows also Annex 1 bird species
Arable	Farms semi-natural grasslands that are mown	Semi-natural parcels, usually very small below 1 ha, are mown; the hay is mostly unutilised	1	2 % included into above 90%	Particularly small and/or fragmented farmland	Unclear but likely to be large for butterflies (probably other insects of ecotone habitats) and some plants No particular value for birds due to small sizes and enclosed landscape context
Arable	Farms with particularly small field sizes relative to the field area	Semi-natural parcels, usually very small below 1 ha, are mown; the hay is mostly unutilised	2	included into above 90%	Particularly small and/or fragmented farmland	Unclear but likely to be large for butterflies (probably other insects of ecotone habitats) and some plants No particular value for birds due to small sizes and enclosed landscape context
Livestock	Farms with particularly small field sizes relative to the field area	Farms with mainly in the regions, where farmland is a minor land-use type (forest and lakes predominate)	10	10% (?) (some are possibly included into the above)	Particularly small and/or fragmented farmland	Unclear but likely to be large for butterflies (probably other insects of ecotone habitats) and some plants
FRANCE						
Livestock	Extensive pastoral/grazing systems sheep/goat	Extensive use of grazed areas (minimum and maximum stocking densities are paramount); Transhumance; Maintenance of landscape features (dry stone walls, huts, ponds…)	1	>80%	Mainly grazed areas on SN dry non herbaceous pastures	Opened landscape - largely N2000 designated. Important for birds, butterflies and dry flora.
Livestock	Extensive beef systems	Grazing regime (minimum and maximum stocking densities are paramount); Late	1		Mix of grazed and mowed areas. The dominant 'grass' land cover consists of a	Complex landscape features: birds, butterflies, amphibians, large wetlands.

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
		mowing; Maintenance of landscape features where they are traditional (eg bocage Northern Massif Central)			variety of land uses from extensive to rather intensive one, even on permanent pastures.	
Livestock	Extensive dairy systems (mountains)	Grazing regime (minimum and maximum stocking densities are paramount) / use of Alpage (summer upland grazings); Intensification on flat areas/land abandonment on slopes is a risk	1		Mix of grazed and mowed areas - generally extensive	Opened landscape - largely N2000 designated. Important for birds, butterflies and dry flora.
Livestock	Extensive dairy systems (plains/wetlands)	Low dairy yield/cow and the presence of [grazing] heifers are the two main HNV characteristics of those systems	1		Presence of grazed and mowed areas - potentially extensive - while some crops (maize, cereals) are generally used for dairy-fodder	Complex landscape features: birds, butterflies, amphibians
Permanent crops	Low-intensity permanent crops (olives, chestnuts, some vineyards)	Low input farming, use of old trees, grazing under the tree cover (sheep, beef)	2	<5%	Permanent crops with grass under storey; stone walls	Complex landscape features: birds, butterflies, amphibians
Mixed	Mixed beef/crop systems	Extensive management of grazed/mowed permanent grassland	2	10-15%	The main land cover is crop, but soil constraints/floods entails the use of some parcels for extensive grass	Might be very significant in generally intensive landscapes as green corridor. Typically in flood plains.
GERMANY						
Mixed	Conventional farms cultivating a mix of arable land and permanent pastures (and partly also permanent cultures)	'Normal' agriculture	Mainly 2, partly also 1 and 3	40 - 60 %	Mixed farming with arable land permanent grassland is still very common in Germany in almost all regions with the exception of best soil areas; most of the farms have landscape elements and some patches of extensive structures - thus small HNV farmland features occur nearly in all landscapes	Mainly landscape elements of all types; further some patches of extensive grasslands or habitats. See list in Figure 1 of case study report
Livestock	Suckler cow farms	Density of suckler cow-keeping may vary from 0.5 - 1.0 LU / ha; there are some whole year outside keepings, but mainly stationary suckler cow keeping dominates (cows are outside in summer period and in winter they are kept near the farm and with stables	1 and 2	15 - 25 %	Extensive grassland, mainly in the low mountain ranges or in the Eastern lowland areas with poor soils	See total list of grassland / semi-natural habitat types in Figure 1, - - additionally species rich meadows and pastures. The very extensive types in alpine and coastal regions do not apply here.
Livestock	Sheep and goat farms	Regional variations in keeping systems (very few transhumance systems, big sheep farms with about 500 - 2,000 sheep dominate in area, many small sheep and goat keepers with 2 - 20 sheep / goats (doing this partly as hobby); density of sheep-keeping from 0.3 - 1.0	1 and 2	5 - 20 %	Extensive grassland, mainly on slopes or on poor soils, partly also orchards (sheep), predominantly in the low mountain ranges	See total list of grassland / semi-natural habitat types in Figure 1, - additionally species rich meadows and pastures.

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
		LU / ha)				
Livestock	Mountain farms	May be dairy or suckler cow farming, may be also sheep farming or a mix of all.	1 and 2	5 - 10 %	Grassland in the mountain ranges of the Alps and of Black Forest and some other mountain ranges	See total list of grassland / semi-natural habitat types in Figure 1 - additionally species rich meadows and pastures. The very extensive types in lowland and coastal regions do not apply here.
Livestock	Hay producers	Low intensity managing the grassland, - often from farmers who gave up their farms	1 and 2	5 - 10 %	Extensive grassland in some landscapes which can be mown (often large patches)	See total list of grassland / semi-natural habitat types in Figure 1 and species rich meadows and pastures. The very extensive types in alpine and coastal regions do not apply here.
Mixed	Organic farms		2, partly 3	5 - 10 %	Also organic farming occurs everywhere (except in the Northwest with only a small share of organic farming); similar as in conventional farms organic farms have HNV farmland features. In addition they often keep patches of HNV arable farmland.	Mainly landscape elements of all types; further some patches of extensive grasslands or habitats, see list in Figure 1.
Arable	Organic farms	Specialised arable organic farms are the minority in organic farm systems; organic mixed farms and organic grassland farms dominate. But there is an growing number of arable farms managing a special crop rotation and partly exchanging manure with organic neighbour livestock farms.	2, partly 3	4-8%	Arable land in all suitable landscapes	Mainly landscape elements of all types; in addition: the arable fields often show a high diversity of wild weeds (also endangered species like Adonis aestivalis) and a diversity of farmland birds (also endangered species like the Corn Bunting).
Arable	Small patches of HNV arable farmland	Can be all types of farming systems who have this kind of patches.	2, partly 3	1-3%	Not as farming system, but important in this respect: patches of arable land with seldom wild weeds which are maintained by nature conservation contracts	By traditional agriculture - often from older farmers who do not cultivate perfect there arel left patches of arable land with seldom weeds and a high nature value. With special programs these farmers could partly be convinced to carry on with an extensive cultivation (nature conservation orientated) even if they are 'normal' conventional famers.
Permanent crops	Orchard farms	Orchard farms may be traditional orchard farms (High stem trees) with a big variety of breeds, but it may also be specialised orchard plantations (Middle or low stem trees). Sometimes there are cooperation's in place.	2	1 - 3 %	Orchards may occur everywhere in Germany but they are most distributed in the small parcelled landscapes in the Southwest of Germany; some farms with orchards have specialised	Species rich meadows and pastures in the understorey may occur.

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
Arable	Nature conservation orientated farms	Only few specialised farms, often with nature conservation background or as school farms	2, partly 3	0.1 - 0.3 %	Arable land with overcome diversity in wild arable weeds especially managed by nature conservation orientated farms	Eg wild weeds, but also special species like European Hamster (*Cricetus cricetus*), Montagus Harrier ((*Circus pygargus*)
Permanent crops	Wine farms (organic)	Special systems of improving the soils occur, eg sowing mixtures of flowering and legume plants (improving soils, attracting insects as pollinators and natural enemies)	2	0.1 - 0.3 %	Wine growing without pesticides and artificial fertiliser in the wine areas of Germany	Typical nature values are a community of wild weeds especially occurring in vineyards such as wild tulip (*Tulipa sylvestris*) or Star-of-Bethlehem (Ornithogalum spp.). Also some animals are specialised (eg wild bee species).
GREECE						
Livestock	Sheep and goat	No detail	1	45	CLC 231, 321, 322, 323 (324, 333)	N2000, Important Bird Areas, , Important Butterflies Areas, bird of prey distribution, wolves distribution, bears distribution
Mixed	Mixed HNV landscape: Mosaic landscape with combination of low-input arable crops and grassland systems	No detail	2	12	CLC 242	N2000, Important Bird Areas, , Important Butterflies Areas, bird of prey distribution, wolves distribution, bears distribution
Arable	Non-irrigated low-input arable crops (cereals, fodder crops, aromatic plants)	No detail	2	10	CLC 231, 243, 411, 421 (211)	N2000, Important Bird Areas, , Important Butterflies Areas, bird of prey distribution, wolves distribution, bears distribution
Livestock	Suckler cows	No detail	1	8	CLC 244, 321, (324, 333)	N2000, Important Bird Areas, , Important Butterflies Areas, bird of prey distribution, wolves distribution, bears distribution
Mixed	Mix of farming types within a single farming unit: Sheep and goat raising in combination with fallow and arable land (alpha alpha, vegetables, cereals, olives, vine)	No detail	2	8	CLC 244	N2000, Important Bird Areas, , Important Butterflies Areas, bird of prey distribution, wolves distribution, bears distribution
Permanent crops	Olive groves	No detail	2	5	CLC 223	N2000, Important Bird Areas, , Important Butterflies Areas, bird of prey distribution, wolves distribution, bears

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
						distribution
Permanent crops	Grapevines	No detail	2	3	CLC 221	N2000, Important Bird Areas, , Important Butterflies Areas, bird of prey distribution, wolves distribution, bears distribution
Permanent crops	Other permanent (plums, almond, pomegranates, citrus fruits)	No detail	2	2	CLC 241 (222)	N2000, Important Bird Areas, , Important Butterflies Areas, bird of prey distribution, wolves distribution, bears distribution
Livestock	Free-range pigs	No detail	1	2	CLC 244, 321, 323 (324, 333)	N2000, Important Bird Areas, , Important Butterflies Areas, bird of prey distribution, wolves distribution, bears distribution
HUNGARY						
Livestock	Extensive management of semi-natural grasslands with the application of shepherding / sectioning grazing (sheep, cattle, buffalo)	grazing with low animal density (0.3-0.5 animal/ha) on sand grasslands; relatively intensive grazing on alkaline grasslands. Mostly sheep on areas covered with short grass, cattle on areas with taller grass. The traditional form of pasture is shepherding (*pásztorolás)*, which has been replaced in most cases by electric fences by now.	1 and 3	30-35%	flatland loess steppes, sand steppes, green and alkaline grasslands may occur	6250 Pannonic loess steppic grasslands; 6260 Pannonic sand steppes; 1530 Pannonic salt steppes and salt marshes; 6210 Semi natural dry grasslands and scrubland facies on calcareous substrates; Great Bustard (*Otis tarda*), Stone-curlew (*Burhinus oedicnemus*), European Roller (*Coracias garrulus*), Eastern Imperial Eagle (*Aquila heliaca*), Saker Falcon (*Falco cherrug*), Red-footed Falcon (*Falco vespertinus*), Meadow Viper (*Vipera ursinii*), Fisher's Estuarine Moth (*Gortyna borelii*) etc.
Arable	Low intensity crop production on (small and even large-scale) arable lands with connection to green infrastructure features and ecological corridors	With the withdrawal of animal husbandry, the solely arable crop production is generally continued.	3	30%	Crop production is based on traditional crop cultures to this day. It is mainly composed of winter wheat, winter barley, oats, corn, sunflower, lucerne. Less and less ploughlands are fallow/set aside.	Stone-curlew (*Burhinus oedicnemus*), Great Bustard (*Otis tarda*), Red-footed falcon (*Falco vespertinus*), European Roller (*Coracias garrulus*), Montagu's Harrier (*Circus pygargus*), Northern Crane (*Grus grus*), Grey Partridge (Perdix perdix), Quail (*Coturnix coturnix*), Saker Falcon (*Falco cherrug*), Eastern Imperial Eagle (*Aquila heliaca*), Greylag Goose (*Anser anser*), Bean Goose (*Anser fabalis*), White-fronted Goose (*Anser albifrons*)
Mixed	Traditional, mosaic-like and small parcel, low	No detail	2 with transition	15-20%	Small-scale arable fields with complex cultivation patterns which include	White Stork (*Ciconia ciconia*) Hoopoe (*Upopa epops*), Grey Partridge (*Perdix*

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
	intensity farming systems (tanya)		to 1 where grassland proportion is higher		scattered grasslands and areas of natural vegetation, tree-lines, hedges, groups of trees	*perdix*), Quail (*Coturnix coturnix*), European Green Lizard (*Lacerta viridis*).
Permanent crops	Traditional orchards, flood-plain orchards	Areas of a few hectares where the space between rows is utilised by mowing, and pesticides are not used.	1	5%	Floodplain orchards of the Upper-Tisza region, plantations in the Őrség where the space between rows is mowed, almond tree cultivations mixed with lavender on the Balaton Highlands, etc.	Syrian Woodpecker (*Dendrocopos syriacus*), Lesser Spotted Woodpecker (*Dendrocopos minor*), Scops Owl (*Otus scops*), Hoopoe *Upupa epops*), European Green Lizard (*Lacerta viridis*), Southern Festoon (*Zerynthia polyxena*), Pannonic salt steppes and marshes
Livestock	Agro-forestry systems, wooded pastures	Land use mostly characterized by grazing with cattle, or on the edges of mid-mountains by sheep.	1 and 3	1-3%	25% trees and shrubs, 75% grassland for pasture forests; wooded pastures: 5% trees, with remnant trees.	Green-winged Orchid (*Orchis morio*) Siberian Flag (*Iris sibirica*), Marsh Gentian (*Gentiana pneumonanthe*), White Stork (*Ciconia ciconia*) Hoopoe (*Upopa epops*), Roller (C*oracias garrulus*), Scops Owl (*Otus scops*), Grey-headed Woodpecker (*Picus canus*), Middle Spotted Woodpecker (*Dendrocopos medius*), Violet Click-beetle (*Limoniscus violaceus)*
IRELAND						
Livestock	Mountain type vegetation	Manly sheep dominated with hardy hill breed ewes producing store lambs for finishing elsewhere although in some areas beef cows are also kept calving in the spring with calves sold in the autumn. The degree of intensification varies within regions.	1	No details	Extensive grazing on large open areas of semi-natural vegetation usually with a heather component. Some small areas of improved grassland around the farm house.	A large percentage of the Ireland's mountain areas are N2000 site. Annex 1 habitats include, for Wet heath (4010), Dry Heath (4030), Blanket bog (7130*) Species-Rich *Nardus* upland Grassland (6230).
Livestock	Wet grasslands	The main output of these areas is the production of store cattle and lambs for finishing elsewhere in Ireland. The heavy soils means that out wintering cattle is limited and cattle are often housed for 6 to 7 months.	1 with transition to 2	No details	Located in the areas with heavy clay soils, these farms consist of large areas of semi natural grasslands with hedgerows and small pockets of scrub. Transition to 2 where the agriculturally improved proportion is higher	Small field structure with species rich hedge rows, small pockets of scrub, species rich semi-natural grassland and some areas still contain traditional hay meadows. Annex 1 habitats include Molinia Meadows (6410), Transition Mires (7140) and wet versions of Lowland Hay Meadows (6510).
Livestock	Dry grasslands	The farming system varies with different regions, grazing of store cattle and beef cows are typical with often cattle out wintered. In the Burren and Aran Islands	1 with transition to 2	No details	Areas of species rich dry semi-natural grassland, some areas large such as the Burren Co Clare but also small pockets of esker grasslands that have not been	Several annexed 1 habitats under the habitats directive, dune systems (2130,2140,2150,2170) and Machair (21AO), Limestone pavement (8240) and

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
		"winterage", which involves growing grass in the spring summer for grazing in the winter, is a traditional system.			intensified. They also include the farmed coastal systems, dunes and machair. Transition to 2 where the agriculturally improved proportion is higher	Calcareous grasslands(6210).
Livestock	Wetlands	The farming system is similar for that of wet grasslands. Some of these sites are species rich and therefore would fit in under wet grasslands. However many have been agriculturally improved or continuous flooding has increased fertility and are no longer species rich.	1 with transition to 2,and some 3	No details	Wetlands are low-lying wet ground or poorly drained marginal grassland but contain populations of breeding waders. transition to 2 where the agriculturally improved proportion is higher. In some cases 3 exists where the areas has been agriculturally improved but the area harbours species of concern	Important sites for breeding waders including Curlew (*Numenius arquata*), Snipe (*Gallinago gallinago*) and Lapwing (*Vanellus vanellus*).
Arable	Small scale arable	No detail	3	No detail	now limited in Ireland , only some small areas	No detail
Mixed	Mosaics	The range in habitat types often allows a greater range of farming systems, for example hill lambs can be fattened on low land. They are still predominantly extensive farming systems reliant on the management of the semi-natural vegetation of the farm to maintain the enterprise.	1 and 2.	No detail	The mosaic contain a range of semi-natural vegetation types include, heathland, species grassland and also some areas of semi-improved and improved grassland and often small pockets of arable. Type 1 in areas that contain mixed areas of mountain (upland) vegetation and semi-natural grasslands. Type 2 is where there is a transition to agriculturally improved grassland on part of the farm.	The nature value of these farms varies depending on the amount of semi-natural vegetation remaining. The top end include fine examples of the heaths Wet heath (4010), Dry Heath (4030), Blanket bog (7130*) and a range of species rich grassland types including *Molinia* Meadows (6410). At the lower nature value end large areas of the farm have been improved or semi-improved.
ITALY						
Livestock	Mainly located in mountainous areas of the **Alps** and Apennines. In main islands (pseudo-steppe and semi-natural dry grassland and scrublands). In Sardinia, also, wooded pastures dominated by evergreen oaks Dry grasslands very widespread.	In the Alps: dominance of cattle. Low intensive livestock systems. Vertical transhumance called "alpeggio", from valley to mountains during summer. In the Apennines: Dominance of sheep and goats on cattle. Some transhumance of sheep and goats is still undertaken in some parts of central and southern regions, esp. in the area called "Antiappennino Adriatico": Abruzzo, Molise and Apulia (Tavoliere and Murge). In the South and Islands: Low-intensity livestock characterised by dry-meadow systems. Mainly sheep and goats.	1	74%	In Alps extensive grazing including mainly permanent grassland, and trees. Dry grassland; hay meadows on better soils. In Apennines extensive grazing including grass and large areas of forest grazing. In extensive grazing including grass, shrubs and trees. Wooded pastures dominated by evergreen oaks (Sardinia). Dry grasslands.	Alps: Siliceous grasslands (6230); calcareous grasslands types (6210); *Molinia* meadows (6410). *Nardus* (e.g. *Nerdetum alpigenum*). Apennine mountain range supports a wide range of grassland habitat types: mainly Nardus grasslands (6230);calcareous grassland types (*Festuco Brometalia*) (6210). Birds of conservation interest such as *Falco biarmicus*, *Pernis apivorus* and plant such as *Primula appennina*. In the South and islands: Pseudo-steppes with grasses and annuals of *Thero-*

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
		Maremmana cattle breeding in scrub and wooded pastures (Lazio and Tuscany)				*Brachypodietes* (6220). Calcareous grassland types (*Festuco Brometalia*) (6210). Habitats including steppe bird communities and endangered endemic species. Examples of significant species (i.e. *Otis tetrax*) and endemic species (i.e. *Ophrys oxyrrhynchos, Ophrys lunulata, Klasea mucronata)*
Arable	They are mainly located in northern plains (low, medium intensity rice cropping) and In central and southern uplands (cereals and forage crops under low intensity management, and proportion of fallow).	Not-irrigated rotation systems (often organic) with a proportion of fallow land. Important features are not-cultivated land-scape elements, such as hedgerows, tree rows, ditches and ponds, dry-stone walls and terraces.	2, rice fields 3	11%	Cereals cultivation in rotation with legumes, fallow land, oleaginous crops, especially in central and southern regions. Rice fields in Northern regions (Piedmont and Lombardy).	In rice fields many bird communities, amphibians, reptiles and plants (i.e. *Marsilea quadrifolia*, *Emys orbicularis*, *Triturus carnifex*)
Permanent crops	The most representative are olive trees and vineyards under low intensity management and with semi-natural under storey (not permanent during summer in drier areas). Large old trees (Apulia). Also traditional orchards with under storey. Landscape elements such as dry-stone walls and terraces represent an intrinsic element of this system.	Alps: Organic cultivation, PDO and PGI production systems of traditional varieties. Central-northern: The more traditional and low-intensity olives and vineyards are often grown in terraces. Important features are not-cultivated landscape elements, such as hedgerows, tree rows, dry-stone walls. Southern Italy: Low-intensity crops are usually grown in terraced landscapes. Presence of organic not-irrigated production. In the area called Campania Felix of Campania grape vines are tied to tall trees similar to the Etruscan practice, while on the ground mixed cropping systems reproduce the traditional "coltura promiscua".	2	9%	In Alps and Sub-Alps orchards, especially apple fruits. **(Central and Northern Italy)** Olive groves especially in Tuscany and Liguria. Vineyards with traditional Italian grapes especially in Tuscany, Trentino, Piedmont. **(Southern Italy)**Olive groves (including large thousand year old olive trees in Apulia). Citrus cultivation especially in Campania and Sicily, typical of Mediterranean areas. In Sicily terraces are used for grapevines, capers, almonds, carobs.	They harbour rare plants, lichens, invertebrates, small mammals and birds.
Mixed	Combination of livestock and crops, typically sheep and goat rearing with cereals and forage cropping.	Extensive farming, usually in not-irrigated systems, with a low density livestock (if there is any).	Type 2	5%	This system, placed especially in hilly areas and Central and Southern regions,Heterogeneous agricultural areas characterised by a variety of crop types (permanent crops and arable crops	Birds, small mammals, and reptiles

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
					including forage). Widespread especially in central and southern regions , including main islands.	
Mixed	Mosaic of low-intensity permanent crops and arable (forage, cereals and olive groves are the main crops). Unfarmed features represent a main characteristic of this system	No detail	2	1%	Peat bogs, salt marshes (especially in northern regions, and in the Alp and Apennines) in proximity of forests. Prevalence of bryophyte, graminaceae and ciperaceae plants.	Four priority habitats Annex 1: (7210), (7240), (7110), (7220)
LATVIA						
Mixed	Type 2 and Type 3: Farmland with a mosaic of low intensity agriculture and structural elements, may include fragments of Type 1 farmlands: Full cycle farms which keep livestock and cultivating crop for fodder, different combinations are possible	Full cycle farms which keep livestock and cultivating crop for fodder but different combinations are possible: primary product can be arable crop or opposite – milk or meat production.	2, 3, fragments of 1	75%	Mosaic of various crops and landscape elements.	Bird species: *Aquila pomarina, Ciconia ciconia.* Other species which are connected to different landscape elements.
Arable	Farmland with a mosaic of low intensity agriculture and natural and structural elements: Farming system where all business going only in arable lands	Farms where dominant business going on arable lands.	2	23%	Mosaic of various crops and landscape elements.	Bird species: *Aquila pomarina, Ciconia ciconia.* Other species which are connected to different landscape elements.
Arable	Farmland supporting rare species or a high proportion of European or World populations: Farming system where all business going only in arable lands	Farms where dominant business going on arable lands.	3		Wide arable fields which often are near to N2000 territories with wetlands.	Important for the resting and feeding of migratory birds.
Livestock	Subtype 1.1 Semi-natural grasslands and grasslands important for birds:	Management is moving or grazing but 40% of farmers crushing the grass. Approximately 45% of all Subtype 1.1	Type 1 - Subtype 1.1	2 – 5%	Open grasslands of different vegetation types. Size of separate polygon from 0.3 till around 500 ha, mostly around 1-2 ha.	Habitats from Annex 1 of the Habitats Directive: 1630 Boreal Baltic coastal meadows, 6110 *Rupicolous* calcareous or

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
	Cattle and sheep keeping in pastures and winter feeding with hay almost without any additional food	currently without any management and gradually afforestation there going on.				basophilic grasslands of the *Alysso-Sedion albi,* 6120 Xeric sand calcareous grasslands, 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (*important orchid sites), 6230 Species-rich *Nardus* grasslands, on silicious substrates in mountain areas, 6270 Fennoscandian lowland species-rich dry to mesic grasslands, 6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*), 6450 Northern boreal alluvial meadows, 6510 Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis*). Bird species: *Vanellus vanellus, Numenius arquata, Motacilla flava, Alauda arvensis, Anthus pratensis, Crex crex, Caturnix coturnix, Gallinago gallinago, Gallinago media, Tringa tetanus*.
Livestock	Subtype 1.2 Wooded pastures and meadows and Juniperus formations: Cattle and sheep keeping in pastures and winter feeding with hay almost without any additional food	Management is moving or grazing but mostly these areas are afforested and currently without any agricultural activity.	Type 1 – Subtype 1.2		Wooded and bushy grasslands often fully afforested but restoration is possible.	Habitats from Annex 1 of the Habitats Directive: 5130 *Juniperus communis* formations on heaths or calcareous grasslands, 6530 Fennoscandian wooded meadows, 9070 Fennoscandian wooded pastures. Species: *Osmoderma eremita, Aurantiporus croceus.*
Livestock	Subtype 1.3 Other permanent meadows and pastures	Management is moving or grazing.	Type 1 – Subtype 1.3.		No detail	Bird species: *Aquila pomarina, Ciconia ciconia, Crex crex* etc.
Livestock	Subtype 1.4 Non-grassland habitats those are dependent on agriculture.	Former management was mainly grazing. Currently almost all these situations are abandoned.	Type 1 Subtype 1.4.		Heathlands, dunes and fens.	Habitats from Annex 1 of the Habitats Directive: 2130 Fixed coastal dunes with herbaceous vegetation (“grey dunes’), 2140 Decalcified fixed dunes with *Empetrum nigrum* 2170 Dunes with *Salix repens ssp. argentea (Salicion arenariae*), 2190 Humid dune slacks, 2320 Dry sand heaths with Calluna and *Empetrum nigrum,* 2330 Inland dunes with open *Corynephorus and Agrostis* grasslands,

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
						4010 Northern Atlantic wet heaths with *Erica tetralix,* 4030 European dry heaths, 6110 *Rupicolous* calcareous or basophilic grasslands of the *Alysso-Sedion albi*, 6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels, 7230 Alkaline fens.
LITHUANIA						
Mixed	Extensive grass/arable systems	When changing requirements of the RDP measures, recently they are requested to have at least some animals in their farms. When taking into account these changes of agro-environmental policy, some small farmers are increasingly ploughing more and more grasslands to get paid for growing of agricultural crops, because of bigger payments	1,2,3	20% (Type 1); 10% (Type 2); 5% (Type 3)	Common grass species favouring normal humidity are usually dominating on semi-natural meadows. Grasslands are mostly mowed. Arable land is used for various crops, mostly for vegetables and cereal.	Extensive mixed farms can be an important habitat for some species of conservation concern (in Lithuania, mostly white stork, lesser spotted eagle (in some areas), red-backed shrike) and for various still common but declining species. Thus they can be valuable habitat for biodiversity in general.
Livestock	Extensive Systems of Beef and Dairy using semi natural pastures	On semi-natural pastures stock is usually kept for the growing season only. On grazing areas in extensive and small farms animals are usually tied individually. In rather big dairy farms grazing areas are usually fenced with permanent and mobile electricity fences. As a rule, grazing animals are concentrated (their density is too high (ex., does not meet requirements for breeding meadow bird habitats). As a local winter food in Lithuania, silage prevails on bigger and more intensive farms, while environmentally more friendly hay is more popular winter livestock food in smaller farms.	1,2,3	10% (Types 1 and 2); 5% (Type 3)	Semi-natural vegetation dominates the forage area used by the farm. In Lithuania, semi-natural meadows are considered those, which have not been ploughed for minimum 5 years. Common semi-natural meadow grasses are usually dominating. Unfortunately natural pastures/meadows, which have never been ploughed, are very rare.	Pastures can be important habitat for some species of conservation concern (in Lithuania, mostly white stork, lesser spotted eagle; rarely - roller (on dry wooded pastures only), etc. Extensively used pastures are valuable for biodiversity in general. They can be very important breeding habitat for some waders (on wet pastures only), but they are still very rare.
Livestock	Other Extensive Livestock Systems in total (Sheep and Goat Systems, Pig and Poultry Systems, Horses Systems, etc)	On semi-natural pastures stock is usually kept for the growing season only. On grazing areas in extensive and small farms animals are usually tied individually. In rather big sheep and horses farms grazing areas are usually fenced with permanent and mobile electricity fences. As a rule, grazing	1,2,3	5%	Semi-natural vegetation dominates the forage area used by the farm. In Lithuania, semi-natural meadows are considered those, which have not been ploughed for minimum 5 years. Common semi-natural meadow grasses are usually dominating. Unfortunately natural pastures/meadows, which have never been ploughed, are very	Pastures for sheep, goat and horses can be an important habitat for some species of conservation concern (in Lithuania, mostly white stork and lesser spotted eagle). Extensively used pastures for horses are valuable for biodiversity in general. They can be very important breeding habitat

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
		animals are concentrated (their density is too high (ex., does not meet requirements for breeding meadow bird habitats). As a local winter food, in Lithuania, hay is prevailing.			rare.	for some waders (on wet pastures only), but are still very rare.
Arable	Low intensity arable systems with a significant density of semi-natural elements and mosaic land cover mosaic	Grain and legume based cropping systems are prevailing. On some areas an agro-environmental measure "Stubbly field in winter season" is being applied.	1,2,3	5%	Such systems are usually on less fertile (sandy) and not drained, not ameliorated areas. Arable land mostly used for growing of triticale, oats, buckwheat, and barley is dominating. Semi-natural elements of landscape: single trees, groups of bushes, forest islands, extensively used grasslands, small-sized meadows and fens locally are common here.	Low intensity arable systems with a significant density of semi-natural elements and mosaic land cover mosaic can be an important habitat for some species of conservation concern (in Lithuania, mostly white stork, lesser spotted eagle, crane, etc). They can be valuable habitat for biodiversity in general (especially for granivorous bird species, insects, etc.).
	Semi intensive arable systems supporting species of conservation concern.	Cereal based cropping systems are prevailing. On some areas an agro-environmental measure "Stubbly field in winter season" is being applied.	1,2,3	5%	In Lithuania, they usually are on at average fertile soils. Semi-intensive arable systems usually are in moraine and hilly landscapes. Fields can be ameliorated (enlarged, drained, cleared from trees) and of medium size. Arable land mostly used for growing of triticale, oats, buckwheat, and barley is dominating. Semi-natural elements of landscape: single trees, groups of bushes, forest islands, extensively used grasslands, small-sized meadows and fens can be found here.	Semi intensive arable systems can be an important habitat for some species of conservation concern (in Lithuania, mostly white stork, lesser spotted eagle, crane). They can be valuable habitat for biodiversity in general (especially for granivorous bird species).
Permanent crops	Traditional orchards with grassy semi-natural or low intensity crop understory.	The apple orchards are usually managed very extensively (no fertilizing, no pruning but ploughing and extensive cropping, in some farms. Usually pesticides are not used. Understory grasslands are used for moving and feeding various animals.	1,2,3	5%	Traditional old apple orchards are prevailing. They usually are without a crop understory. Understory mostly forms wild herbal plants, specific for a semi-natural meadow of normal humidity.	Old orchards (especially over-matured trees) can be very important for some biodiversity, especially for insects and birds. They can support species of conservation concern (in Lithuania, ex. white stork, red-backed shrike, etc).
NETHERLANDS						
Livestock	Permanent grass	The systems are relatively intensive, but are not the most intensive farms in The Netherlands. They are mostly in the wet peatland areas and mostly involve dairy cattle grazing.	3	47%	Large scale open landscape with permanent low to middle intensive grazings <=2.0 LU/ha.	**Wintering birds on roosts:** Mute Swan *Cygnus olor*, Bewick's Swan (SPEC) *Cygnus columbianus*, Whooper Swan (SPEC) *Cygnus cygnus*, Bean Goose *Anser fabalis*, Tundra Bean Goose *Anser serrirostris*, Pink-footed Goose (SPEC) *Anser*

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
						brachyrhynchus, White-fronted Goose *Anser albifrons*, Greylag Goose *Anser anser*, Brent Goose (SPEC) *Branta bernicla*, Barnacle Goose (SPEC) *Branta leucopsis*
Livestock	Grass and moorland (semi-natural habitats)	Extensive grazing systems with suckler cows, sheep, horses, and young dairy cattle. In some case traditional herded sheep flocks are grazing these lands. In many cases nature conservation organisations have their own cattle to manage the land through grazing or lease it to farmers as grazing land.	1	34%	Extensive permanent grazings including grass, shrubs and moorland (heather) and grazing in floodplains. Also grazing on dykes with permanent grassland cover mostly by sheep. Generally very low density <0.5 LU/ha	**Annex 1 habitats:** 4010 Northern Atlantic wet heath with *Erica tetralix*; 4030 European dry heath; 4040 Dry Atlantic coastal heath with *Erica vagans;* 5130 *Juniperus communis* formations on calcareous grasslands; 6120 Xeric sand calcareous grassland; 6410 Molinia meadows on peaty soils; 6440 Alluvial meadows of river valleys; 6510 Lowland hay meadows; 6440 Alluvial meadows of river valleys. **Birds:** Woodlark (SPEC) *Lullula arborea*, Short-eared Owl (SPEC) *Asio Flammeus*, Yellowhammer (SPEC) *Emberiza citronella*, Black-necked grebe *Padiceps nigricollis*, Red-backed shrike (SPEC) *Lanius collurio*, Great grey shrike (SPEC) Lanius excubitor, Nightjar (SPEC) Caprimulgus europaeus, Grasshopper warbler (SPEC) *Locustella naevia*, Whinchat (SPEC) *Saxicula rubetra*, Bluethroat *Luscinia svecica*, Black Grouse (SPEC) *Tetrao tetrix*, Little grebe *Tachibaptus ruficollis*, Curlew (SPEC) *Numenius arquata*, Teal *Anas crecca*, Tawny pipit (SPEC) *Anthus campestris*, Wryneck (SPEC) *Jynx torquilla*.
Mixed	Permanent grasslands on peaty soils with high density of wet linear elements (ditches, ponds)	The farming systems involved are most often grazing systems, mostly dairy and less often suckler cows, with low intensity grazing for Dutch standards (<1.5 LU/ha). Grazing of cattle is often combined with sheep.	2	10%	Mostly permanent grassland with a high density of ditches, ponds and open water.	**Breeding birds** of pastures/meadows under wet conditions: Garganey *Anas querquedula* (SPEC), Shoveler *Anas Clypeata*, Tufted Duck (SPEC) *Aythya fuligula*, Meadow pipit (SPEC) *Anthus pratensis*, Yellow wagtail *Motacilla flava*, Ruff (SPEC) *Philomachus pugnax*, Snipe *Gallinago gallinago*, Redshank (SPEC) *Tringa totanus*, Black-tailed Godwit (SPEC) *Limosa limosa*, Black Tern (SPEC) *Chlidonias niger*. **Vegetation types**: wet

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
						infertile grasslands; marsh marigold grasslands on peat (e.g. 6410 Molinia meadows on peaty soils).
Mixed	Permanent grasslands on peaty soils	The farming systems involved are most often grazing systems (both for dairy and suckler cows) with low intensity grazing for Dutch standards (<1.5 LU/ha).	2	10%	Mostly permanent grassland with a high density of d wet linear elements itches, ponds and open water.	**Breeding birds** of pastures/meadows under wet conditions: Garganey *Anas querquedula* (SPEC), Shoveler *Anas Clypeata*, Tufted Duck (SPEC) *Aythya fuligula*, Meadow pipit (SPEC) *Anthus pratensis*, Yellow wagtail *Motacilla flava*, Ruff (SPEC) *Philomachus pugnax*, Snipe *Gallinago gallinago*, Redshank (SPEC) *Tringa totanus*, Black-tailed Godwit (SPEC) *Limosa limosa*, Black Tern (SPEC) *Chlidonias niger.* **Vegetation types**: wet infertile grasslands; marsh marigold grasslands on peat (eg 6410 Molinia meadows on peaty soils).
Mixed	Permanent grassland and some arable on sandy soils		2	6%	Mostly permanent grassland mixed with some arable plots with maize and cereals in a half open landscape. Fields are relatively small for Dutch standards with a high density of "green veins" (e.g. tree lines, field boundaries, hedges and small forest patches).	**Breeding meadow birds**: Kestrel (SPEC) *Falco tinnunculus*, Red-backed shrike (SPEC) *Lanius collurio*, Yellowhammer (SPEC) *Emberiza citrinella*, Grey Partridge (SPEC) *Perdix perdix,* Linnet (SPEC) *Carduelis cannabina*, Goldfinch *Carduelis Carduelis,* Tree Sparrow *Passer montanus*, Curlew (SPEC) *Numenius arquata*, Rook *Corvus frugilegus*, Spotted flycatcher (SPEC) *Muscicapa striata*, Turtle Dove (SPEC) *streptopelia turtur*, Whitethroat (SPEC) *Sylvia communis*, Icterin warbler (SPEC) *Hippolais icterina*, Mistle thrush (SPEC) *Turdus viscivorus*, Barn Owl (SPEC) *Tyto Alba*, Little Owl (SPEC) *Athene noctua*, Fieldfare (SPEC) *Turdus Pilares*, Stonechat (SPEC) *Saxicola torquata*, Swallow (SPEC) *Hirundo rustica*. **Vegetation types**: dry, infertile grasslands on higher sandy or calcareous soils; (6120 Xeric sand calcareous grassland); or wet semi-fertile grasslands (6440 Alluvial meadows of river valleys; 6440 Alluvial meadows of river valleys).

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
Arable	Dryland arable with a high proportion of fallow	This is mostly a low to medium intensive arable agricultural system either located in the open marine clay areas of the extreme north and south-west or on sandy soils in the north-east of the country. The share of fallow and wheat in the rotation is relatively high as compared to other arable systems and they maintain a high share (>5%) of UAA in fallow.	3	3%	Arable crops non-irrigated (mostly winter and summer wheat and barley), potatoes, onions, sugar beet.	**Breeding birds of arable land**: Montagu's harrier (SPEC) *Circus pygargus*, Corncrake (SPEC) *Crex crex*, Quail (SPEC) *Coturnix coturnix*, Grey Partridge (SPEC) *Perdix perdix*, Yellow wagtail *Motacilla flava*, Skylark (SPEC) *Alauda arvensis*, Lapwing *Vanelus vanelus*, Oystercatcher *Haematopus Ostralegus*, Corn Bunting (SPEC) *Miliaria calandra*.
POLAND						
No detail						
PORTUGAL						
Livestock	Low intensity extensive grazing	No detail	1	78%	Located in the north and centre, where semi-natural vegetation is found in both the irrigated mountain pastures called *lameiros*, or the extensive communal grazing called *baldio*s. These *baldios* area very important part of the system and account for 13% of all "forest" in Northern and Central Portugal: at higher altitudes there is upland grazing above the treeline (in the Gerês and Estrela mountains) and scrubby rough grazing at lower altitudes.	No detail
Arable	Low intensity non-irrigated arable crops	No detail	1	15%	Located largely in the south, especially the montado agro-forestry system, is found mostly on the landscape scale, and it corresponds to a totally different property structure, *latifundia*	No detail
Permanent crops	Low intensity permanent crops	No detail	1	4%	The Type 2 farmland on the south is mostly in the form of low-intensity small scale olive groves, where the trees were planted in irregular patterns, are not irrigated and where the olive production is combined with grazing between the trees.	No detail
Mixed	Mosaic areas composed of agricultural and semi-natural areas (traditional mixed farming)	No detail	2	3%	Type 2 HNV farmland is predominant in north and central Portugal, where traditional farming systems often create a highly diverse landscape mosaic.	No detail
Livestock	Intensive dairy farms	No detail	3	No detail	Type 3 HNV farmland is highly productive and generally of low biodiversity, but	No detail

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
					nevertheless supports important species. This is the case along some river estuaries, from the Tagus to smaller rivers all along the coast – these areas are largely used for intensive dairying	
ROMANIA						
Livestock	Mountain – extensive semi-natural grasslands	Sheep and cattle grazing/fodder. Stocking rates under 1 LU/ha, summer only. Hay mown after 1 July if under a-e measures. FYM only, and limited under AE measures: no bag fertilisers.	1	40%	extensive semi-natural pastures, with some hay meadows	Dominated by HD Annex 1 habitats 6210, 6230, 6240, 6410, and 6520. Numerous protected fauna: wolf, bear, lynx, raptors such as golden eagle and lesser-spotted eagle.
Livestock	Hilly area pastures, usually common grazing	Common grazing, sheep and cattle, some goats, some buffalo. Local transhumance of sheep. Stocking rates under 1-1.2 LU/ha, summer only	1	20%	extensive semi-natural pastures and hay meadows with some scrub, isolated trees, tree lines along streams, damper patches with reeds	Dominated by HD Annex 1 habitats 40A0, 6210, 6240, 62C0, 6430 and 6510. 6 HD Annex 2 flora species
Mixed	Hilly areas – hay meadows, arable and landscape features mixed at micro-farm level	Hay meadows mown after 1 July if under AE measures. FYM only, and limited under AE measures: no bag fertilisers. Small-scale arable cattle feed: for maize, beans, wheat.	2	20%	Pastures, hay meadows, arable and landscape features mixed at micro-farm level	Dominated by HD Annex 1 habitats 6210, 6410, 6420, 6430, 6510 and 6520. Lowland bears and wolves. 8 HD Annex 2 lepidoptera species. Over 17 WBD species including corncrake, lesser grey shrike, Eurasian eagle owl red-footed falcon, western marsh harrier, lesser spotted eagle.
Permanent	Traditional orchards with permanent grass understorey	Hay meadows mown after 1 July if under AE measures.	2	10%	Small-scale orchards with mown/grazed permanent grass understorey	Important for HD Annex 2 flora and lepidoptera species
Arable	Arable farms in southeast Romania with few natural features,	Fertilisers used. Under a-e measures winter cereal or rape crop is obligatory, and summer maize crop permitted. No spraying / grazing /cultivation /harvesting permitted 15 Oct-31 May.	3	10%	Large fields of maize /sunflower/wheat, declared for migratory birds	WBD Migratory birds such as red-breasted goose.
SLOVAKIA						
Livestock	Semi-natural grassland habitats (pastures and meadows)	Regional difference in farming practices. Cattle and sheep grazing dominate, rarely goats and horses. Continuous or rotation grazing or mowing two times per year of combination of both (mowing in spring, then grazing until October). Mostly low intensity of grazing (less than 1LU). Transhumance – from uplands to valleys (app 10-20km)	1	87%	Extensive permanent semi-natural habitats including pastures and hay meadows in mountains and lowlands. Large areas of grasslands notably present in mountains and sub-mountains regions and floodplain areas.	17 habitat types of Annex 1 (Habitat directive)

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
Livestock	Abandoned grasslands (potential HNV)	No detail	Potentially 1 – low evidence of biodiversity status, most of the area is out of LPIS	100,000 ha	No detail	17 habitat types of Annex 1 (Habitat directive)
Mixed	Traditional Agricultural Landscape with Dispersed Settlements. Traditional Agricultural Landscape of arable land, pastures, orchard. Traditional Agricultural Landscape of Arable-Land and Grasslands.	Traditional extensive farming practices, presence of hand mowing, small number of animals (one cattle, small herd of sheep).	2, could include 1	10% (all mixed together)	Created in a mosaic of dominant mosaic of small fields of arable land, grassland that might by completed by orchard's. In the southern part of Slovakia old vineyards are valuable. Buildings and other landscape elements (stone walls, etc.) are also a significant element of this mosaic, since their presence is correlated with the degree of land use.	No detail
Permanent crops	Traditional Agricultural Landscape vineyards	No detail	2	2%	No detail	No detail
Arable	Arable land in N2000 sites (potential HNV)	Extensive management	2 (possibly 3)	308,000 ha of arable land (292,000 ha in SPAs, 46,000 ha in SACs)	No detail	Arable land may support important bird species; however, there is no evidence if there is a minimum biodiversity.
SLOVENIA						
Livestock	extensively managed grassland in lowlands	Regional variations in systems and practices. Cattle, sheep, goats, horses are an exception (Lipica area). Livestock breeding is often a complement to other activities (wine, fruits production, permanent crops). Important also as feeding ground for numerous bat species in caves belowground. Local transhumance in the areas near the alps (summer pastures), e.g. in Western Slovenia, Kamniško-Savinjske Alps.	1	20-30%	Pastures and hay meadows in lowlands. Typical of karstic areas. Often intertwined with drywalls, small-scale traditional meadow orchards and patches of arable land on flatter areas and on the bottom of sinkholes. Often bordering vineyards, especially on southern slopes.	Annex 1 habitats include Lowland hay meadows (6510), semi-natural dry grasslands (*Festuco Brometalia*) (6210*), Eastern sub-mediterranean dry grassland (*Scorzoneretalia villosae*) (62A0), Rupicolous calcareous or basophilic grasslands of the *Alysso-Sedion albi* (6110), *Lanius collurio, Lullula arborea, Anthus campestris, Caprimulgus europaeus, Upupa epops, Pernis apivorus, Eriogaster catax,* several species of bats, *Himantoglossum adriaticum;* rich in orchid species. Very strong overlap with N2000 sites, predominant in Natura site

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
						Kras.
Livestock	extensively managed grassland in subalpine areas	Regional variations in systems and practices. Cattle, sheep, rarely goats. Livestock breeding often complements other activities on the farm (arable crops, permanent crops, forestry). Local transhumance in the areas near the alps (summer pastures), eg in the Karavanke and Julian Alps.	1	20-30%	Pastures and hay meadows in hilly areas, usually on hill slopes. Some traditional small-scale meadow orchards and small-scale arable cropping.	Mountain hay meadows (6520), Alpine and subalpine calcareous grasslands (6170), species-rich *Nardus* grasslands (6230*). Similar bird species as in grassland in lowlands; butterfly species, e.g. *Colias myrmidone; Pulsatilla grandis* at Boč. Often included in N2000 sites.
Livestock	intensively managed grassland	2-3 mowings per year and regular application of fertiliser. Grass is used for fodder as hay or silage. Linked to local transhumance in the areas near the alps (summer pastures), e.g. in the Cerklje-Komenda-Kamnik area under Kamniško-Savinjske Alps.	3	15%	Intensively managed meadows in lowlands. Often bordering arable land or permanent crop production (orchards, hops fields). Sometimes small patches of woodland or large individual trees in the middle.	Habitat of numerous bird species, for example *Sturnus vulgaris, Alauda arvensis, Hirundo rustica, Saxicola rubicola, Motacilla flava, Emberiza citrinella, Vanellus vanellus*. Important also for birds of prey such as falcons and buzzards. Habitat of several species of small mammals.
Mixed	grasslands with trees, trees and shrubs	Used for coppicing or fodder material and as shadowed area for rest.	2	6-7%	Areas with large trees and bushes that cannot be categorised as forests, including hedgerows, patches of woodland, overgrown river banks and similar. Usually a small proportion of a farm.	Invertebrates, small mammals, birds, amphibians, reptiles – a patch of species diversity in more or less intensively farmed area. Often part of in N2000 sites.
Mixed	extensive/meadow orchards	Production of fruits in a traditional way, often of traditional varieties. Combined with haymaking, often on hill slopes.	2	5-6%	Areas where fruit trees are grown in traditional way, where the trees are planted at low density and grown high. Usually a small proportion of a farm.	Usually include lowland hay meadows (6510), semi-natural dry grasslands (*Festuco Brometalia*) (6210*) and semi-natural dry grasslands and scrubland facies on calcareous substrates (6210). Habitat of numerous bird species, for example *Lanius collurio, Jynx torquilla, Pernis apivorus,* and insects. Often part of N2000 sites, especially the ones with extensive grassland as one of the key habitats.
Arable	agricultural land under shrub encroachment	Abandoned farming use. Typical for land property of abandoned farms or land that is not easily accessible or where land parcels are too small and too distant from the rest of property that farming would still be viable.	2	5.5%	Abandoned arable land that is slowly overgrown. A mixture of perennial plants, shrubs and small trees, depending on the phase. Often found in patches corresponding to land ownership parcels.	Invertebrates, small mammals, birds, amphibians, reptiles – a patch of species diversity in more or less intensively farmed area. Often include alien species; *Juniperus communis* and various species of Pinus often present in the transition phase in Western and South-Western

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
						Slovenia.
Livestock	Alpine pastures (dry open land with special vegetation)	Transhumance from local plains with regional variations in systems and practices. Cattle, sheep (mainly North-West), horses (usually in addition to cattle), rarely goats (usually mixed with others). Very low LSU/ha, usually <1 LSU/ha. High per centage of autochtonous breeds – for example in 2008, 25 per cent of cattle was "cika" breed.	1	3,6	Extensive permanent grazing areas at altitudes above 750 m; predominantly grassland with varying proportion of shrubs and trees. Some hay meadows especially on lower altitudes.	Annex 1 habitats include semi-natural dry grasslands and scrubland facies on calcareous substrates (6210), Alpine and subalpine calcareous grasslands (6170), Mountain hay meadows (6520), locally also Alpine and Boreal heaths (4060), siliceous alpine and boreal grasslands (6150), species-rich *Nardus* grasslands (6230*). Species include *Alectoris graeca saxatilis, Aquila chrysaetos, Tetrao tetrix tetrix, Monticola saxatilis, Erebia calcaria, Colias myrmidone.* Strong overlap (75%) with N2000 sites.
Mixed	Sub-Mediterranean agricultural landscape	Mixed farming and labour or resource (water scarcity is the key issue) intensive activities, such as vegetable production result in a mosaic landscape.	2 with transition to 3 in non-terraced areas	2%	A patchwork of woodland, scrub, vegetable gardens and small fields as well as small vineyards, olive groves, orchards and nurseries. Most of the area is terraced and extensively managed, most farms being managed as a mosaic of activities.	Habitat of numerous bird species typical also of extensively managed grassland in lowlands. Can be rich in orchids. Mostly included in N2000 sites.
Livestock	humid grasslands and marshy land	Regional variations in systems and practices. Cattle and some horses, rarely goats and sheep. Grass is usually mown, but considered low-quality fodder. Use for grazing is usually in dryer season and temporary.	1	1.5%	Pastures and hay meadows in marshy, humid areas such as Ljubljana Marsh, floodplains and intermittent lakes. Usually intertwined with ditches, patches of willow and poplar woodland and hydrophyllous tall herbs.	Annex 1 habitats include Molinia meadows (6410), lowland hay meadows (with *Alopecurus pratensis, Sanguisorba officinalis)* (6510), hydrophilous tall herb fringe communities of plains and of the montane to alpine levels (6430). Species include *Coenonympha oedippus, Crex crex, Circus cyaneus, Coturnix coturnix, Falco vespertinus, Saxicola rubetra, Pernis apivorus, Maculinea teleius, Euphydryas (Eurodryas) aurinia*. Mostly included in various N2000 sites.
SPAIN						
Livestock	Mountain	Regional variations in systems and practices. Suckler cattle, sheep, goats (mainly centre and south), horses (mainly north). Very low LU/ha, typically <0.2LU/ha in drier areas and <1LU/ha in wetter areas. Often with local transhumance to plains. Hay meadows survive under traditional management in	1	20-30%	Extensive permanent grazings including grass, shrubs and trees in varying proportions. Large areas of forest grazing. Some traditional hay meadows though mostly intensified on better soils in valleys. Some small-scale arable cropping for forage.	Annex 1 habitats include European dry heaths (4030), Alpine and Boreal heaths (4060), Semi-natural dry grasslands and scrubland facies on calcareous substrates (6210), Siliceous Pyrenean *Festuca eskia* grasslands (6140), Oro-Iberian *Festuca indigesta* grasslands (6160), Alpine and subalpine calcareous grasslands (6170),

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
		some areas, but many have been intensified.				Lowland hay meadows (6510), Mountain hay meadows (6520), *Molinia* meadows (6410) and Mediterranean tall humid grasslands (6420). In southern mountains Endemic oro-Mediterranean heaths with gorse (habitat 4090) and Pseudo-steppe with grasses and annuals of the *Thero-Brachypodietea* (priority habitat 6220).
Livestock	*Dehesas*	Cattle, sheep, goats, pigs (acorns an important forage resource, mainly for pigs). Some local transhumance to mountains (not pigs). Some pastures are reseeded periodically to remove shrubs and improve productivity (very long cycles).	1 with transition to 2 where arable proportion is higher	15-25%	Extensive permanent grazings with tree cover of up to 60 trees/ha (sometimes more). Some crops on better land. Often with a mosaic of shrub patches and other features such as streams, ponds, dry-stone walls.	*Dehesa* is an Annex 1 habitat. Also several others within the matrix e.g. Mediterranean temporary ponds (priority habitat 3170), Forests of *Quercus suber* (9330), Pseudo-steppe with grasses and annuals of the *Thero-Brachypodietea* (priority habitat 6220).
Arable	Dryland arable with a proportion of fallow in rotation and some semi-natural elements e.g. field boundaries	Traditional and semi-traditional rotations of cereal-fallow, sometimes also with legumes. Proportion and length of fallows varies considerably. Often with sheep grazing on stubbles.	2 with transition to 3 where semi-natural and fallow elements are reduced and main wildlife is bird communities.	10-20%	Cereals, fallow, legumes. Field boundaries of spontaneous vegetation. Other scattered landscape elements e.g. shrub and tree patches, streams, ponds, dry-stone walls in some areas.	Mainly steppe bird communities. Hen Harrier (*Circus cyaneus*), Montagu's Harrier (*Circus pygargus*), Lesser Kestrel (*Falco naumanni*), Great Bustard (*Otis tarda*), Little Bustard (*Tetrax tetrax*)
Livestock	Grass and shrub steppeland	Regional variations in systems and practices. Cattle, sheep, goats. Some local transhumance to mountains.	1 with transition to 2 where arable proportion is higher	10-20%	Extensive permanent grazings including grass, shrubs and trees in varying proportions. Some arable cropping for forage. Merges with Arable-Grass-Shrub Steppes type.	Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (6210), Pseudo-steppe with grasses and annuals of the *Thero-Brachypodietea* (priority habitat 6220). High altitude plains of the north and southeast include *Juniperus* woods (priority habitat 9560). Dupont's lark (*Chersophilus duponti*), the most threatened passerine bird in Europe, inhabits these areas and depends on

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
						continued grazing for its existence.
Mixed	Mosaics of arable-grass-shrub pastures, may include permanent crops (olives, vines)	No detail	2	10-20%	Very varied type of farmland, e.g. large-scale mosaic in centre, smaller scale in north. In some areas mosaics are dominated by permanent crops.	Several Annex 1 habitat types as for grass steppes. Birds include Stone Curlew (*Burhinus oedicnemus*), Collared Pratincole (*Glareola pratincola*), Black-bellied Sandgrouse (*Pterocles orientalis*), Pin-tailed Sandgrouse (*Pterocles alchata*), European Roller, (*Coracias garrulus*), Tawny Pipit (*Anthus campestris*)
Permanent crops	Traditional permanent crops under low-intensity management with semi-permanent or permanent understorey.	Permanent crops have undergone major intensification processes in recent decades. Some areas, especially in uplands, still have low use of manufactured fertilisers and biocides. In some limited locations, permanent understorey grazed by sheep.	2, though olives with permanent grazed understorey may be considered 1. More intensive olives that support important migratory bird populations may be counted as 3.	4-8%	Mostly olives. Also almonds, chestnuts, figs, apples, pears. Generally large old trees, often on terraces with dry-stone walls, interspersed with semi-natural patches.	Birds, invertebrates, small mammals, reptiles. Permanent understorey supports typical grassland butterflies such as small copper (*Lycaena phlaeas*), meadow brown (*Maniola jurtina*), common blue (*Polyommatus icarus*), marsh fritillary (*Euphydryas aurinia*). Older trees develop hollows which are used by birds such as little owl (*Athene noctua*) and reptiles, as well as genet (*Genetta genetta*). Wintering habitat for thrushes, warblers and finches, and breeding grounds for the Rufous Bush Robin (*Cercotrichas galactotes*) one of three passerines at risk of extinction in Spain.
Arable	Low-intensity rice cropping	Input use (levels, timing, products) is a major determinant of the environmental values of rice production. Intensive rice farming has important environmental impacts, mainly through excessive exploitation of sensitive water resources (eg around Doñana National Park), and pollution from agro-chemicals.	3	0.2-0.5%	Rice fields and irrigation channels, in more traditional cases with field-boundary strips and other patches of semi-natural vegetation.	Mainly wetland bird communities that use rice fields as substitutes for wetland habitats that have been lost. Also fish, for example *Aphanius iberus* and *Valencia hispanica*, Mediterranean endemics that survive in channels and small ponds with less pesticide pollution. Also invertebrates.
Mixed	Micro-scale mosaics of vegetables and orchards	In certain upland locations, often with traditional irrigation systems.	2	0.2-0.5%	Orchards of fruit and nut trees, vegetable plots, **micro-scale** cropping, interspersed with semi-natural patches and elements.	Birds, invertebrates, small mammals, reptiles.
SWEDEN						
Livestock	Type 1: All permanent	No detail	1	32 - 46%	Semi-natural pastures and meadows are	Research has shown that pastures may be

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
	pastures and meadows				characterized by species dependent on agricultural maintenance as well as by a high proportion of cultural heritage values, such as stone walls. These habitats are not stable, and will become overgrown if not managed properly and eventually they will become different types of forests.	very useful even if they do not have a high value for red-listed species, since they maintain pollination in the surrounding area (Öckinger and Smith 2007).
Mixed	All non-Type 1 farmland in municipalities with <4 % agricultural land.	No detail	2	22%	No detail	No detail
UNITED KINGDOM						
Livestock	Low-intensity livestock - upland	These upland grazings are predominately under un-shepherded sheep grazing, with suckler cows as a subsidiary enterprise in some regions. Traditional breeds remains of major importance, particularly in the hill sheep sector. Common grazing is an important farming characteristic associate with low-intensity livestock rising in these areas, accounting for over 1.16 million ha.	1	50%	Large, mainly 'unenclosed' areas, dominated by low productivity semi-natural vegetation. On the inbye ground, species-rich hayfields and other semi-natural grassland communities (not otherwise represented on the rough grazings) can occur. Small proportion of cereals (mostly barley or oats, with occasional rye) grown for winter feed for cattle (where present). Traditional orchards can be art of one of the livestock systems above. They are characterised by large old trees and permanent pasture, usually semi-natural, though not always species-rich.	No detail
Livestock	Low-intensity livestock - lowland	Some of these lowland grazings (eg saltmarsh) can be predominantly under un-shepherded sheep grazing, but suckler cows can predominate in some regions and a combination of more mixed livestock grazing (e.g. sheep, cattle, horses, pigs) can occur in others. The grazed woodlands of the New Forest and Forest of Dean both represent an unusual survival of historic land use patterns.	1	30%	Large unenclosed areas, dominated by low productivity semi-natural vegetation, are unusual in the lowlands, but do occur. Other lowland livestock systems with a significant proportion of semi-natural vegetation do occur in some areas, particularly where drainage is poor. Locally there are significant areas of semi-improved grassland in smaller field patterns, often associated with smaller patches of semi-natural grassland and with a high presence of landscape features, such as large hedges In some regions, these are areas of smallholdings, sometimes with hobby farmers or horse-only holdings.	No detail

Dominant farming system	Farming system	Farming practices	HNV Type	Estimated % of total extent of HNV farmland	Land cover	Nature values
					Traditional orchards can be art of one of the livestock systems above. They are characterised by large old trees and permanent pasture, usually semi-natural, though not always species-rich.	
Livestock	Lowland semi-natural farmland	Predominantly permanent grassland livestock systems; more unusually crop/grass livestock systems; very rarely mixed systems. In other such areas, the semi-natural is integrated into the rest of the farming system, but is the main area where nature value is focussed eg grazing of chalk grassland escarpments.	2	20%	The remaining semi-natural farmland occurs in a great variety of situations. In most areas, physical limitations to arable cropping mean that the semi-natural exists within a wider mosaic dominated by permanent grassland, some of which may be highly intensively used.. In other places, such as parts of Devon, topographic limitations coincide with areas where the flatter land is capable of a range of uses. Arable cropping can then be a substantial part of the system, benefitting some species such as cirl bunting.	No detail
Other	Intensively managed improved grasslands and/or arable	Generally occurring with the farming system characteristics means there is access to a plentiful supply of high quality grass or seed foodstuffs.	3	10%	Intensively-managed improved grasslands and/or arable, sometimes adjacent to or replacing former breeding/feeding/roosting sites on semi-natural areas.	No detail
Permanent crops	Traditional orchards	The area of traditional orchard is of the order of 20,000 ha, and is assumed to be included in the global HNV figures given elsewhere in this report.	2	1	It is assumed that all traditional orchards are part of one of the livestock systems above. They are characterised by large old trees and permanent pasture, usually semi-natural, though not always species-rich.	(In addition to the grassland values, which are variable) Bark flora and fauna; certain larger fauna, such as hawfinch.
Arable	Low-intensity arable (not part of livestock systems)	Low-intensity arable is very unusual in the UK; not in association with a mixed system, it hardly exists at all. For the purposes of this report it is assumed that it does not exist, and arable fields are taken to add value as part of a wider mosaic (e.g. in the Uists, in South Devon) or to be of Type 3 (stone curlew nesting areas in the Breckland, goose feeding grounds in e.g. Kinross)	1	0%	Low-intensity arable (with a viable population of arable 'weeds'), not in the context of livestock systems.	No detail

Annex 3 Available maps, data sets and reports on HNV farming by Member State

Source: individual Member State case studies

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
AT	Agrar-Umweltindikator 'High Nature Value farmland'. Verifizierung der Gebietskulisse für Österreich	Report; DE (with EN summary); 2008	Verification of HNV farmland in Austria, Discussion of continuing steps for the designation of HNV farmland in Austria	Compiled national data on threatened habitats and bird distribution and IACS on land use to visualise HNVF in a nationwide map showing potential HNVF (note, this is a static resource that does not look at changing land uses)	Umweltbundesamt (2008) Bartel, A.; Schwarzl, B.: Agrar-Umweltindikator 'High Nature Value Farmland'. Verifizierung der Gebietskulisse für Österreich. Projekt GZ BMLFUW-LE.1.3.7/0011/-II/5/2007. Umweltbundesamt, Wien. Referenced as: Austria HNV (2008)
AT	Weiterentwicklung des Agrar-Umweltindikators 'High Nature Value farmland' für Österreich	Report; DE; 2011	Determination of the area of type 1 and type 2 HNV farmland in Austria, implementation of CMEF indicators	This study developed a more dynamic map of HNVF that can be updated annually in order to show short changes and monitor quantity and quality of HNVF - still needs to be developed for type 3 though as currently only exists for types 1 and 2	Umweltbundesamt (2011) Bartel, A.; Süßenbacher, E.; Sedy, K.: Weiterentwicklung des Agrar-Umweltindikators 'High Nature Value Farmland' für Österreich. Endbericht, Projekt GZ BMLFUW-LE.1.3.7/0007-II/5/2010. Umweltbundesamt, Wien. Referenced as: Austria HNV (2011)
BE	HNV farming in 35 countries of Europe	Book chapter EN, 2012	Summary country profile		Danckaert, S, de Ruck, K, Mulders, C and Peeters, A (2012) HNV farming in 35 countries of Europe, Belgium 'In', R Oppermann, G Beaufoy and G Jones (Eds) *High Nature Value Farming in Europe,* pp128:135. Germany; Verlag regionalkultur.
BE	Indicators for the monitoring of agricultural land with a high nature value. An exploratory analysis	Report summary EN; Main report in Flemish, 2008	Exploratory analysis of CMEF HNV indicator. Main report including regional breakdown for HNV. Summary offers outline of type distinctions		Danckaert, S, Carels, K, Van Gijseghem, D and Hens, M (2009) *Indicators for the monitoring of agricultural land with a high nature value. An exploratory analysis*. Report summary http://lv.vlaanderen.be/nlapps/docs/default.asp?id=1762
BE	Agri-environmental indicators in relation to rural development policy in Flanders, Belgium	EN, 2009	Break down for HNV 1-3, includes maps and figures, management actions and targeted species	Also discusses AEM in relation to HNV	Van Gijseghem, D, Danckaert, S, Van Zeebroeck, M, Maertens, E (2009) *Agri-environmental indicators in relation to rural development policy in Flanders, Belgium.* Department of Agriculture and Fisheries, Brussels, Belgium. http://www.oecd.org/tad/sustainable-agriculture/44808214.pdf
BE	Mid-term evaluation	Background document to MTE Flemish, 2009	Reports on HNV indicator. Includes estimates of HNV area		IDEA Consult, Universiteit Gent, Soresma, VUB (2010) *Mid term evaluatie van het Vlaams Programmadocument voor Plattelandsontwikkeling 2007-2013.* Achtergronddocument
BE	State of Nature in Flanders (Belgium) 2007	EN, 2007	Share of HNV by land cover; figures and map		Dumortier, M, De Bruyn, L, Hens, M, Peymen, J, Schneiders, A, Van Daele, T and Van Reeth, W

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
					(2007) *State of Nature in Flanders (Belgium) 2007.* P27 http://www.inbo.be/files/bibliotheek/95/178495.pdf
BE	Relevance, utility and data availability of agricultural (and forestry) competitiveness indicators and agri-environmental indicators for rural development and policy analysis	EN, 2008	Evaluation of HNV indicator		Debergh, A-S, Van Delm, T, Kerselaers, E and Lauwers, L (2008) Relevance, utility and data availability of agricultural (and forestry) competitiveness indicators and agri-environmental indicators for rural development and policy analysis. TAPAS 2006, Rural Development. Final report. http://www.ilvo.vlaanderen.be/Portals/9/Documents/Eindrapport_TAPAS_2006.pdf
BE	Updated High Nature Value Farmland in Europe. An estimate of the distribution patterns on the basis of CORINE Land Cover 2006 and biodiversity data.	EN, 2006	Overview of EU HNV farmland includes table with MS totals		Schwaiger, E, Banko, G, Brodsky, U L, GISAT, van Doorn, A, Alterra (2012) *Updated High Nature Value Farmland in Europe. An estimate of the distribution patterns on the basis of CORINE Land Cover 2006 and biodiversity data.* Draft EEA Technical Report on a basis of the ETC SIA IP 2011 Task 421 implementation, 4 September 2012 http://forum.eionet.europa.eu/nrc-agriculture-and-forest-interest-group/library/forests/nrc-forests/nrc-agri-forest-meeting-26-sept.-2012-copenhagen/documents/updated-high-nature-value-farmland-europe/download/1/Task421_HNV_report_final_draft_to_be_published.pdf
BG	Attachment 4 of Annex 5, BG RDP 2007 -2013 Approach for designation of HNV farmland in Bulgaria and map of HNV farmland in Bulgaria	Report; 2007	Approach for identification of HNV	The approach is based on the existing GIS data sets at that time. It can be assumed that it includes HNVF type 1 and to some extent HNV type 3, but for sure it does cover all of the HNVF type 2. Intended to support farmers in such areas. The final report of the HNV identification stated that the identification was very general and should have been considered as indicative only. The report recommended that further analysis and validation was needed.	MAF, Bulgarian RDP 2007-2013 Located in Annex 1 of case study
BG	Map of HNVF in Bulgaria	Data set (GIS); 2007	The first data set was a list with the potential HNV physical blocks in Bulgaria A HNVF layer was later created for LPIS	Intended to support farmers in such areas. The final report of the HNV identification stated that the identification was very general and should have been considered as indicative only. The report recommended that further analysis and validation was needed.	WWF-DCP, MAF

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
BG	HNV farmlands: Recognising the importance of South East European landscapes, Final summary report (Bulgaria& Romania)	Report; EN; 2008 (September)	Description of HNV systems in case study areas (Russenski Lom, Western Stara planina and Strandja) Analysis of the existing policy for HNV and small scale farming and related recommendations Approaches for Identification of HNV farmland and targeting the support	These developments were led by specialists in the LPIS department (within MAF) - although they made several changes to the HNVF layer, the process was not reported and the experts used to create the original data set were not consulted.	EFNCP, WWF-DCP, Authors: Guy Beaufoy, Gwyn Jones, Koen de Rijck, Yanka Kazakova
BG	The Hidden Values of HNV Farming Systems in Bulgaria and Romania	Report; EN; 2009 (May)	Simple typology of HNV farming systems in Bulgaria (and Romania) Hidden values of HNV farming systems and socio – economic importance of these systems, Policy support analysis and recommendations	Focuses on importance, socio-economic challenges specific to the area - intended for the pilot/case study area. NGO results are usually submitted to the MoA	WWF-DCP Author : Mark Redman
BG	Bulgarian RDP 2007-2013 Midterm report	Report; 2010	Assessment of the adequacy of BG CMEF Indicators	Addressed the needs to invest in development of the HNVF indicators for BG.	Agrotec SpA
BG	Precision (revision) of the map of the HNV farmland	Map/GIS LPIS layer; Forthcoming (expected by the end of 2013)	The scope covers the territory of Bulgaria	There is a real risk that the same approach will be used as for the first map, only the GIS data sets will be upgraded. The intention is to develop a data set that has a more precise HNVF layer. The project is financed via the technical assistance measure in the BG RDP. The terms of references that we have seen are not too promising for the improvement of the identification of HNV farmlands in Bulgaria. It still focuses only on GIS data and layers and omits the connection to farms and nature value on the ground which was the main recommendation of the report after the first GIS identification. They were not consulted with NGOs or other experts involved in the initial expert working groups from 2007. Furthermore, an expert from the MoA LPIS directorate explained in a personal communication that they were not consulted either in the development of the ToRs and thus their experience with the 'HNV layer' problems is not being addressed.	MAF RDP Technical assistance tender won by Povic and Business group Contact
BG	Conservation of HNV	Project reports,	The project and the	Focusses on importance, socio-economic challenges specific to the	Bulgarian society for protection of birds (BSPB)

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
	grasslands in Bulgaria	guidelines and maps; 2009-2012	existing datasets and maps are for Ponor mountain, Western Stara Planina, Bessaparski hills	area - intended for the pilot/case study area. NGO results are usually submitted to the MoA	
CY	None	2006		In 2012, the Cyprus Agriculture department put out a tender for definition of HNV farmland areas in Cyprus for implementation of CMEF indicators. This tender was won by the Cyprus University of Technology (CUT) and relevant work is ongoing, based principally on Corine land cover data (2006). Beyond the above, there has been no work on identifying HNV farmland or its extent and no work on providing information about HNV farming systems, farms or farmers. There is therefore a knowledge gap when it comes to HNV farmland definition, definition of extent and of the management practices that create/maintain it. The current knowledge amounts to a 'best estimate' of extent and a description of likely areas only.	
CZ	Farmland in Natura 2000 and Special protected areas = HNV farmland for period 2007-2013	Map; CZ; 2004-2013	showing distribution of current HNV farmland in national territory	Based on the database analysis referred to below (row 14)	National Strategic Document (2008) Located in the case study annex
CZ	Natura 2000 biotopes with brief characteristics of the habitat	Database, maps; 2004-2013	Whole national territory, field level	This designation is carried out by the EEA, based on CORINE analysis is used in the indicator table - it is considered too low resolution to capture HNVF. The basis for the designation is data collected in the process of mapping of Specially protected areas and Natura 2000 (currently in process of revision by new mapping). The mapping represents a visit of each field, identifying relevant biotope (using typologies: Natura 2000, Corine), and description of its status. For all of those types of habitats a Catalogue of habitats (Chytrý 2010) was used for designation. The database is not publicly available and the database analysis was done on the request of the MoA.	Not publicly available (owner Nature Conservation Agency in the Czech Republic, only low resolution maps available but not available in this report
CZ	Nesting sites of lapwing	Database, maps; 2012	Whole national territory	This was developed for RPD targeting	Not publicly available (designated by Czech ornithological society). Not available in this report
CZ	Proposal for new HNV farmland designation	Database; 2012	Areas: Natura 2000, specially protected areas, designated sites outside any protected area	The analysis and designation is based on detailed Natura 2000 mapping. The original purpose of the mapping was designation of Natura 2000 (currently revision of the former mapping), but later database and GIS exercise were done for designation of HNV farmland. The process is not yet finished. Because the data is in form of database and maps it was possible to overlay it with LPIS database and calculate actual acreage of the HNV. Note that the summarised outputs should be available in new RDP	The database is not publicly available, the final result of designation is still under discussion and not published yet. Not available in this report

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
CZ	Natura 2000 biotopes – bird areas	Database, map; 2012	Whole national territory, field level	Note that the results of analysis could be available.	Not publicly available (designated by Czech ornithological society, Birdlife international in the Czech Republic). Not available in this report
CZ	Designation of sites with butterflies	Database, map; 2012	Whole national territory, field level		Published by Nature Conservation Agency in the Czech Republic. Located in the case study annex.
DE		Map; EN and DE; 2011	German map with results	The extent of HNV-farmland has been recorded with a sample plot approach. Altogether there were about 900 sample plots of 100 ha size each to identify extent and quality of HNV farmland. These data have been extrapolated on national and Federal State level in order to achieve quantitative and qualitative data on the HNV farmland extent. There is no official information about HNV farming systems, farms and farmers. The quality and scope of the data sets is excellent; there are only two short comings: the data could be much more regionalized (NUTS 2 or NUTS 3 level instead of NUTS 1 level) and checking the significance of HNV-type 3 within the sample plots proved to be complicated.	Bundesamt für Naturschutz (BfN, 2012) Erfassungsanleitung für den HNV-Farmland-Indikator - Version 4, Stand 2012 (Guide HNV recording German sample approach). BfN Bonn, 40 pages, available online: last call 24/02/2013: http://www.bfn.de/fileadmin/MDB/documents/themen/monitoring/Erfassungsanleitung_HNV_V4_2012_4.pdf
DE	Full report on HNV monitoring 2009/2010	Report; DE; 2011	Report with details of monitoring approach and results	The extent of HNV-farmland has been recorded with a sample plot approach. Altogether there were about 900 sample plots of 100 ha size each to identify extent and quality of HNV farmland. These data have been extrapolated on national and Federal State level in order to achieve quantitative and qualitative data on the HNV farmland extent. There is no official information about HNV farming systems, farms and farmers. The quality and scope of the data sets is excellent; there are only two short comings: the data could be much more regionalized (NUTS 2 or NUTS 3 level instead of NUTS 1 level) and checking the significance of HNV-type 3 within the sample plots proved to be complicated.	Bundesamt für Naturschutz (BfN, 2012): Erfassungsanleitung für den HNV-Farmland-Indikator - Version 4, Stand 2012 (Guide HNV recording German sample approach). BfN Bonn, 40 pages, available online: last call 24/02/2013: http://www.bfn.de/fileadmin/MDB/documents/themen/monitoring/Erfassungsanleitung_HNV_V4_2012_4.pdf
DK	HNV farming in 35 countries of Europe,	Book chapter EN	Summary country profile		Brink, M and Jensen, J (2012) HNV farming in 35 countries of Europe, Denmark 'In', R Oppermann, G Beaufoy and G Jones (Eds) *High Nature Value Farming in Europe,* pp184:189. Germany; Verlag regionalkultur.
DK	(Development of a High Nature Value (HNV) indicator. Ranking of HNV land and potential	DK	The report describes the construction of a High Nature Value (HNV) indicator in Denmark, identifying the farmland areas with the greatest biodiversity values. The report describes the indicator data base and		Ejrnces, R, Skov, F, Bladt, J, Fredshavn, J, Nygaard, B (2012) *Udvikling af en High Nature Value (HNV) indicator. Rangordning af arealer efter naturvoerdi og potentiale*.) http://2.naturerhverv.fvm.dk/Admin/Public/Download.aspx?file=Files%2fFiler%2fLanddistrikter%2fHNV-redskab%2fHNV-rapport.pdf

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
			calculation, as well as perspectives on the use of a HNV indicators in Danish land management.		
DK		EN, 2006	Overview of EU HNV farmland includes table with MS totals		Schwaiger, E, Banko, G, Brodsky, U L, GISAT, van Doorn, A, Alterra (2012) *Updated High Nature Value Farmland in Europe. An estimate of the distribution patterns on the basis of CORINE Land Cover 2006 and biodiversity data.* Draft EEA Technical Report on a basis of the ETC SIA IP 2011 Task 421 implementation, 4 September 2012 http://forum.eionet.europa.eu/nrc-agriculture-and-forest-interest-group/library/forests/nrc-forests/nrc-agri-forest-meeting-26-sept.-2012-copenhagen/documents/updated-high-nature-value-farmland-europe/download/1/Task421_HNV_report_final_draft_to_be_published.pdf
EE	Updated HNVF in Europe. An estimate of the distribution patterns on the basis of CORINE Land Cover 2006 and biodiversity data.	The draft EEA Technical Report; EN; 2012	EU 27 HNV farmland mapping approach	JRC/EEA HNV farmland map only indicates the likely presence/distribution of HNV farmland. It has some significant limitations for assessing impacts of rural development programmes. One of the main shortcomings is the mapping accuracy (the smallest polygons are 25 ha) which doesn't allow the identification of patches of HNV farmland within mixed classes, or when the dominant class is mapped. One of the major limitations of the present approach is also that it does not explicitly take into account the intensity of management of HNV land cover types including grassland/pastures. This is why identification of changes in habitat quality over the years is complicated. For some land cover categories it is not certain that all of the mapped areas are under farming use (e.g. partly wetlands included), also the relationship between land cover classes and nature values is rather weak.	JRC, EEA Authors: Schwaiger, E, Banko, G, Brodsky, L, Doorn A
EE	High Nature Value Farming in Estonia: situation analysis	Master thesis; EE (with EN summary); 2009	Review of EEA HNV farmland map. Analysis of potential Estonian data sources and selection of preliminary HNV farming indicators for expansion of HNV farming concept	The availability and usability of the data describing intensity of agricultural production in Estonia is rather weak. There is no nationwide high-quality spatial statistics existing for farming intensity indicators (e.g. fertilizers, pesticide use, grazing density etc.) - they are either lacking at all, are in very generalized (e.g. county level) or not comparable due different data collection methodologies (e.g. pesticides are calculated by Statistics Estonia per kg of preparation, not per active ingredient).	Koorberg, P, High Nature Value Farming in Estonia: situation analysis

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
EE	Environmental Register including Estonian Nature Information System (EELIS)	National register, electronic database; EE; data is regularly updated	Country data about national resources, natural heritage and environmental situation. Includes data layers about (Natura 2000) SNHs, valuable nature objects etc.	According to several data sources there are ~100,000 ha of semi-natural habitats in Estonia, out of 74,330 ha are included into Natura 2000 network. Unfortunately for even those Natura 2000 SNH areas no concrete updated information exists about their current status and changes in values. More detailed information about the land use and managers exists only about the SNHs which are supported by the RDP 2007-2013 special AE semi-natural habitat support. According to IACS/LPIS in 2011, 916 farmers received such kind of support covering in total 24,298 ha. 48% of this supported land was privately owned, 24.5% owned by the state, 0.6% municipality owned and 27% of land had no registered ownership (ARC, 2012). The databases are updated constantly and thereof the numbers aren't constant and it is not possible to track the changes by the years (what was area in different years and how much has it changed over the years).	Ministry of Environment, Environmental Information Centre, Environmental Register including Estonian Nature Information System (EELIS)
EE	Grid-cell based HNV pilot study	Report + GIS database; EE; 2009-2010	Analysis of 15 chosen HNV farming indicators to reflect low-intensity farming, nature values of farmland and landscape mosaics	1×1 km grid-cell based mapping approach and set of 15 HNV farming characteristics were agreed to be tested in one selected county out of 15. Indicators were chosen to reflect the actual situation (data available horizontally for all grids) with farming and land use intensity, existing nature values and landscape mosaics. Pilot study is still on-going and there is still need to extend this study to all Estonia which is planned to be completed by end of 2014.	Estonian Agricultural Research Centre
EL	Estimation of the extent of High Nature Value farmlands of Greece	Map	The land cover and biodiversity data estimation of HNV farmlands and forests in Greece		Hellenic Ornithological Society
EL	Identification of High Nature Value agricultural and forestry land	Report; EL (executive summary in EN)	The National Identification oh HNV farmland and forests		Hellenic Ornithological Society. Available at: http://pmk.agri.ee/pkt/CD/content/Posters/11-Dimalexis_Markopoulou_Kourakli_Manolopoulos_Vitaliotou_Chouvardas_poster_paper.pdf
ES	Modelización de las áreas agrarias y forestales de alto valor natural en España.	Pdf report including national and regional maps, 2011	National and regional maps of HNV farming and HNV forestry, included estimated extent.	Study done for MAGRAMA (Ministry) by IREC (research institute). Not officially adopted as official position on HNV farming/forestry.	Authors: Olivero J, Márquez A-L, Arroyo B, 2011. Encomienda de gestión del Ministerio de Medio Ambiente y Medio Rural y Marino al Instituto de Investigación en Recursos Cinegéticos (CSIC). Informe final. http://www.magrama.gob.es/es/biodiversidad/temas/conectividad-ecologica-en-el-territorio/Inf_final_mod_agrarias_forestales_a_v_n_espa%C3%B1a_tcm7-237657.pdf
ES	Sistemas agrarios y	Pdf report	Navarra maps of HNV	Work in progress commissioned by regional government of	Authors: Iragui Yoldi U, Astrain Massa C, Beaufoy G,

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
	forestales de alto valor natural en Navarra - identificación y monitorización	including Navarra maps, 2010	farming and HNV forestry.	Navarra to establish CMEF indicator	2010. Published by: Gobierno de Navarra, Dirección General de Desarrollo Rural, Servicio de Diversificación y Desarrollo Rural
FI	Käsite 'High Nature Value (HNV) farmland' ja luontoarvoiltaan arvokkaiden maatalousalueiden identifiointi Suomessa.	Report; FI (with English summary); 2006	National evaluation of the available data for identifying HNV	Finland has no available data or (so far) possibilities to monitor changes in the quality of the HNV-areas. Knowledge on the extent and quality of valuable semi-natural grassland areas in Finland is outdated, and there is no regular monitoring.	Schulman and Luoto (2006) Käsite 'High Nature Value (HNV) farmland' ja luontoarvoiltaan arvokkaiden maatalousalueiden identifiointi Suomessa
FI	Luonnoltaan arvokkaat maatalousalueet Suomessa – määrittely, seuranta ja hoidon taloudelliset edellytykset	Report; FI (with English summary); 2009	Mapping the NHV regions, developing NHV indicator; National cover	Atlas of birds, being currently updated. However, the scale of surveys (10 x 10 km) cannot be related to the farm level. Surveys of butterflies do not cover the country evenly and randomly, and therefore are unlikely to be sufficiently reliable. Additional data set with a good spatial coverage is available from monitoring of specifically farmland birds (Tiainen et al., 2007). But these are only for a sample of farmland not covering all regions. Extrapolation has been done for the whole country and used in delineating HNV regions (Heliölä et al., 2009).	Heliölä *et al* (2009) Luonnoltaan arvokkaat maatalousalueet Suomessa – määrittely, seuranta ja hoidon taloudelliset edellytykset
FI		Report; FI (with English summary); 2012	Testing NHV indicator; National cover	The administrative register is the only data source which is both complete in its spatial coverage (includes nearly all Finnish farms) and is updated regularly (enabling monitoring). Information on endangered species can be retrieved from different sources but, as with the other species data, these can at best support the mapping of the NHV-areas	Heliölä (2012) HNV-seurantaindikaattorin testaaminen maastoaineistoilla
FI	Natura2000 inventory	Data	National	Note that this is only marginally relevant to HNV	
FI	Paikkatietomenetelmillä peltojen monimuotoisuusarvot esiin – esimerkkialueena Halikonjoen valuma-alue	Project report; FI; 2011	Regional case study	A fairly recent project used information on the field soil types, forest edge direction and gradient (ground tilt) to predict the potential biologically diverse forest-field ecotones (Koskinen, I. and Ikonen, I. 2011).	Koskinen, I and Ikonen, I (2011) Paikkatietomenetelmillä peltojen monimuotoisuusarvot esiin – esimerkkialueena Halikonjoen valuma-alue
FI	Most valuable fields for endangered birds and butterflies	Data; 2012	Fields with the largest concentration of staggering cranes and geese regional; most important breeding sites of endangered bird and butterfly spp.	MoE has some information on the largest staggering concentrations of birds (cranes and geese) on fields. This has been used in research on mechanisms to prevent damage to crops. The information is not complete, however, and there are no criteria of what can be regarded as sufficiently large and frequent concentration.	Personal information from the regional centres Original report in project folder (Koskinen Ikonen.pdf)
FI	Traditional biotopes, inlc. wooded pastures and grazed forests	Report; FI (with English summary); 2009		Natura2000 includes only minor area of farmland (less than 1%; 5,500 ha of farmland, of which about 3000 ha are semi-natural grasslands (Kemppainen and Lehtomaa 2009). Use of the species data is restricted.	Kemppainen and Lehtomaa (2009) Located here: www.environment.fi > Publications

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
FR	Solagro V1	Maps and methodology; 2007	national	This report is mainly methodological. Its intent is to illustrate how farm data can be used for HNV characterization (farm indicators). The case used was France, but the intention was to give insights for EU works. Key elements of the methodology used are: - the threshold of 25% of French UAA being HNV is an explicit working hypothesis. This was needed in order to calibrate the model used for producing the map. The map indeed is the one of the 25% 'best' average hectares in France re Solagro criteria (diversity of agricultural land use, presence of landscape features and agricultural land use intensity); - the methodology does not centrally take into account SNV issues, while the grassland indicator for example, which weight is paramount in the map, is based on a common envelope of permanent and temporary/rotational grassland; - the databases used are not at the same level, thus some interpolation rules have been mobilized in order to keep the communal level of representation for the map. This is debatable and the precision of mapping is recognized to be misleading. - the map estimates the UAA of the average farm at communal level (aggregate date of farms); it does not take into consideration the differences between farms within the same communal statistical unit. Note that current data is being developed (led by MoA, results are expected summer 2013.	Pointereau, P, Paracchini, M L, Terres, J M, Jiguet, F, Bas, Y, Biala, K (2007) Identification of high nature value farmland in France through statistical information and farm practice surveys. Office for Official Publications of the European Communities, Luxembourg, Report-EUR 22786 EN, 62 p.
FR	Solagro V2	Maps and methodology; 2010	national	This report is a second version of the previous one, changing the weight of indicators and setting correlations between the map and the bird index population. See comments above for Solagro V1.	Pointereau, P, Coulon, F, Doxa, A, Jiguet, F, Paracchini, M L (2010) Location of HVN farmland area in France and links between changes in High nature value farmland areas and changes in birds population. JRC/SOLAGRO, 2010
HU	Ángyán, J. et al. (Eds.): Védett és érzékeny Természeti területek Mezőgazdálkodásának alapjai.	HU; 2002		[Basics to Agriculture in Protected and Nature Sensitive Areas]	Mezőgazda Kiadó, Budapest, 530 p.

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
HU	Ángyán J. – Tar F. – Fésűs I. – Podmaniczky L. Nemzeti Agrár-környezetvédelmi Program a környezetkímélő, a természet védelmét és a táj megőrzését szolgáló mező-gazdasági termelési módszerek támogatására	HU; 1999			http://www.fvm.hu/doc/upload/200407/nakp.pdf
HU	Fülöp, Gy. – Szilvácsku, Zs. Természetkímélő módszerek a mezőgazdaságban.	HU; 2009		[Nature Friendly Methods in Agriculture]	Magyar Madártani és természetvédelmi Egyesület. Eger
HU	Hungarian Nature Conservation Information System Public Relations Module	EN			http://geo.kvvm.hu/tir_en/viewer.htm
HU	25 feasibility studies	2001-2009	Studies covered: wooded pastures of Baranya county, Békés-Csanádi hát, Bihari Plain, Bodrogköz, Borsodi Mezőség Area, Bükkalja, Dévaványa and surrounding areas, Dunavölgyi Plain, Észak-Cserehát, Gerje-perje Plain, Hanság, Hevesi Plain, Homokhátság, Hortobágy, Kis-Sárrét, Marcal basin, Mosoni Plain, Őrség-Vendvidék, Sárvíz Valley, Somogy, Szatmár, Szentendre Island, Taktaköz, Turján region, Zámolyi Basin	These areas were officially designated based on the 2/2002 Regulation of the Hungarian Ministry for Environment and Water and Ministry of Agriculture and Rural Development. The designation can be considered as a first, rough estimate of where HNV farmlands maybe located. Boundaries of these areas were determined in line with administrative boundaries, along settlement limits; thus can hardly be considered subtly defined. This is the reason why one of the earliest objectives was to make the designation more precise. Since 2001, so-called feasibility studies have been carried out on these broadly designated areas based on more detailed analyses and field surveys in order to set the boundaries of HNV areas more accurately, to map natural values, to determine recommended management methods and measure the economic situation. According to the 25 feasibility studies completed so far, HNV areas cover altogether 900 000 ha	
HU	Monitoring Environmentally Sensitive Areas Baselin (Report and Methodological Propositions)	Report			Ministry for Environment (2006)
HU	Monitoring studies of the	Report; data from			Bükk National Park Directorate

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
	Hevesi-sík High Nature Value Farmland Area	2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011			
HU	Az Érzékeny Természeti Területek rendszere - The System of Environmentally Sensitive Areas	2001			Ángyán J. – Podmaniczky L. – Szabó M. – Vajnáné Madarassy A.
HU	MTÉT adatlapok	HU; 2009		[Factsheet on each designated HNV Areas] in Hungarian	http://www.termeszetvedelem.hu/index.php?pg=sub_446
HU	MTÉT kiadvány gazdálkodóknak	HU; 2009		[Information leaflet for farmers on designated HNV Areas] In Hungarian	http://www.termeszetvedelem.hu/_user/downloads/agrar/MTET_kiadvany%202009.pdf
HU	New Hungary Rural Development Programme 2007-2013	EN; 2007			http://www.termeszetvedelem.hu/_user/downloads/ett/new_hungary_rural_development_programme_official_20092007.pdf
HU	Mid-term evaluation of the New Hungary Rural development Programme	2010			http://umvp.kormany.hu/mid-term
IE	Case studies on high nature value farming in Ireland Aran Islands and Connemara.	Report; EN; 2010	Specific case studies on a limestone grassland area and upland area, to improve understanding of relationships between natural and cultural heritage and the associated farming practises.	Referred to as: Aran/Connemara Case study.	Smith, G.F., Bligh, J., Delaney, E., Egan, M., O'Donavan, G., O'Donaghue, P., O'Hara, K. (2010). Case Studies on High Nature Value Farming in Ireland: Aran Islands and North Connemara. A report to the Heritage Council Ireland.
IE	A list of past and ongoing work on HNV farming in Ireland	Case studies; EN; 2012	Case studies in each area as a means to identify threats, opportunities and practical solutions for HNV farmland.	This scarcity of information is presently being addressed through a recently DAFM funded research project on 'Identifying the Distribution and Extent of Agricultural Land of High Nature Value', which will take place over the next two years by Teagasc and the Institute of Technology, Sligo. The work by the Heritage Council, EFNCP Teagasc and academic institutes have highlighted both the importance of HNV farming in maintaining Ireland's biodiversity and raised awareness of the need for its identification and the need for greater incorporation into Ireland's RDP. The present study by Teagasc will build on this but is too early in its development to contribute to this report.	EFNCP is collaborating with the Heritage Council of Ireland: http://www.efncp.org/projects/hnv-farmland-irish-uplands/
IT	'Aree Agricole ad alto valore naturale in Italia: quale biodiversità'	Paper including Map Data set; IT; 2012 data	HNV Farmland estimate at NUTSII and national level. HNVF by type and classes of nature value		Trisorio A., De Natale F., Pignatti G. (2012). Paper presented at the IX National conference on Biodiversity held in Bari, September 2012. Located in the case study annexes: A2a, A2b, A2c

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
IT	'High Nature Value Farming Systems in Italy: an Economic Perspective' *	Paper including Data set; EN; 2008	HNV farming systems, and farms at national level and economic structure of HNV farms, based on Italian FADN.		Trisorio et al. (2008), in Using Evaluation to Enhance the Rural Development Value of Agro-environmental Measures, Proceedings of an International conference held in Pärnu, Estonia, 17-19 June 2008. Located in the case study annexes: A3a, A3b; A3c
IT	'Dimensione geografica e sistemi agricoli nella definizione delle aree ad alto valore naturale. Il caso italiano'	Paper including data set; IT; 2007	HNV farmland at NUTSII and national level, by classes of nature value based on land cover and species approach		Povellato and Trisorio,(2007) in Aree Agricole ad Alto Valore Naturalistico: Individuazione, Conservazione, Valorizzazione. Atti del Convegno, 21 Giugno 2007, in APAT, Roma, pp. Located in the case study annex: A4
IT	'Aree agricole ad alto valore naturale: dall'individuazione alle gestione'	Book; IT; 2010	Handbook on HNVF identification, including inventories of potential indicators, and ecological information at national and NUTSII level	Because of the lack of both a common understanding of HNV farming concept and a common method of identification at the beginning of programming period, estimates on HNV Farmland (HNVF) were realized by each Managing Authority on the basis of different methods and available data . In some RDPs HNVF was identified according to different methods, thus different possible extent values were provided. Moreover, we found even different methods between some RDPs and Mid Term Evaluation (MTE) reports. It was, hence, impossible to consistently aggregate regional HNV extent values in one national value. The quality of data on HNVF strongly depends on the quality of data used for their identification, including the level of geographical detail (i.e. Regional datasets). This implies that only in some cases (i.e. Emilia Romagna, Lombardy, Sicily) estimates provide a more detailed picture of HNVF.	Forconi V., S. Mandrone, C. Vicini (eds.), (2010). Aree agricole ad alto valore naturale: dall'individuazione alle gestione manuali e linee guida, ISPRA, Roma.
IT	'Un primo contributo all'individuazione delle aree agricole ad elevato valore naturalistico nella regione Lazio'.	Paper including data set; IT; 2007	HNV farmland in Lazio Region based on land cover approach		Marotta et al., (2007) in Aree Agricole ad Alto Valore Naturalistico: Individuazione, Conservazione, Valorizzazione. Atti del Convegno, 21 Giugno 2007, APAT, Roma, pp. 105-112. Located in the case study annex: A5
IT	'Aree agricole ad alto valore naturale in Lombardia (2011-2013)'.	Technical Report Map; IT; 2012	HNVF and farming systems in Lombardy Region. Land cover and birds data (sample areas).		Brambilla et al., (2012) : "Aree agricole ad alto valore naturale in Lombardia, Fondazione Lombardia per l'Ambiente, Unpublished technical report.
IT	'Characterising High Nature Value farming systems through the Italian Farm Accountancy Data Network (FADN)'*	Paper including data set; EN; Forthcoming	HNV farming system estimate at national and NUTSII level		Trisorio et al, in progress.
IT	'Gli uccelli comuni e il Farmland Bird Index nelle	Report including data set; IT;	Assessment of bird population trends in		LIPU-Birdlife Italy and INEA (National Rural Network)

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
	aree agricole ad alto valore naturale'	Forthcoming	HNVF at national level		Located in the case study annex: A6
IT	'Programma di sviluppo rurale Veneto 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Veneto Region (NUTSII)		Publisher: Regione del Veneto
IT	'Programma di sviluppo rurale Valle d'Aosta 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Aosta Valley		Publisher: Regione Autonoma Valle d'Aosta/Région Autonome Vallée d'Aoste
IT	'Programma di Sviluppo Rurale Sicilia 2007- 2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Sicily		Publisher: Regione Sicilia, Assessorato Agricoltura e Foreste
IT	'Programma di Sviluppo Rurale Campania 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Campania		Publisher: Regione Campania
IT	'Programma di Sviluppo Rurale Lazio 2007- 2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Lazio		Publisher: Regione Lazio
IT	'Programma di Sviluppo Rurale Lombardia 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Lombardy		Publisher: Regione Lombardia
IT	'Programma di Sviluppo Rurale Marche 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Marche		Publisher: Regione Marche
IT	'Programma di Sviluppo Rurale Umbria 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Umbria		Publisher: Regione Umbria
IT	'Programma di Sviluppo Rurale Abruzzo 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Abruzzo		Publisher: Regione Abruzzo
IT	'Programma di Sviluppo Rurale Toscana 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Tuscany		Publisher: Regione Toscana
IT	'Programma di Sviluppo Rurale Piemonte 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Piedmont		Publisher: Regione Piemonte
IT	'Programma di Sviluppo Rurale Friuli Venezia Giulia 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Friuli Venezia Giulia		Publisher: Regione Friuli Venezia Giulia
IT	'Programma di Sviluppo Rurale Liguria 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland		Publisher: Regione Liguria

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
			for Liguria		
IT	'Programma di Sviluppo Rurale Emilia Romagna 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Emilia Romagna		Publisher: Regione Emilia Romagna
IT	'Programma di Sviluppo Rurale Molise 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Molise		Publisher: Regione Molise
IT	'Programma di Sviluppo Rurale Puglia 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Apulia		Publisher: Regione Puglia
IT	'Programma di Sviluppo Rurale Basilicata 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Basilicata		Publisher: Regione Basilicata
IT	'Programma di Sviluppo Rurale Calabria 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Calabria		Publisher: Regione Calabria
IT	'Programma di Sviluppo Rurale Sardegna 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for Sardinia		Publisher: Regione Sardegna
IT	'Programma di Sviluppo Rurale Provincia Autonoma Trento 2007-2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for P. A. Trento		Publisher: Provincia Autonoma di Trento
IT	'Programma di Sviluppo Rurale Provincia Autonoma Bolzano 2007 – 2013'	RDP Report; IT; 2008	RDP including official estimate of HNV farmland for P. A. Bolzano		Publisher: Provincia Autonoma di Bolzano
LT	Identification of changes in quality and quantity of HNV agricultural and forest areas] Original title: "DIDELĖS GAMTINĖS VERTĖS ŽEMĖS ŪKIO NAUDMENŲ BEI MIŠKŲ PLOTŲ KIEKYBINIŲ IR KOKYBINIŲ POKYČIŲ IDENTIFIKAVIMAS"	Report; LT; 2010	The study is devoted to assess impact of Axis II of the RDP on HNV areas in Lithuania		State Land Survey Institute [In Lithuanian; DIDELĖS GAMTINĖS VERTĖS ŽEMĖS ŪKIO NAUDMENŲ BEI MIŠKŲ PLOTŲ KIEKYBINIŲ IR KOKYBINIŲ POKYČIŲ IDENTIFIKAVIMAS. 2010. VĮ Valstybinisžemėtvarkosinstitutas. 66 psl.]
LT	HNV territories of Lithuania	Map/Database (dataset); 2010		Unavailable to include in this report	State Land Survey Institute/Ministry of Agriculture. Fig. 11. In: Identification, 2010; Filename "Tyrimas_DGVT.pdf"
LT	Lithuania	Review paper; EN; 2010			Kurlavičius P (2011) In: Oppermann R, Beaufoy G and Gwyn J (ed) High Nature Value Farming in

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
					Europe. IEEP, WWF and JNCC. P. 280-285.
LT	Rural Development Programme for Lithuania2007 – 2013. Consolidated version	Legal Act; LT; 2007			Lithuanian Ministryof Agriculture 2013. Accessed through: http://www.zum.lt/documents/kaimo_pletros_depart/rdp_2007-2013_general_part_final+consolidated+2009+09+18.pdf
LV	Map of Biologically Valuable Grasslands (BVG)	Esri shapefile; 2010	Poligons of BVG, there are no limits in scale	Relatively accurate information is only about Biologically Valuable Grasslands (BVG) which partly overlaps with HNV farmland Type 1. Until 2010, measure MBVG was held without any official linking to HNV farmland concept; however it is clear that there is strong connection. BVG are mapped mainly by NGO Latvian Fund for nature (LFN) and this organization also keeps BVG database. GIS layer of BVG polygons also keeps Rural Support Service which is responsible of administration of RDP measure. From 2013 responsibility to develop methodology and organise inventory of BVG is delegated to the Nature Protection Board. Rural Support Service data in 2011 showed that total amount of BVG in Latvia is 66,744 ha it is around 1 % from Latvia's national territory or 11.7 % of 'likelihood' HNV farmland (569,534 ha) (information from EEA). From total amount of BVG (66,744 ha) for payments notified around 37,000 ha (55%) (Anon. 2011b), experience shows that remaining part mostly without management and gradually afforestation there going on. Since the beginning of 2013 under leadership of Nature Protection Board, has begun a new project, which provides an inventory of BVG including mapping of habitats of EU importance.	Rural Support Service
NL	High Nature Value farmland areas in The Netherlands	Map and report; NL (with EN summary); 2008	First map of HNV farmland for the Netherlands	Uses national statistical and spatial data sources of highest resolution and thematic detail. Aimed to improve spatial delimitation and characterisation of the HNVF areas. First HNVF map in the NL - note, this data was never used for reporting baseline HNVF indicator in the CMEF	See Separate file 'English summary NL report_25062007' http://edepot.wur.nl/19884
NL	High Nature Value Farmland in Nederland: Handvatten voor beleidsimplemen-tatie	Map and report; 2013	Up-dated map of HNV farmland for the Netherlands	Aimed to develop methodology for monitoring HNVF in order to report on HNVF result and impact indicators within the CMEF. The results have not yet been officially published but are available and therefore are used here. Compared to the 2008 version, this involved the use of more recent data sets, a wider number of species distribution information layers. In addition the identification of HNV farmland was done at a spatial resolution of 250 m² while the first study used a 1km² resolution.	Alterra report (expected April 2013) Not available yet

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
NL	HNV farmland identification in Estonia, Germany (Nordrhein Westfalen) and Austria	2012	Discusses possibilities to target HNV farmland in The Netherlands in the new post 2013 CAP		Doorn and Elbersen (2012) http://edepot.wur.nl/200676
PL	Areas with high natural values in Poland	Map; PL			Institute of Surveying and Mapping http://www.igik.edu.pl/pl/wstepna-koncepcja-wyznaczenia-na-obszarach-wiejskich-polski-obszarow-o-wysokich-walorach-przyrodniczych-hnv-oraz-opracowanie-dla-nich-programu-monitoringu
PT	GPP maps: 1; 2; 3; 4	Map; PT; 2006 - on going		First report was published in 2007 based on 2006 data - concluded that CORINE data is too rough to be used in the context of HNVF and that land cover classification made by JRC is not appropriate for PT HNVF. Since 2008, the GPP has been developing a methodology to assess HNVF in PT as defined within CMEF. It is referred to at three levels (baseline, outcome, and impact). GPP has reporting existing (not potential) HNV farmland also estimating its extent across the Portuguese mainland area comprising seven geographical regions namely Entre Douro e Minho, Trás-os Montes Beiras Litoral and Interior, Lisbon and Tagus valey, Alentejo and Algarve. The procedure adopted by GPP comprised a 3 step framework, as follows: 1. Identification and characterization of the main HNV farming systems; 2. Identification of criteria to identify HNV 3. Application and simulation of these criteria with data from the best national database Concerning identification (point 1 above) tfour farming systems were selected, namely: a) extensive grazing systems which included the montado agro-forestry system, b) extensive production/fallow land, c) extensive permanent cultures such as olive groves and dry fruits, and finally d) high diversity farm land cover systems- mosaic. As far as the identification criteria is concerned (point 2 above) the four following listed were selected: 1) fodder area –grazing intensity in the production unit (LSU /Ha), 2) proportion of fallow land and permanent pastures, 3) area of non-irrigated olive groves and dry fruits, and 4) number of parcels and cultures and size of farms.	GPP- Gabinete Planeamento e Políticas. Ministry of Agriculture Confidential information- a permit to include these maps has to be requested. Not available yet – expected shortly

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
				Both the application and simulation (point 3 above) were conducted using as data source the direct payments dataset from IFAP- Instituto de Financiamento Agricultura e Pescas- based on the data from the years 2007, 2009, 2011. Throughout this period, GPP has been progressing on the application and simulation procedures. In the first evaluation (2007) only the primary codes of the land cover occupation (from the IFAP database) were used. In the second evaluation (2011) also the secondary descriptive field was introduced in order to refine the primary code, this way better discriminating land cover occupation. It is acknowledged that the IFAP databases comprise only the areas requiring payment schemes this likely not encompassing all the Portuguese mainland area. However, an assessment of this gap was made and it was concluded that the IFAP database area is very approximate of the complete Portuguese agricultural area. Summarising, the approach developed by GPP allowed at mapping the different HNV types described above across Portugal	
PT	A landscape approach to assess the High Nature Value of complex silvo-pastoral systems	Paper; EN; 2013		The ICAAM (University of Evora) recently got financing for a research project on 'Addressing the high nature value of agro silvopastoral systems: montado for nature and people', running from January 2013 to December 2014. This project recently started and it aims at shedding light in methodological improvements for assessing HNV in montado systems progressing both conceptually and empirically in collecting field data to assess the HNV of the montado systems specifically focussing on the grazing activities. The research team in ICAAM has been working on this methodological issues aiming to integrate the ecological with the farm system classification and to combine the two with the land cover based approaches (Almeida and Pinto-Correia 2013). There is not yet maps or reports of this work to be included but in the near future this can be an important data source for HNV classification.	Almeida M and Pinto-Correia T (2013) A landscape approach to assess the High Nature Value of complex silvo-pastoral systems. Danish Journal of Geography (submitted)
RO	High Nature Value farmlands: Recognising the importance of South East European landscapes.	Report; 2008	Regional - Carpathians		www.efncp.org/download/Sibiu_HNVFreport_Final.pdf See case study annex 2a
RO	Project Mozaic in Cluj County (http://proiect-mozaic.com)	Report; 2011	Local – 2 or 3 ATUs		http://www.proiect-mozaic.com/media/35626/mozaic%20report_efncp_2010_2011.pdf See case study annex 2b
RO	ADEPT / EFNCP HNV	Report; 2010	National	Policy targeting at both local and regional levels. Work confined to	www.fundatia-

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
	Grasslands and Public Goods Conference, September 2010			Tarnava Mare N2000 site (8 ATUs in Brasov, Sibiu and Mures counties), 12 ATUs in Cluj and Suceava counties	adept.org/bin/file/conference2010/HNV_conference_brochure1.pdf See case study annex 2c
RO	Corine and MARD a-e measure maps	PDF; 2007	National	These other studies were, specifically, land use mapping by the Romanian Research Institute for Soil Science and Agrochemistry (ICPA). From this the MARD estimated that in Romania there are 3.32 million hectares agricultural land of high natural value, based on it being mapped as permanent grassland. These account for about 14% of the national territory and about 22.5% of the agricultural land area at national level. (NRDP page 606). Analysis is deemed incomplete. Certain HNV areas delimited for a-e scheme purposes, not on strong criteria	NRDP See case study annex 3
RO	Example of farm statistics available from MARD and ATUs	Excel; 2012	Local		Fundatia ADEPT See case study annex 3a
RO	Schematic map HNV Romania	PDF; 2012	National		Fundatia ADEPT See case study annex 3b
RO	HNV indicators	Report; 2011	Local	Policy targeting at both local and regional levels. Work confined to Tarnava Mare N2000 site (8 ATUs in Brasov, Sibiu and Mures counties), 12 ATUs in Cluj and Suceava counties	Fundatia ADEPT/EFNCP See case study annex 4
RO	Farm-level statistics example	Excel; 2011	Local		Fundatia ADEPT See case study annex 4a
RO	Quality indicating grassland species in Romania	Report; 2010	National		MARD/Veen See case study annex 5
RO	Monitoring and Evaluation of High Nature Value Grasslands in Romania	Report; 2009	National	Veen Ecology for setting of CMEF indicators, national. 4.99 m ha of potential grasslands were remotely surveyed by Landsat TM satellite images. 390,000 ha were included in the mapping process, in a number of randomly selected areas across the country, of which 371,000 were identified as permanent semi-natural grasslands	MARD/Veen See case study annex 6
RO	Grasslands of Romania	Report; 2003	National		MARD/Veen See case study annex 7
RO	Romanian Statistical Yearbook	Book; Data is updated annually	National		National Statistics Institute, NSI Available on line
RO	Romanian NRDP	Report; RO; 2007	National	The MARD uses the term HNV purely in the sense of permanent grassland. This has a profound effect on the mapping of HNV in Romania. Official MARD mapping, linked to support payments, uses only permanent grassland as a criterion (more precisely, the presence of more than 50% of permanent grassland in a commune makes the commune eligible for HNV grassland payments). Therefore the categories do not correlate with the typology of	MARD See case study annex 8

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
				HNV into Types 1, 2 and 3. This work was carried out for the NRDP (2007). NGOs and farmer groups were consulted. Andre Jones advised on indicators and management rules for HNV and grassland measures	
RO	Romanian HNV case study by Sally Huband and Davy McCracken on the EFNCP website:	Report; EN; 2009	Local – 2 or 3 ATUs		Available on line: http://www.efncp.org/hnv-showcases/romanian-carpathian-mountains
SE	Grasslands inventory database	Data set; SE; 2002 – on going		A national in-field survey of the most valuable natural pastures and meadows was carried out in 2002-2004 - alongside pastures and meadows receiving SPS and RDP payments, this now forms an important base for the identification of HNVF. It is clear though that the database (TUVA) needs to be continuously updated. Hence we have since 2004 focused on completing it with additional pastures that somehow has come to our knowledge as high-nature value sites. To some extent pastures have also been revisited, but that has not been prioritized. In 2013 we will conduct a special evaluation of the database, trying to conclude to what extent the pastures need to be revisited and the data updated in order for the database to be accurate. TUVA also gives us a good basis for evaluating qualitative changes in HNV farmland. For that purpose a set of these pastures are included in the national survey of the Swedish landscape (NILS: http://www.slu.se/en/collaborative-centres-and-projects/nils), with each pasture being revisited every 5th year.	Board of agriculture: www.jordbruksverket.se/tuva Publically available database, only in Swedish.
SE	Grasslands inventory	GIS – maps; SE; 2002-2012			Board of Agriculture: Tuva2011, Naturtyp2011
SE	Agricultural land	GIS – maps; SE; 2012		Parcels with 'Ägoslag'= Bete (Ägoslag means type of land use, bete means semi-natural pasture) is considered HNV. Additionally agricultural parcels within municipalities with less than 4 % agricultural land are considered HNV.	Board of Agriculture File: Agricultural parcels 2012
SI	High nature value farmland areas (indicator KM05)	Data set; SI; 2008	A definition of HNV areas is given, followed by graphs of estimated share of HNV in the framework of 3 scenarios. Objectives of HNV measurement are provided, as well as comment on the results, a description of methodology and a link	Datasets behind the graphs can be accessed via a link.	Republic of Slovenia, Ministry of Agriculture and Environment, Slovenian Environment Agency: Environmental indicators in Slovenia http://kazalci.arso.gov.si/?data=indicator&ind_id=57&lang_id=94

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
			to another indicator.		
SI	Agricultural Land Use Monitoring database	Data set; SI; 2012	GIS of land use categorised in 25 categories; 17 refer to agricultural use, some of them entail intensity. Data are regularly updated.	Data can be downloaded by clicking "Grafični podatki RABA za ello Slovenijo (shape.rar ~ 600 MB)" on the right side	http://rkg.gov.si/GERK/
SI	Data on Less Favoured Areas, use of agri-environment measures and Natura 2000 areas	Data set; SI; 2012	GIS of Less Favoured Areas, Natura 2000 areas and areas under agri-environment measures	Data can be downloaded by clicking on the datasets on the right side	http://rkg.gov.si/GERK/ Viewer at: http://rkg.gov.si/GERK/WebViewer/#map_x=500000&map_y=100000&map_sc=1828571
SI	Farm Registry	Data set, 2013	Registry contains information farm type, agricultural land and forest ownership, LPIS data, number and status of livestock, classification as less-favored areas, subsidies		http://rkg.gov.si/GERK/eRKG/ Viewer of LPIS data at: http://rkg.gov.si/GERK/WebViewer/#map_x=500000&map_y=100000&map_sc=1828571
SK	National Grassland Inventory	GIS dataset, articles; 1998-2006 data (with on-going updates)	GIS with more than 16,000 polygons (min.0,5ha) 1 milion of plant species records, basic management, definition of grassland habitat types	Comments that more than 96% of potential HNV semi-natural grasslands mapped. HNV concept not yet effectively implemented within current policy instruments - but progress is being made towards this. In 2012, in the framework of RDP, the Ministry initiated the monitoring of biodiversity status of HNV grassland for the period 2007 – 2015 using data from National Grassland Inventory completed in 2006. Majority of HNV farmland in Slovakia is recognised on semi-natural grasslands (HNV Type 1). Experts also propose small patches of mosaic landscape to be recognised as HNV Type 2 farmland. It includes Traditional Agricultural Landscape (TAL) characterised by ecosystems that consist of a mosaic of small-scale arable fields and permanent agricultural cultivations such as grasslands, vineyards and high-trunk orchards. So far, the estimate does not include HNV on arable land. Potentially, arable in Natura 2000 site could be included in Type 3 farmland, but there is no expert and common definition of indicative species or any other reliable indicators.	Data available on the website of Soil Protection Institute responsible for LPIS maintenance in Slovakia www.podnemapy.sk See case study Annex 1: Map of HNV Type 1 in Slovakia
SK	National traditional agricultural mosaics Inventory	GIS dataset, articles; 2009-2011	GIS with more than 4000 polygons – land use, management, balks, threat	This database refers to mosaics of grasslands, arable lands, orchards, vineyards and balks (hedgerows stone walls nad heaps, terraces). Traditional Agricultural Landscape will be identified from database of Institute of Landscape Ecology that provides data on extent and statue of mosaic landscape in Slovakia. All polygons	Data available on the website of Institue of Landscape Ecology SAS http://www.uke.sav.sk/hspk/typizacia/typizacia.htm See case study annexes: Annex 2: Map of potential

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
				with potential the TAL has been defined from available aerial photos completed by field mapping. This database is much recommended to be used for identification and extent of HNV Type 2. So far, this database is not fully recognised by competent national authorities.	HNV Type 2 in Slovakia and Annex 3: Distribution of all four classified groups of TAL in Slovakia
UK	Unpublished National Report on United Kingdom and Ireland	Report; EN; 2003	National Report for UK, drawing on broad case studies, conducted as part of EEA HNV study		Jones, G and McCracken, D (2003) Unpublished National Report on United Kingdom and Ireland. 41 pp. Conducted as part of Developing a high nature value farmland indicator Project. Report for European Environment Agency (Contract 3223/B2002.EEA51351), Danish Forest and Landscape Research Institute, Denmark.
UK	Measuring and monitoring the High Nature Value farmland indicators in England	Brief report; EN; 2009	Overview of provisional approaches to HNV mapping taken in England	Both the 2007 and late 2008 analyses concluded that while the approaches advocated in the Guidance Document may be suitable to help identify Type 1 HNV farmland, they expressed doubt over the ability to identify Type 2. No further official analyses have been conducted since late 2008 and official concern has been expressed over the usefulness of HNV indicator(s) as a means of measuring impact of RDPs. The EEA map for England was 'enriched' by using national data on semi-natural habitats, because the CORINE-based map showed only large blocks of semi-natural land, mainly in the uplands. Other than feedback from the presentation of these analyses at conferences, it does not appear that any experts external to Natural England were involved in these analyses.	Geoffrey Radley, Keith Porter and Stephen Chaplin. Natural England
UK	HNV farming in England & Wales	Report; EN; 2012	Overview of EFNCP case studies in England & Wales	No coordinated UK overview to date - work tends to be carried out at UK component country level to varying degrees. For England, the case study work by EFNCP was concerned with helping inform policy development and involved a number of other experts, including from within local government, Natural England and interested NGOs. For the Welsh case study work by EFNCP were concerned with helping inform policy development and involved a number of other experts, including from within local government, Welsh Assembly Government/Countryside Council for Wales and interested NGOs	http://efncp.org/projects/united-kingdom/ Available from EFNCP website: http://efncp.org/download/HNV_Farming_brochure_final.pdf Case studies available at; http://efncp.org/projects/united-kingdom/devon/ http://efncp.org/projects/united-kingdom/wye-valley/ http://efncp.org/projects/united-kingdom/carmarthenshire/
UK	NI Annex to UK Strategy Plan	Report; EN; 2007	Provides brief details of broad HNV estimates at start of 2007-13 RDP	DARD (Department of Agriculture & Rural Development) developed the approach to providing a broad initial estimate of potential HNV extent, primarily as a potential means of setting a baseline for use in the CMEF process. It does not appear that any experts external to DARD or other NI agencies were involved in this process.	Separate pdf and word documents available at: http://www.dardni.gov.uk/strategy_plan_gateway Supposedly the same document, but the word and pdf version contain differing estimates of HNV extent – one includes LFA but the other doesn't

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
UK	Permanent Pastures and Meadows: adapting CAP instruments to take account of public goods	Powerpoint presentation; EN; 2011 data	Overview of permanent pasture condition in NI	The EFNCP has focussed some small pieces of work in Northern Ireland (focussed on hay meadows as an example of habitats associated with HNV, and summarising the conditions of permanent pastures and meadows) but aspects of more major inputs to work in the Republic of Ireland will be of relevance to helping characterise some HNV farming systems within Northern Ireland. The work by EFNCP was primarily focussed on raising awareness of the HNV importance of meadows and permanent pastures and involved interaction with farmers and other environmental NGOs.	http://efncp.org/projects/united-kingdom/ Available from EFNCP website: http://efncp.org/download/brussel2011/N_Ireland_example.pdf
UK	NICS and HNV farmland monitoring	Powerpoint presentation; EN; 2012	Overview of potential to use Countryside Survey in NI to estimate HNV		http://efncp.org/events/seminars-others/uk-land-use-policy/ Available from EFNCP website: http://efncp.org/download/uk-land-use-policy/NICS-and-HNV-farmland-monitoring.ppt
UK	Report of a Technical Working Group presenting baseline indicators on High Nature Value for the Scotland Rural Development Programme	Set of four reports; EN; 2011	Overview of approach taken to establish estimate of HNV in Scotland	During the development of Scotland's 2007-13 RDP, the official position was that guidance on the identification of HNV farmland was not sufficiently developed and so the official estimate of HNV was the extent of all terrestrial land. The Scottish Government subsequently established a Technical Working Group which published in 2011 an official estimate of the amount and broad distribution of Scottish agricultural land estimated to be under HNV farming systems. These official estimates were made for each of the years 2007, 2008 and 2009. The Scottish Government has expressed an intent to provide additional estimates for 2010, 2011 and (once data is available) for 2012, but as yet no updated estimates have been calculated for any of those years. The EFNCP has also focussed work on common grazings (an important component of HNV in Scotland) and as part of that work has also made estimates of the wider extent of HNV across Scotland. The Technical Working Group established to consider the development of HNV farmland (and associated but separate HNV forest) indicators was established by the Scottish Government as an off-shoot of a larger CMEF Working Group. A range of Scottish Government departments and agencies sat on the group together with representatives from RSPB Scotland (and environmental NGO) and what was then called the Scottish Agricultural College (represented in this instance by a researcher). The work on the development of the HNV estimates was primarily conducted through SAC advising Scottish Government Analytical Service Department staff and through Scottish Natural Heritage staff conducting a separately derived mapping exercise – all of which was co-ordinated through the Technical Working Group.	Four reports (main Scottish Government Overview and three Technical Annexes) available at http://www.scotland.gov.uk/Publications/2011/08/10135254/0 Includes: McCracken, D.I. 2011 Describing and characterising the main types of HNV farming systems in Scotland. Supplementary Paper 1 of the Scottish Government Summary report of the Technical Working Group on High Nature Value Farming and Forestry Indicators. Web only publication.

MS	Title of map, data set or report	Format, language, date	Scope and scale	Comments and additional information	Source and location
UK	Unpublished Farming Systems Regional Case Study on The Highlands & Islands, Scotland	Report; EN; 2006	Regional case Study Report conducted as part of DG Agriculture HNV study		Jones, G (2006) Unpublished Farming Systems Regional Case Study on The Highlands & Islands, Scotland. 23 pp. Conducted as part of HNV indicators for evaluation Project. Report for DG Agriculture (Contract 2006 G4-04), Institute for European Environmental Policy, London.
UK	Common grazings in Scotland	Reports; EN; 2011 and 2012	Reports on EFNCP common grazing work in Scotland	The work by EFNCP on common grazings was primarily focussed on raising awareness of the importance of these as well as how current (and likely future) support mechanisms were likely to impact upon them. This work involved interaction with crofters, crofters representatives, local Scottish Government agricultural officials and environmental NGOs.	http://efncp.org/projects/common-land/common-grazing-scotland/ Two reports available: http://efncp.org/download/Trends-in-Common-Grazing3.pdf http://efncp.org/download/SRDP-CG-report.pdf
UK	Mid Term Evaluation of the Wales Rural Development Plan 2007 -13	Report; EN; 2010	Brief details on lack of HNV data approach in Wales	During the development of Wales' 2007-13 RDP, the official position appears to have been that no baseline estimation of HNV farmland extent would be calculated since analyses below the UK figure would not be meaningful. The Mid-Term Evaluation of the RDP in 2010 indicated that a description of the proposed methodology to calculate HNV data had been submitted to the Commission but that the time series data had not been calculated. Such calculations have yet to be made and published for Wales. The proposed methodology to calculate HNV data has apparently been developed by the Welsh Assembly Government (with some consultation with Countryside Council for Wales), primarily with a view to informing the implementation of CMEF. This proposed approach is still unpublished but does not appear to have involved input from any external experts.	Mid Term Evaluation of the Wales Rural Development Plan 2007 -13 http://europa.eu/rapid/press-release_MEMO-08-104_en.htm?locale=en

*Note: all of the information in this table is taken from version 1 case studies with the exception of the UK (version 1.5) and Romania (version 2)

Annex 4 The 57 habitat types of Community interest dependent on agricultural management (as listed in Annex I of the Habitats Directive, including priority status)

Code	Priority	Habitat	Dependence on agricultural management	Agricultural activity	Estimated area	% in UFC in EU-25 (% in unknown conservation status)
COASTAL & HALOPHYTIC HABITATS						
1330		Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	p/n	g (m)	1005 km^2	100% (0%)
1340	*	Inland salt meadows	p	g (m)	28 km^2	100% (0%)
1530	*	Pannonic salt steppes and salt marshes	p/n	g; m	2015 km^2	100% (0%)
1630	*	Boreal Baltic coastal meadows	p	m/g; m	229 km^2	100% (0%)
COASTAL SAND DUNES AND INLAND DUNES						
2130	*	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	p/n	g; sc	855 km^2	95% (1%)
2140	*	Decalcified fixed dunes with *Empetrum nigrum*	p/n	g; sc	228 km^2	93% (0%)
2150	*	Atlantic decalcified fixed dunes (*Calluno-Ulicetea*)	p/n	g; sc	56 km^2	28% (72%)
2190		Humid dune slacks	p	g; sc	200 km^2	93% (6%)
21A0	*	Machairs (* in Ireland)	f	m/g/ar	28 km^2	100% (0%)
2250	*	Coastal dunes with *Juniperus* spp.	p	g; sc	183 km^2	76% (24%)
2310		Dry sand heaths with *Calluna* and *Genista*	p/n	g; sc	174 km^2	100% (0%)
2320		Dry sand heaths with *Calluna* and *Empetrum nigrum*	p/n	g; sc	47 km^2	99% (1%)
2330		Inland dunes with open *Corynephorus* and *Agrostis* grasslands	p/n	g; sc	319 km^2	98% (2%)
2340	*	Pannonic inland dunes	f	g; sc	12 km^2	100% (0%)
TEMPERATE HEATH AND SCRUB						
4010		Northern Atlantic wet heaths with *Erica tetralix*	f	g; sc	4846 km^2	100% (0%)
4020	*	Temperate Atlantic wet heaths with *Erica ciliaris* and *Erica tetralix*	f	g; sc	1528 km^2	16% (84%)
4030		European dry heaths	f	g; sc	28823 km^2	52% (47%)
4040	*	Dry Atlantic coastal heaths with *Erica vagans*	f	g; sc	16 km^2	63% (0%)
4060		Alpine and Boreal heaths	p/n	g; sc	33719 km^2	22% (4%)
4090		Endemic oro-Mediterranean heaths with gorse	p	g; sc	23592 km^2	2% (91%)
SCLEROPHYLLOUS SCRUB						
5120		Mountain *Cytisus purgans* formations	p/n	g	3409 km^2	0% (92%)
5130		*Juniperus communis* formations on heaths or calcareous grasslands	p	g; sc	1440 km^2	47% (7%)
5210		Arborescent matorral with *Juniperus* spp.	p/n	g; sc	9867 km^2	0% (86%)
5330		Thermo-Mediterranean and pre-desert scrub	p/n	g; sc	12154 km^2	15% (77%)
5420		*Sarcopoterium spinosum* phryganas	p	g	2520 km^2	0% (6%)
5430		Endemic phryganas of the *Euphorbio-Verbascion*	p	g	451 km^2	0% (7%)

NATURAL AND SEMI-NATURAL GRASSLAND FORMATIONS						
6110	*	Rupicolous calcareous or basophilic grasslands of the *Alysso-Sedion albi*	p/n	g	1434 km^2	12% (78%)
6120	*	Xeric sand calcareous grasslands	p	g; m	153 km^2	99% (1%)
6140		Siliceous Pyrenean *Festuca eskia* grasslands	p	g	921 km^2	64% (11%)
6150		Siliceous alpine and boreal grasslands	p	g (m)	8390 km^2	10% (0%)
6160		Oro-Iberian *Festuca indigesta grasslands*	p	g	4176 km^2	0% (100%)
6170		Alpine and subalpine calcareous grasslands	p	g	9967 km^2	26% (31%)
6180		Macaronesian mesophile grasslands	p	g	141 km^2	100% (0%)
6190		Rupicolous pannonic grasslands (*Stipo-Festucetalia pallentis*)	f	m/g	26 km^2	63% (0%)
6210		Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)	f	g (m)	9164 km^2	49% (23%)
6220	*	Pseudo-steppe with grasses and annuals of the *Thero-Brachypodietea*	f	g; sc	14702 km^2	3% (82%)
6230	*	Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and sub-mountain areas, in Continental Europe)	f	g; m/g	3525 km^2	80% (2%)
6240	*	Sub-Pannonic steppic grasslands	p	m/g	275 km^2	100% (0%)
6250	*	Pannonic loess steppic grasslands	f	m/g	207 km^2	99% (1%)
6260	*	Pannonic sand steppes	f	g; m	486 km^2	100% (0%)
6270	*	Fennoscandian lowland species-rich dry to mesic grasslands	f	g; m	449 km^2	100% (0%)
6280	*	Nordic alvar and precambrian calcareous flatrocks	f	g; sc	349 km^2	53% (0%)
62A0		Eastern sub-Mediterranean dry grasslands (*Scorzoneratalia villosae*)	f	m/g	909 km^2	91% (0%)
6310		Dehesas with evergreen *Quercus* spp.	f	g/tm/ar	15674 km^2	0% (98%)
6410		*Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)	f	m (g)	1535 km^2	94% (4%)
6420		Mediterranean tall humid herb grasslands of the *Molinio-Holoschoenion*	p	m; g	2471 km^2	3% (95%)
6430		Hydrophilous tall herb fringe communities of plain and of the montane to alpine levels	p/n	sc; g	2334 km^2	77% (23%)
6440		Alluvial meadows of river valleys of the *Cnidion dubii*	f	m/g	639 km^2	100% (0%)
6450		Northern boreal alluvial meadows	f	m/tm	454 km^2	100% (0%)
6510		Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis*)	f	m (g)	14373 km^2	89% (6%)
6520		Mountain hay meadows	f	m (g)	2257 km^2	99% (1%)
6530	*	Fennoscandian wooded meadows	f	m/tm	53 km^2	100% (0%)
RAISED BOGS AND MIRES AND FENS						
7210	*	Calcareous fens with *Cladium mariscus* and species of the *Caricon davallianae*	p/n	m	359 km^2	71% (2%)
7230		Alkaline fens	p	m	9941 km^2	97% (0%)
ROCKY HABITATS						
8230		Siliceous rock with pioneer vegetation of the *Sedo-Scleranthion* or of the *Sedo-albi-Veronicion dillenii*	p/n	g	2797 km^2	9% (82%)
8240	*	Limestone pavements	p	g; sc	1466 km^2	27% (37%)

FORESTS						
9070		Fennoscandian wooded pastures	f	g; tm	508 km^2	100% (0%)

Notes

Agricultural dependence: f= fully dependent on agricultural management (see below); p= partially dependent because agricultural management prolongs the existence of the habitat by blocking succession, or enlarges/maintains an enlarged area of habitat distribution; p/n = partial/not dependent – only some habitat subtypes are dependent on management (NB some areas of primary habitat should be protected from any agricultural use); or the habitat is only dependent on management in parts of its distribution area; in some cases different reviewers still cite different opinions concerning the dependence of these habitats on agricultural management. Sources: (Halada et al, 2011; Sipkova et al 2010).

Estimated area: Estimated area reported by Member States in their Article 17 reports in 2007. NB accuracy of estimates varies greatly between habitat types and Member States so this should be taken as an indication only. Source: (ETC/BD, 2008a).

Type of agricultural activity: g=grazing (extensive to v extensive); m=mowing; m/g = mowing followed by grazing; (m) = mowing only on particular sites or as replacement/supplement for grazing; sc=scrub cutting; ar/g = arable farming alternating with grazing; tm = tree management (pruning/pollarding). Source: (Olmeda *et al,* 2013).

NB the table does not include habitat area data for Romania and Bulgaria, and also does not include the agriculturally-dependent habitat types unique to these Member States. Notably, Romania and Bulgaria contain substantial areas of hay meadow and other grassland habitat.

Annex 5 Inventory of HNVF support under EAFRD Axis 2, by Member State (2007-13 RDPs)

Source: individual Member State case studies, unless otherwise stated.

HNVF systems	Eligibility/exclusion criteria	Farm level requirements
Measure 211 LFA /natural handicap mountain areas[1]		
BULGARIA		
All types of HNVF systems described in Task 1 Table2	Farmers in mountain LFA that farm more than 0.5 ha are eligible for this support.	None specific to HNV systems
CYPRUS		
Low-intensity cereals		
Cereals with olives/carobs		
Olive groves		
Almond groves		
Upland vineyards		
Farmland mosaics		
CZECH REPUBLIC		
All mentioned in LFA	Support is only for LFA areas.	Cross-compliance
GERMANY (BADEN-WUERTTEMBERG)		
L-farms, M-farms	Only for land meeting the criteria of LFA.	No
FRANCE		
Extensive pastoral/grazing system sheep/goat	Available to livestock farms with over 3 LU/ha. Fodder area up to 50 ha/farm. 25 first ha with higher payment rates. Transhumant farmers get a bonus/ha. Very small breeders (<3 LU/ha) excluded. Unclear how significant this is, as the threshold seems very low in the French context. Non grassland pastures and collective pastures eligible. Dry areas are found to get higher level of payments.	Stocking density between 0.1 and 1.8 LU/ha and cross-compliance rules.
Extensive dairy system mountains	Available to livestock farms with over 3 LU/ha. Fodder area up to 50 ha/farm. 25 first ha with higher payment rates. Transhumant farmers get a bonus/ha. Very small breeders (<3 LU/ha) excluded. Unclear how significant it is, as the threshold seems very low in the French context. Non grassland pastures and collective pastures eligible.	Stocking density between 0.15 and 1.9 LU/ha and cross-compliance rules.
Extensive beef system	Available to livestock farms with over 3 LU/ha. Fodder area up to 50 ha/farm. 25 first ha with higher payment rates. Unclear exclusion criteria. Non grassland pastures and collective pastures eligible. Dry areas are found to get higher level of payments.	Stocking density between 0.35 and 2.0 LU/ha and cross-compliance rules.
Low intensity permanent crop	This only applies to dry areas, permanent crops and crop systems are eligible. Olive and chestnut excluded, except in Corsica.	Cross-compliance
ITALY (ABRUZZO)		

[1] Source: BG: RDP Annual Report for 2011; CZ: Green Report; DE: BMELV 2011; FR: Agreste, 2011; IT: APR; PT: National government, http://www.ifap.min-agricultura.pt/portal/page/portal/ifap_publico/GC_drural/GC_proder/GC_mzd_R; RO: RAPIP; SK: VUEPP and Euroconsulting, 2011; SI: RDP Annual Report for 2011

Livestock dominant and permanent grassland	At least 2 ha of UAA; 0.2 < LU/ha < 3 if livestock is present. Permanent crops are excluded	
ITALY (AOSTA VALLEY)		
All systems	Max 4LU of local breeds; Max 3 LU of other breeds; 0.5 < LU/ha of forage < 1.5	
ITALY (APULIA)		
Livestock dominant, mixed farming, permanent crops	Min 2 ha of UAA; 0.2 < LU/ha of forage < 1.4 if livestock is present. For permanent crops, only vineyards and citrus fruits are eligible. Very small farms and olive groves are excluded.	
ITALY (BASILICATA)		
Livestock dominant and mixed farming	0.8 < LU/ha of forage < 3; at least 2 ha of UAA. Small farms, permanent grassland and permanent crops are excluded	
ITALY (BOLZANO)		
Livestock dominant, and mixed farming (with livestock)	At least 1 ha of UAA and 0.4 LU/ha of forage area. Other than livestock and permanent grassland systems, all farming systems are excluded.	Mowing and cleaning and/or grazing activity
ITALY (CALABRIA)		
All farming systems are potentially included	0.5 < LU/ha < 3 if livestock is present	
ITALY (CAMPANIA)		
All farming systems are potentially included	At least 0.5 ha of UAA; 0.5 < LU/ha < 3	
ITALY (EMILIA ROMAGNA)		
All farming systems are potentially included	At least 5 ha of UAA; 0.5 < LU/ha of forage < 2 if livestock is present; meadows and pastures: at least one mown and/or grazing for at least two months during the year. Small farms are excluded.	
ITALY (FRIULI VENEZIA GIULIA)		
All farming systems		Livestock systems: Mowing at least once a year; <0.2LU/ha/year<2; grazing at least 60 days a year; weed control. Other systems: compliance with provisions concerning pesticides and herbicides.
Livestock dominant and mixed farming	At least 60 days of grazing activity per year; 0.2 < LU/ha of forage < 2	
Arable dominant		
Permanent crops	Max 30% of UAA for vineyards; limits to fertiliser and crop protection products application	
ITALY (LAZIO)		
Livestock dominant	0.5 < LU/ha of forage < 2; Min 3 LU and min 1.5 ha of forage UAA. Permanent grassland is excluded.	
Permanent crops	Min 0.5 ha of UAA. Permanent grassland is excluded	
ITALY (LIGURIA)		
Livestock dominant, permanent grassland; permanent crops	Fodder crops: Min 3 Ha; Olive groves: min 0.5 ha; vineyards: min 0.5 ha. Orchards excluded (only olive groves and vineyards eligible)	Livestock systems: at least 90 days of grazing activity per year; mowing before the end of July; 0.5 < LU/ha of forage < 3 (<2 in Natura 2000 sites); organic fertilisation
Permanent crops	Olive groves and vineyards are eligible. Other permanent crops are excluded	Traditional vineyards, with stonewalls and slope > 35 %
ITALY (LOMBARDY)		

Livestock dominant ; permanent grassland; permanent crops	Eligibility criteria: Livestock systems: min 0.5 ha (permanent grasslands) / min 3ha (pastures) and 0.2<LU/ha < 3; permanent crops: at least 0.5 ha	Livestock systems: management of min 0.5 ha (permanent grasslands) / min 3ha (pastures) and 0.2<LU/ha < 3; permanent crops: at least 0.5 ha to be farmed; in vineyards of Valtellina and Comonica valley is also required the maintenance of dry-stone walls
Permanent crops		Livestock systems: management of min 0.5 ha (permanent grasslands) / min 3ha (pastures) and 0.2<LU/ha < 3; permanent crops: at least 0.5 ha to be farmed; in vineyards of Valtellina and Comonica valley is also required the maintenance of dry-stone walls
ITALY (MARCHE)		
All farming systems are potentially included	Min 3 ha of UAA. Small farms are excluded	0.3 <LU/ha of forage area <2 for livestock systems; forage area must be at least 50% of the area under commitment. Chestnut -compliance with regional law 6/200
ITALY (MOLISE)		
All farming systems are potentially included	At least 2 ha of UAA. Small farms are excluded.	
ITALY (PIEDMONT)		
All farming systems are potentially included	Min 3 ha of UAA. Small farms are excluded.	
ITALY (SARDINIA)		
All farming systems are potentially included	Livestock dominant and mixed farming at least 10 ha of UAA and LU/ha of forage > 0.5; for other farming types at least 2 ha of UAA. Small farms are excluded.	
ITALY (SICILY)		
All farming systems are potentially included	Min 2ha (1ha in minor islands); 0.5 < LU/ha of forage < 2 if livestock is present; traditional permanent crops including olive groves, chestnuts, carob trees. Small farms are excluded	
ITALY (TRENTO)		
All farming systems are potentially included	At least 2 ha of UAA (or 0.3 ha in case of olive groves and chestnuts); LU/ha of forage area < 3 if livestock is present Some type of permanent crops (apple trees, pear trees and peach trees) are excluded	
ITALY (TUSCANY)		
Livestock dominant, arable systems; mixed farming systems	Min 5 ha UAA; Min 5 LU; 0.2 < LU/ha of forage < 2. Permanent grassland and permanent crops are excluded	
ITALY (UMBRIA)		
All farming systems are potentially included	At least 2 ha of UAA; 0.15 < LU/ha of forage < 2 if livestock is present. Small farms are excluded.	
ITALY (VENETO)		
Livestock dominant and mixed farming	Farm size: min 2 ha; min 1 LU/ha. Small farms; permanent grassland and other farming systems are excluded.	
PORTUGAL		
Maintenance of agricultural activity in disadvantaged areas inside the Natura 2000: low-intensity semi-natural grazing	Singular person or collective people engaged in agricultural activities are eligible. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems

(including montado, Type 1); low-intensity permanent crops (Type 1); mosaic areas composed of agricultural and semi-natural area (Type 2); low-intensity non-irrigated arable crops (Type 1); low-intensity semi-natural grazing (including montado) (Type 1); low-intensity permanent crops (Type 1); mosaic areas composed of agricultural and semi-natural area (Type 2); low-intensity non-irrigated arable crops (Type 1)		
ROMANIA		
Types 1 and 2	Any farmland in IACS in a designated Mountain LFA area (over 600m, or between 400-600 m with slope of over 15%). Excluded if below 400 m, or below 600 m and average slope in commune is under 15%. 30% (1 m ha) of HNV grassland area (defined by Measure 214/1) is excluded in this way. Also excluded from eligibility for any area payments if: holding under 1 ha (in parcels of over 0.3 ha). More than 25% of parcels have scrub or rocks. More than 50 trees per ha in parcel.	Nothing beyond GAEC
SLOVAKIA		
Type 1 Semi-natural grassland habitats (pastures and meadows)	Support for legal or private entities - registered farmers managing min 1ha of agricultural land in LFA (mountains). Only Natura 2000 sites are recognised as HNV areas (79/409/EHS, 92/43/EHS). NGOs owning agricultural land mostly in protected areas (including Natura 2000 areas) are excluded from the support as they do not do agricultural business	This is horizontal measure supporting all LFA mountains areas. Within this measure only Natura 2000 sites are recognised as HNV areas (79/409/EHS, 92/43/EHS)
SLOVENIA		
Humid grasslands and marshy land	All farms eligible	
Extensively managed grassland in subalpine areas	All farms eligible	
Alpine pastures (dry open land with special vegetation)	All farms eligible	
Intensively managed grassland	All farms eligible	
Agricultural land under shrub encroachment	All farms eligible	
Extensive/meadow orchards	All farms eligible	
Grasslands with trees, trees and shrubs	All farms eligible	
SWEDEN		
Type 1 and 2	There is an entry-level of at least 3 ha of farmland. For grassland there are requirements of having a certain number of animals in order to get the area payment. The 3 ha entry-level can exclude some HNV-land that is isolated, but it cannot be	None specific to HNV systems

	considered a big problem.	
Measure 212 LFA /natural handicap other areas[2]		
BELGIUM (FLANDERS)		
BULGARIA		
All types of HNVF systems described in Task 1 Table2	Farmers in other LFA that farm more than 1ha	None specific to HNV systems
CYPRUS		
Low-intensity cereals		
Cereals with olives/carobs		
Olive groves		
Almond groves		
Upland vineyards		
Farmland mosaics		
GERMANY		
Livestock-Farming	Only classified areas	
Arable-Farming	Only classified areas	
Permanent-Crop-Farming	Only classified areas	
Mixed-Farming	Only classified areas	
GERMANY (BADEN-WUERTTEMBERG)		
L-farms, M-farms	Only for land meeting the criteria of LFA	None
ESTONIA		
All HNVF systems partly involved	This support is available for farmers (natural and legal persons, civil law partnerships and other associations of persons without the status of a legal person) who are entitled to receive support under the Single Area Payment Scheme for the same land. Support available for agricultural areas in LFA designated local municipalities (77 municipalities).	Applicants committing themselves to agricultural activities in less-favoured areas for at least 5 years after the first support payment.
GREECE		
Livestock dominant	Agriculture and stock famers, transhumance stock farmers, permanent resident. The measure refers to land greater than 2 ha.	5-6 year commitments: must remain farmers/ residents and implement the Commission's regulation for the protection of the environment, animal and plants welfare and GAEC
Arable dominant	Agriculture and stock famers, transhumance stock farmers. The measure refers to land greater than 2 ha.	5-6 year commitments: must remain farmers/ residents and implement the Commission's regulation for the protection of the environment, animal and plants welfare and GAEC
SPAIN		
All HNVF systems may benefit to	LU/ha limits: min 0.2 LU/ha max 1 LU/ha (<800mm rainfall) or 2 LU/ha (>800mm	Already listed under eligibility criteria.

[2] Source: BE: Annual implementation report for RDP; BG: RDP Annual Report, 2011; CY: Official figures and expert judgement; DE: BMELV 2011; EE: MoA and annual monitoring reports, ARC, 2013; EL: RDP; ES: National framework, RDP and MTE; FI: RDP; IE: MTE; IT: APR; LV: Rural Support Service Report; NL: Official Payment Agency, 2009; PT: National government http://www.ifap.min-agricultura.pt/portal/page/portal/ifap_publico/GC_drural/GC_proder/GC_mzd_R; RO: RAPIP; SK: VUEPP and Euroconsulting, 2011; SI: Annual report on implementation of Rural Development Programme for 2011; UK: Defra, 2013 and MTE of NI RDP.

some extent, but small-scale systems largely excluded by criteria (farm size and requirement to be 'professional' farmer)	rainfall). Farmer must live in the municipality or adjacent. Must be 'professional' or 'priority' farm (defined in terms of % of income/employment from farm). Part-time farmers below a threshold are excluded. Also minimum holding size criterion.	
SPAIN (ARAGÓN)		
All HNVF systems may be supported to some extent, with possible exception of rice (not known if within LFA).	Applications are approved in order or priority: 1) Young farmers 2) Women 3) In Natura 2000 4) Farmer participating in 214. As for Spain: LU/ha limits: min 0.2 LU/ha max 1 LU/ha (<800mm rainfall) or 2 LU/ha (>800mm rainfall). Farmer must live in the municipality or adjacent. Must be "professional" or "priority" farm (defined in terms of % of income/employment from farm). Part-time farmers below a threshold are excluded. Also minimum holding size criterion.	Already listed under eligibility criteria.
FINLAND		
All	Available to wooded pastures that fall outside '50 trees/ha' definition of agricultural area. Typical Scandinavian wooded pastures would benefit from more support.	No specific action
IRELAND		
All HNV Systems	Open to farmers in a pre-determined defined area. Initially due to the large area classified as Disadvantaged it is unlikely that any HNVF is excluded, although small pockets of remaining species rich dry grassland may be excluded. In recent years specific stocking rates apply (0.3LU/ha) which can exclude farmers in heathland where the ecological preferred stocking rate would be 0.15Lu/ha.	Comply with Cross Compliance requirements set down in EU legislation and must maintain the farm in good agricultural and environmental condition (GAEC).
ITALY (ABRUZZO)		
Livestock dominant and permanent grassland	0.2 < LU/ha < 3 if livestock is present. Permanent crops are excluded.	
ITALY (APULIA)		
Arable dominant, livestock dominant, mixed farming	Min 5 ha of forage UAA; 0.2 < LU/ha of forage < 1.4 for livestock systems. Small farms and permanent crops are excluded	
ITALY (CAMPANIA)		
All farming systems are potentially included	At least 0.5 ha of UAA; 0.5 < LU/ha < 3	
ITALY (EMILIA ROMAGNA)		
All farming systems are potentially included	At least 5 ha of UAA; 0.5 < LU/ha of forage < 2 if livestock is present; meadows and pastures: at least one mown and/or grazing for at least two months during the year. Small farms are excluded.	
ITALY (LAZIO)		
Livestock dominant	0.5 < LU/ha of forage < 1.4; Min 3 LU and min 1.5 ha of forage UAA. Small farms are excluded.	
Arable dominant	Min 1.5 ha of UAA. Small farms are excluded.	
ITALY (LIGURIA)		
Livestock dominant and mixed farming	Livestock dominant: Min 3 ha of forage. Fodder crops; olive groves; vineyards. Small farms are excluded.	At least 90 days of grazing activity per year; mowing before the end of July 0.5 < LU/ha of forage < 3
ITALY (MARCHE)		
All farming systems are potentially	Min 3 ha of UAA. Very small farms are excluded.	0.3 < LU/ha of forage area < 2 for livestock systems; forage area must be at least

included		50% of the area under commitment .
ITALY (MOLISE)		
All farming systems are potentially included	At least 2 ha of UAA. Small farms are excluded	
ITALY (SARDINIA)		
All farming systems are potentially included	Livestock dominant and mixed farming at least 10 ha of UAA and LU/ha of forage > 0.5; for other farming types at least 2 ha of UAA. Small farms are excluded.	
ITALY (SICILY)		
All farming systems are potentially included	Min 2ha (1ha in minor islands); 0.5 < LU/ha of forage < 2 if livestock is present; traditional permanent crops including olive groves, chestnuts, carob trees. Small farms are excluded.	
ITALY (TUSCANY)		
Livestock dominant, arable systems; mixed farming systems	Min 5 ha; Min 5 LU; 0.2 < LU/ha of forage < 2. Small farms are excluded	
ITALY (UMBRIA)		
All farming systems are potentially included	At least 2 ha of UAA; 0.15 < LU/ha of forage < 2 if livestock is present. Small farms are excluded	
LATVIA		
Livestock dominant, Mixed farming, Arable dominant	Available for grasslands and different crop lands (LFA status has been granted to 74.4% of the total agricultural land in Latvia, accounting for 1.81 million hectares of utilised agricultural area.) Excludes farmland which does not meet the rules of GAEC, including areas with more than 50 separately growing trees on 1ha, as well as areas where tree or shrub clumps covering more than 0.01 hectares. Excludes all silvo-pastoral systems, heathland, dune and fen habitats. Payment available only if applied area at least 1 ha, consisting of plots not smaller than 0.3 ha.	A beneficiary is eligible to receive aid if: 1) performs agricultural activity on eligible UAA of at least 1 ha consisting of plots not smaller than 0.3 ha; 2) cross compliance of Articles 4 and 5 and Annexes III and IV of Regulation (EC) No. 1782/2003, the minimum requirements for fertiliser and plant protection product use and other mandatory requirements specified in Annex 9 of the Programme are enforced on the whole territory of the agricultural holding; 3) undertakes to pursue agricultural activity on the utilised agricultural land in less favoured area for the next five years from the first payment of compensatory allowance; 4) the minimum livestock density of at least 0.2 livestock units per eligible hectare shall be ensured in the area of permanent meadows and pastures or perennial grasses sown into the arable land, except in Natura 2000 teritories and biologically valuable grasslands.
THE NETHERLANDS		
Livestock dominant (permanent grass), Type 1, 2 and 3	Payments only in less favoured areas, coincide most often with the moist peat meadow areas (because of the shallow water tables), these areas are also the HNVF concentration areas in NL. Farmers outside LFA areas cannot apply for the measure	In some LFAs there are management requirements concerning soil tillage, use of agro-chemicals and maintenance of physical handicaps.
PORTUGAL		
Maintenance of agricultural activity in disadvantaged areas inside the Natura 2000: low-intensity semi-natural grazing (including montado, Type 1); low-intensity permanent crops (Type 1); mosaic areas composed	Singular person or collective people engaged in agricultural activities. Should not exclude any farms or farmers that can benefit with this funding measure	None specific to HNV systems

of agricultural and semi-natural area (Type 2); low-intensity non-irrigated arable crops (Type 1); low-intensity semi-natural grazing (including montado) (Type 1); low-intensity permanent crops (Type 1); mosaic areas composed of agricultural and semi-natural area (Type 2); low-intensity non-irrigated arable crops (Type 1)		
ROMANIA		
Type 3	Any farmland in IACS in a designated Non-mountain LFA area (soil quality, agricultural handicap areas). Excluded from eligibility for any area payments if: holding under 1 ha (in parcels of over 0.3 ha). More than 25% of parcels have scrub or rocks. More than 50 trees per ha in parcel.	Nothing beyond GAEC
SLOVAKIA		
Type 1 Semi-natural grassland habitats (pastures and meadows)	Support for legal or private entities - registered farmers managing min 1ha of agricultural land in LFA (others). Only Natura 2000 sites are recognised as HNV areas (79/409/EHS, 92/43/EHS). NGOs owning agricultural land mostly in protected areas (including Natura 2000 areas) are excluded from the support as they do not do agricultural business.	
SLOVENIA		
Humid grasslands and marshy land	All farms eligible	
Extensively managed grassland in lowlands	All farms eligible	
Intensively managed grassland	All farms eligible	
Agricultural land under shrub encroachment	All farms eligible	
Extensive/meadow orchards	All farms eligible	
Sub-Mediterranean agricultural landscape	All farms eligible	
Grasslands with trees, trees and shrubs	All farms eligible	
SWEDEN		
Type 1 and 2	There is an entry-level of at least 3 ha of farmland. For grassland there are requirements of having a certain number of animals in order to get the area payment. The 3 ha entry-level can exclude some HNV-land that is isolated, but it cannot be considered a big problem.	None specific to HNV systems
UK (ENGLAND)		

All HNVF systems within the pre-determined disadvantaged are (17% of England's UAA)	Yes, defined area within England classed as LFA - 2.2 million ha classed as LFA of which 1.8 million ha is in agricultural production (LFA is 17% of England's UAA). 360,000 ha of common land also fall within LFA. The new 214 scheme is open to all regardless of size of farm be actively farming (note that Transitional Upland Payment requires at least 10 ha of forage to be within the LFA) . Entry to new scheme dependent on achieving sufficient points - based on undertaking particular actions. Compulsory ones include min (0.05 LU/ha) stocking rate on moorland areas between June and Sept plus no overgrazing or under grazing. From 2007-2010, LFA support was provided under 212 via Hill Farm Allowance. This closed in July 2010 with new entrants being directed to a new Upland Entry Level Stewardship Scheme A large proportion of land within the LFA is likely to be HNVF though not all of it will qualify as being in agricultural production. The small area of overall UAA designated as LFA means that a lot of HNVF will fall outwith the LFA area	Entry to new scheme dependent on achieving sufficient points - based on undertaking particular actions. Compulsory ones include min (0.05 LU/ha) stocking rate on moorland areas between June and Sept plus no overgrazing or under grazing. Meet GAEC and Cross Compliance requirements.
UK (NORTHERN IRELAND)		
All HNVF systems within the pre-determined disadvantaged are (70% of N Ireland's UAA)	Yes, defined area within NI classed as disadvantaged area (SDA) or Severely disadvantaged area (DA). Must have breeding livestock (cows and/or ewes) and a minimum stocking rate of 02LU/ha. Some farm systems, species rich dry grasslands could fall outside this support system as the designated area is based on land quality. A lot of non HNVF systems fall into this support due to the high area of land designated as LFA	Maintenance of breeding stock (cows or ewes) and a minimum stocking level of 0.2 Lu/ha. And meet Cross Compliance requirements.
UK (SCOTLAND)		
All HNVF systems within the pre-determined disadvantaged are (85% of Scotland's UAA and 64% of agricultural holdings)	Yes, defined area within Scotland classed as LFA. Must have more than 3 ha of land and be actively farming (carrying out an activity associated with grazing or feeding farmed livestock). Must also comply with min (0.12 LU/ha) and max (1.4LU/ha) stocking densities at holding level. A large proportion of HNVF falls within the LFA - though some small-holding will not be eligible for support. The large area of UAA designated as LFA means that a lot of non HNVF systems fall into the LFA area	Min (0.12 LU/ha) and max (1.4LU/ha) stocking densities at holding level. Meet GAEC and Cross Compliance requirements.
UK (WALES)		
All HNVF systems within the pre-determined disadvantaged are (80% of Wales' UAA)	Defined area within Wales classed as LFA. There is 1.53m ha of agricultural land classified as LFA (80% of UAA in Wales). The Tir Mynydd 212 scheme stipulated claimants must have more than 6 ha of land and be actively farming. Must also comply with min (0.1 LU/ha) grazing density at holding level. No max stipulated but would be inspected above 1.8 LU/ha. From 1 January 2012 all existing agri-environment schemes were replaced by a single, integrated scheme called Glastir (see 214 below) and Tir Mynydd, the Less Favoured Area Scheme was withdrawn. Glastir covers all of Wales with a single payment rate plus top up if within LFA. Farmers who have common land rights can also apply to join the Glastir Common Land Element having first formed a grazing association. A large proportion of HNVF falls within the LFA - though some small-holding will not be eligible for support. The large area of UAA designated as LFA means that a lot of non HNVF systems fall into the LFA area, including dairy farmers who become eligible for support within the new Glastir scheme	Under the previous Tir Mynydd scheme, min (0.1 LU/ha) stocking densities at holding level with inspections over 1.8 LU/ha. Meet GAEC and Cross Compliance requirements. Under Glastir need to sign up to various commitments to qualify for points to enter the scheme, but no distinction made between LFA categories in new scheme.

Measure 213 Natura 2000 payments and payments linked to Directive 2000/60/EC [3]		
BELGIUM (FLANDERS)		
BULGARIA		
Livestock dominant/ Subsistence, semi-subsistence and family farming/Mixed small holding with low intensity cropping	Support is available only to farmers in Natura 2000 sites under Bird directive - 109 sites with area eligible for support amounting to 599,871 ha. Support is still not available for Natura 2000 sites under Habitat directive.	A) Restrictions for permanent grassland: 1) Ploughing and afforestation of meadows and pastures is forbidden; 2) Use of pesticides and mineral fertilizers is forbidden in pastures and meadows; 3) Mowing is not allowed till 1st July or mowing of meadows before 15th July from periphery to the centre with high speed mowing equipment is forbidden; 4) Removal of landscape features in agricultural land is forbidden (field boundaries, standing or group trees, tree belts, etc.) B) Restrictions for arable land: 1) Use of non-selective materials against pests in agriculture and forestry is forbidden. 2) Removal of landscape features in agricultural land is forbidden (field boundaries, standing or group trees, tree belts, etc). C) Restrictions for permanent crops: 1) Use of non-selective materials against pests in agriculture and forestry is forbidden.
Permanent crops dominant/Traditional orchards and vineyards	Support is available only to farmers in Natura 2000 sites under Bird directive - 109 sites with area eligible for support amounting to 599,871 ha. Support is still not available for Natura 2000 sites under Habitat directive.	C) Restrictions for permanent crops: 1) Use of non-selective materials against pests in agriculture and forestry is forbidden
Arable dominant/intensive farms	Support is available only to farmers in Natura 2000 sites under Bird directive - 109 sites with area eligible for support amounting to 599,871 ha. Support is still not available for Natura 2000 sites under Habitat directive.	B) Restrictions for arable land: 1) Use of non-selective materials against pests in agriculture and forestry is forbidden.B2) Removal of landscape features in agricultural land is forbidden (field boundaries, standing or group trees, tree belts, etc).
CZECH REPUBLIC		
Valuable grasslands in protected areas	Available to all eligible farms (in designated areas), except for very small farms (limited by minimum size).	Compensation for regulation of fertilisers and pesticides use
GERMANY		
Livestock-Farming	Only farms in Natura 2000 areas	
Arable-Farming	Only farms in Natura 2000 areas	
Permanent-Crop-Farming	Only farms in Natura 2000 areas	
Mixed-Farming	Only farms in Natura 2000 areas	
GERMANY (BADEN-WUERTTEMBERG)		
Mainly L-farms, M-farms	Only farms in Natura2000 areas	None
ESTONIA		
All support eligible HNVF systems partly involved	Support is available for farmers (natural and legal persons, civil law partnerships and other associations of persons without the status of a legal person) who are entitled to	Follow cross-compliance requirements and Nature Conservation Act (eg it is not allowed to establish or maintain a land improvement system or to use a biocide, a

[3] Source: BE: Annual implementation report on RDP; BG: RDP Annual report for 2011; CZ: Green Report; DE: BMELV 2011; EE: MoA and annual monitoring reports, ARC, 2013; EL: Journal of Government 1211/2013; IE: MTE; IT: APR; LV: Rural Support Service Report; SK: VUEPP and Euroconsulting, 2011.

	receive support under the Single Area Payment Scheme for the same land. All agricultural land of LPIS (grassland, arable land, permanent cultures) in Natura 2000 areas eligible	pesticide or a fertiliser).
GREECE		
Livestock dominant	Stock farmers, grazing land inside National Parks, grazing lands that are funded by other measures (Pillar 1 and 2) are not eligible. Support is granted for grazing lands which include islands (0.05 ha) of natural vegetation.	1) harvest follows a specific method, 2) maintain the islands of natural vegetation, 3) pause grazing in these islands (March- August), 4) follow the Management Plan of the National Park, 5) protect water inside the land
HUNGARY		
	Only for Natura 2000 grasslands identified in LPIS	
IRELAND		
All HNV Systems	Specific farms in Natura 2000 sites. Annexed habitats outside of designated areas are excluded.	Yes, specific management prescriptions are included in a Farm Plan based on the habitat type
ITALY (FRIULI VENEZIA GIULIA)		
All farming systems are potentially included	Max 2 LU/ha of forage	Maintain permanent pastures and historic features. Cutting regime, restricted management dates, scrub management. Management of water resources
ITALY (LAZIO)		
Livestock dominant	0.2 < LU/ha of forage < 2; Min 3 LU and min 1.5 ha of forage UAA. Small farms; other farming systems are excluded.	Ban of stone clearing in permanent pastures; establishment of fences, hedges, rows, stonewalls only with traditional materials and methods; conservation of semi-natural features; restrictions on the use of chemicals against rodents
ITALY (MARCHE)		
All farming systems are potentially included	_	Maintaining permanent pastures. Historic features management. Cutting regime, restricted management dates, scrub management. Management of water resources
ITALY (VENETO)		
All farming systems are potentially included	_	
LATVIA		
Livestock dominant, Mixed farming	Available for grasslands in Natura 2000 sites**** Exclude farmland which does not meet the rules of GAEC, including areas with more than 50 separately growing trees on 1ha, as well as areas where tree or shrub clumps covering more than 0.01 hectares. Exclude all silvo-pastoral systems, heathland, dune and fen habitats. Payment available only if applied area at least 1 ha, consisting of plots not smaller than 0.3 ha. ****Natura 2000 support for agricultural lands is paid for permanent meadows and pastures located within Natura 2000 areas. No special management requirements are set by the RDP, as the support is justified by a false assumption that all Natura 2000 areas stipulate special management practices (In Latvia in Natura 2000 areas quite often included intensive agricultural and forestry lands without serious management restrictions).	A beneficiary is eligible to receive aid if: 1) performs agricultural activity on eligible UAA of at least 1 ha consisting of plots not smaller than 0.3 ha; 2) cross compliance of Articles 4 and 5 and Annexes III and IV of Regulation (EC) No. 1782/2003, the minimum requirements for fertiliser and plant protection product use and other mandatory requirements specified in Annex 9 of the Programme are complied with in the entire holding
SLOVAKIA		
Type 1 Semi-natural grassland habitats (pastures and meadows)	Support is for legal or private entities - registered farmers managing min 1ha of grasslands registered as grassland agricultural land in and Natura 2000 area. NGOs owning agricultural land mostly in protected areas (including Natura 2000 areas) are excluded from the support as they do not do agricultural business.	

Measure 214 Agri-environment payments [4]		
AUSTRIA		
Extensively cultivated grassland in low areas	Support is available for all farmers who (1) cultivate more than 2 ha of land; (2) have subscribed the specific funding conditions before the year 2010. Those which do not comply with this are excluded.	The farmer has to apply a package of specific measures on his meadows / pastures which have been fixed together with an ecologist (eg not mowing part of the meadow, mowing later in the year than normal…) at the beginning of the funding period.
Semi-intensively cultivated meadows and pastures	Support is available for all farmers who (1) cultivate more than 2 ha of land; (2) have subscribed the specific funding conditions before the year 2010. Those which do not comply with this are excluded.	The farmer has to apply a package of specific measures on his meadows / pastures which have been fixed together with an ecologist (eg not mowing part of the meadow, mowing later in the year than normal…) at the beginning of the funding period.
traditional orchards	Support is available for all farmers who (1) cultivate more than 2 ha of land; (2) have subscribed the specific funding conditions before the year 2010. Those which do not comply with this are excluded.	The farmer has to apply a package of specific measures on his meadows / pastures which have been fixed together with an ecologist (eg not mowing part of the meadow, mowing later in the year than normal…) at the beginning of the funding period.
Arable cropland with specific nature conservation measures	Support is available for all farmers who (1) cultivate more than 2 ha of land; (2) have subscribed the specific funding conditions before the year 2010. Those which do not comply with this are excluded.	The farmer has to apply a package of specific measures on his arable land which have been fixed together with an ecologist (eg not using the land for the production of crops; sowing special winter crops as food for birds…) at the beginning of the funding period.
mosaic of low intensity agriculture and natural and structural elements	Support is available for all farmers who (1) cultivate more than 2 ha of land; (2) have subscribed the specific funding conditions before the year 2010. Those which do not comply with this are excluded.	The farmer has to apply a package of specific measures on his farmland which have been fixed together with an ecologist at the beginning of the funding period (eg keeping small parcels).
Extensively cultivated grassland in low areas	Support is available for all farmers who (1) cultivate more than 2 ha of land; (2) have subscribed the specific funding conditions before the year 2010. Those which do not comply with this are excluded.	The requirements have to be fulfilled on the entire grassland as well as the entire arable land: not more than 150 kg/ha of nitrogen fertiliser; observing of detailed limitations for nitrogen fertiliser for every cultivated crop; conservation of all landscape elements on the farm; conservation of the extent of grassland; fulfilling of specific requirements concerning the crop rotation; the percentage of one crop on the crop land area may not be bigger than 66%; creation of 'biodiversity areas' (use of suitable seeds that support insects etc) on at least 2 % of the arable crop land; at least 5 % of the grassland may not be mowed more than twice a year; machines that are used for the application of pesticides have to be checked by an organization that is authorized by the Ministry; detailed documentation (eg of the application of nitrogen fertilizer or sowing and harvesting dates) for every field.
Semi-intensively cultivated meadows and pastures	Support is available for all farmers who (1) cultivate more than 2 ha of land; (2) have subscribed the specific funding conditions before the year 2010. Those which do not comply with this are excluded.	The requirements have to be fulfilled on the entire grassland as well as the entire arable land: not more than 150 kg/ha of nitrogen fertiliser; observing of detailed limitations for nitrogen fertiliser for every cultivated crop; conservation of all

[4] Source: BE: Annual implementation report on RDP; BG: RDP Annual Report for 2011; CY: Official figures and expert judgment; Green Report; DE: BMELV 2011; EE: MoA RDP + annual monitoring reports, ARC 2012 and 2013; EL: RDP; ES: National RDP framework, RDP and MTE; FI: National monitoring of AEP, 2009 and MTE; FR: MoA; IE: MTE; IT: APR; NL: Doorn et al, 2013; PT: National government http://www.ifap.min-agricultura.pt/portal/page/portal/ifap_publico/GC_drural/GC_proder/GC_mzd_R; RO: RAPIP; SK: VUEPP and Euroconsulting, 2011; SI: Annual report on implementation of Rural Development Programme for 2011; UK: Defra, 2013, MTE (NI)

		landscape elements on the farm; conservation of the extent of grassland; fulfilling of specific requirements concerning the crop rotation; the percentage of one crop on the crop land area may not be bigger than 66%; creation of 'biodiversity areas' (use of suitable seeds that support insects etc) on at least 2 % of the arable crop land; at least 5 % of the grassland may not be mowed more than twice a year; machines that are used for the application of pesticides have to be checked by an organization that is authorized by the Ministry; detailed documentation (eg of the application of nitrogen fertilizer or sowing and harvesting dates) for every field.
mixed landscapes	Support is available for all farmers who (1) cultivate more than 2 ha of land; (2) have subscribed the specific funding conditions before the year 2010. Those which do not comply with this are excluded.	The requirements have to be fulfilled on the entire grassland as well as the entire arable land: not more than 150 kg/ha of nitrogen fertiliser; observing of detailed limitations for nitrogen fertiliser for every cultivated crop; conservation of all landscape elements on the farm; conservation of the extent of grassland; fulfilling of specific requirements concerning the crop rotation; the percentage of one crop on the crop land area may not be bigger than 66%; creation of 'biodiversity areas' (use of suitable seeds that support insects etc) on at least 2 % of the arable crop land; at least 5 % of the grassland may not be mowed more than twice a year; machines that are used for the application of pesticides have to be checked by an organization that is authorized by the Ministry; detailed documentation (eg of the application of nitrogen fertilizer or sowing and harvesting dates) for every field.
Extensively cultivated grassland in low areas	Support is available for all farmers who (1) cultivate more than 2 ha of farmland; (2) have subscribed the specific funding conditions before the year 2010; (3) have their farms within a defined area of Austria (specified in the Austrian agri-environmental programme); (4) have more than 0.5 Cattle LU/ha grassland and forage crops. Exclusion criteria: farms that cultivate less than 2ha; farms that did not subscribe the specific funding conditions before the year 2010; the area where farmers can attend this measure includes mainly cattle dominant farmers who cultivate primarily grassland; nevertheless there may be some farms outside the defined area who would also attend if there was no demarcation; there might also be some farms without cattle that would like to attend this measure, however when developing the measure it was the clear intention to include only cattle-breeding farms in order to support a 'closed loop recycling management' on the farms.	No silage making or use of silage; no production or storage of silage bales and no delivery to others; no use of sewage sludge or composted sewage sludge.
Semi-intensively cultivated meadows	Support is available for all farmers who (1) cultivate more than 2 ha of farmland; (2) have subscribed the specific funding conditions before the year 2010 (3) have their farms within a defined area of Austria (specified in the Austrian agri-environmental programme) (4) have more than 0.5 Cattle LU/ha grassland and forage crops. Exclusion criteria: f arms that cultivate less than 2 ha of land; farms that did not subscribe the specific funding conditions before the year 2010; the area where farmers can attend this measure includes mainly cattle dominant farmers who cultivate primarily grassland; nevertheless there may be some farms outside the defined area who would also attend if there was no demarcation; there might also be some farms without cattle that would like to attend this measure, however when developing the measure it was the clear intention to include only cattle-breeding farms in order to support a 'closed loop recycling management' on the farms.	No silage making or use of silage; no production or storage of silage bales and no delivery to others; no use of sewage sludge or composted sewage sludge.
traditional orchards	Support is available for all farmers who (1) cultivate more than 2 ha of farmland; (2)	Mowing of the meadow in the orchard at least one time a year and taking away

	have subscribed the specific funding conditions before the year 2010. It is estimated that 40 % of the traditional orchards are not grown on farming land, but in gardens around the farm buildings ('Hausgärten') or on former farming land which are excluded from agri-environment funding.	the hay or use as pasture; no removal of trees; at least 30 trees per hectare or at least 5 trees in one row and no more than 20 m between the single trees.
Extensively cultivated grassland /semi-intensively cultivated grassland	Support is available for all farmers who (1) cultivate more than 2 ha of land; (2) have maximally 2 GVE/ha (2) have subscribed the specific funding conditions before the year 2010. Those which do not comply with this are excluded.	Mowing of the steep meadow at least one time a year and taking away the hay; no re-afforestation.
Alpine meadows and pastures	Support is available for all farmers who (1) cultivate more than 2 ha of farmland; (2) have subscribed the specific funding conditions before the year 2010; (3) meadows have to be above the settlement boundary. Those which do not comply are excluded.	Mowing of the meadow at least one time every two years and maximally one time a year; no use as pasture; only stall manure is allowed; no pesticides; no sewage sludge; preservation of landscape elements
Alpine meadows and pastures	Support is available for all farmers who (1) cultivate more than 2 ha of farmland; or (2) more than 3 ha of alpine pastures; (3) have subscribed the specific funding conditions before the year 2010. Those which do not comply are excluded.	At least 3 livestock units of roughage eating animals (e.g. cattle, goats, horses) have to be on the alpine pastures non-stop at least for 60 days; maximally 0,67 livestock units of roughage eating animals per hectare of pasture that can be used for grazing; no use of silage or roughage from somewhere else than the funded alpine pasture; no application of liquid manure that is not from the funded alpine pasture; there are only fertilizers allowed that are listed in regulation 2092/91; no application of sewage sludge or composted sewage sludge; no application of pesticides that are not listed in regulation 2092/91
BELGIUM (FLANDERS)		
Habitats of Annex I of Habitat Directive (Type 1)	Botanical management (phasing out measure, 214P). No eligibility/exclusion criteria	Specific management conditions for grassland (mowing date, grazing period, density of livestock)
Regionally important grassland habitats (Type 1)	Botanical management (phasing out measure, 214P). No eligibility/exclusion criteria	Specific management conditions for grassland (mowing date, grazing period, density of livestock)
Small-scale mosaic landscapes (Type 2)	Landscape elements measure. No eligibility/exclusion criteria	Specific criteria for the recovery, development and maintenance of small landscape elements
Historical pastures of very good biological quality (Type 2)	Landscape elements, farmland bird measure, grassland bird measure, botanical management, reduction soil erosion, field strips. No eligibility/exclusion criteria.	Specific criteria for each measure
Mainstream intensive farmland used by grassland birds (Type 2)	Species protection measure (grassland birds). No eligibility/exclusion criteria.	Specific criteria for the grassland bird measure
Mainstream intensive farmland used by farmland birds (Type 2)	Species protection measure (farmland birds). No eligibility/exclusion criteria.	Specific criteria for the farmland bird measure
Conservation area for European hamster in agricultural use (Type 3)	Species protection measure (hamster). No eligibility/exclusion criteria.	Specific criteria for the hamster protection measure
BULGARIA		
Livestock dominant/ Subsistence, semi-subsistence and family farming	Support is available only to farmers with HNV grassland as defined in the HNVF LPIS layer that have more than 0.5 ha of grassland. Farmers with less than 0.5 ha of grassland and parcels smaller than 0.1 ha are excluded. Farmers outside the HNVF layer in the LPIS system are also excluded.	Each year farmers have to specify whether the grassland will be mowed or grazed. Use of fertilizers and application of pesticides is prohibited except those defined in Regulation (EEC) 2092/91 (R 834/2007). No new drainage and ploughing is permitted. For grasslands that will be mowed the following requirements should be observed: • Free grazing on meadows after the last mowing (except for meadows in the forests, because they are a habitat for plant species of European conservation importance where the grazing might not be of benefit, moreover the forest meadows are used for grazing by wild fauna and human presence might

		disturb them). • Mowing should be between 15 June and 15 July for lowlands and between 30 June and 15 August for mountainous LFA as defined in Measure 211. • The mowing may be done manually or if it is with a slow grass cutting machine to be performed in a way that will not disturb the nesting birds or other animals (eg from the centre towards the periphery of the meadow and with low speed or from one end to the other) - To allow the ground nesting birds and other animals to escape. For grasslands that will be grazed: • Maintenance of minimal and maximum density of livestock depending on natural climatic and soil conditions in order to assure a good ecological state of the meadows and pastures and keep permanent grass cover. The minimum and maximum levels are 0.3-1.5 LSU/ha. • Maintain minimum and maximum stocking density in the whole grazing area within the farmers block. Respect of stocking density will take into account all grazing livestock kept in the farm
Arable dominant/intensive farms	Farmers can apply with minimum 0.3 ha arable land that falls into the HNVF layer or bigger depending on the management requirements. Exclusion: The farmers with less than 0.3 ha of arable land and parcels smaller than 0.1 ha are excluded. Excluded are also farmers outside the HNVF layer in the LPIS system.	The farmer may choose one or a combination of the following activities: • Leave small (16-25 m^2) pieces of land unploughed and not sowed, amongst the autumn cropped areas (4 such pieces/ha); • Retain winter stubbles on fields selected for spring-grown crops; • Leave uncultivated and un-ploughed areas ('wildlife-friendly set-a-side') for a period for 2 years on a 5 year rotational basis in intensive agricultural land with monocultures (10 to 20% of the farmers block, but not less than 1 ha, as a single, non-fragmented block of land; with a 1m sterile strip around the perimeter that should be ploughed 2-3 times a year [but not between March and July] to prevent spread of weeds into adjacent crops); • No cereal harvesting before 31 July in areas with nests of Montagu's Harrier (Circus pygargus); • No use of pesticides (including second generation rodenticides) and mineral fertilisers - other than 'localised-treatment' of invasive weeds, ie selective use of some herbicides such as fluazifop-P-butyl or similar in March is permitted to suppress rank grass swards on grass margins or wildlife set-aside areas; • Agri-environmental activities for the wintering geese. In connection with the provision of feeding wintering geese will be supported farmers who sow/ cultivate appropriate crops grown on at least 50% of the farm block, so as to provide grazing for geese in winter: rye, triticale, barley, other cereal crops (spelled, buckwheat, etc), rape and other oilseeds (mustard, rape, safflower caraway, etc), other forage crops (repko, rape, etc.). Treating farm blocks with herbicides is not permitted during the period October 15 - March 1. • Conversion of arable lands that are habitats of European ground squirrel into pastures and subsequent extensive maintenance. This activity will be implemented in all HNV arable land which has permanent colonies of ground squirrels. The farmer is obliged not to plough converted into pastures arable lands and to maintain them in an extensive way by grazing - a maximum of

		1.5 AU/ha. • Conversion of arable lands that are habitats of the Golden eagle into pastures and subsequent extensive maintenance. This activity will be implemented in all HNV arable land, which has permanent colonies of Golden eagles. The farmer is obliged not to plough converted into pastures arable lands and to maintain them in an extensive way by grazing - a maximum of 1.5 AU / ha. • Conversion of arable lands that are habitats of the Egyptian vulture into pasture and subsequent extensive maintenance - Activities will be implemented in all HNV arable land, which has permanent colonies of Egyptian vultures. The farmer is obliged not to plough converted into pastures arable lands and to maintain them in an extensive way by grazing - a maximum of 1.5 AU / ha. No combination of the 3 sub-packages for conversion of arable land to pasture (concerning habitats of European ground squirrel, Golden eagle & Egyptian vulture) on the same area is not permitted
Permanent crops dominant/Traditional orchards and vineyards	Farmers can apply with minimum 0.3 ha of traditional orchards. The definition of traditional orchards is very narrow including widely-spaced more than 25 years old trees (but with less than 10 m). The orchard floor has continuous or near continuous grass cover that is commonly used for grazing animals. The fruits cannot be marketed commercially. All of the extensive orchard gardens with HNV that are more than 25 years old are not eligible for support.	• Retain all living fruit trees; • Ensure regular pruning at least once per year; • Maintain grass growing on the floor of the orchard through grazing and/or mowing; • Do not burn grass or wood in the orchard; • Do not allow standing fruit trees to be damaged by grazing livestock or mowing equipment; • Plant protection treatment is allowed only in extreme circumstances - where direct threat of destruction of the trees and after consultation with an expert; • Do not apply any fertilisers or herbicides to the grass on the floor of the orchard. • According to the specific situation of their orchards certain farmers will be required to plant up to 10 young trees per ha for the whole 5 year period. Farmers will be informed of the specific requirement applicable to their orchards
Mixed small holding with low intensity cropping	Support is available only to farmers with HNV grassland as defined in the HNVF LPIS layer that have more than 0.5 ha of grassland. Farmers with less than 0.5 ha of grassland and parcels smaller than 0.1 ha are excluded. Farmers outside the HNVF layer in the LPIS system are also excluded.	Each year farmers have to specify whether the grassland will be mowed or grazed. Use of fertilizers and application of pesticides is prohibited except those defined in Regulation (EEC) 2092/91 (R 834/2007). No new drainage and ploughing is permitted. For grasslands that will be mowed the following requirements should be observed: • Free grazing on meadows after the last mowing (except for meadows in the forests, because they are a habitat for plant species of European conservation importance where the grazing might not be of benefit, moreover the forest meadows are used for grazing by wild fauna and human presence might disturb them). • Mowing should be between 15 June and 15 July for lowlands and between 30 June and 15 August for mountainous LFA as defined in Measure 211. • The mowing may be done manually or if it is with a slow grass cutting machine to be performed in a way that will not disturb the nesting birds or

		other animals (eg from the centre towards the periphery of the meadow and with low speed or from one end to the other) - To allow the ground nesting birds and other animals to escape. For grasslands that will be grazed: • Maintenance of minimal and maximum density of livestock depending on natural climatic and soil conditions in order to assure a good ecological state of the meadows and pastures and keep permanent grass cover. The minimum and maximum levels are 0.3-1.5 LSU/ha. Maintain minimum and maximum stocking density in the whole grazing area within the farmers block. Respect of stocking density will take into account all grazing livestock kept in the farm
Livestock dominant/Subsistence, semi-subsistence and family farming/Mixed small holding with low intensity cropping	Available for alpine pastures in National parks (Pirin, Central Balkan and Rila), and for farmers having more than 10 LU (sheep, cattle, horses). The support excludes the alpine pastures with HNV in Natural parks and other Natura 2000 areas.	The farmer/shepherd must graze their livestock on the designated mountain pastures for at least 3 months of the year (eg May – October). Shorter periods will be permitted according to seasonal conditions (eg a late spring or early autumn)
CYPRUS		
Low-intensity cereals		
Cereals with olives/carobs		
Olive groves		
Almond groves		
Upland vineyards		
Farmland mosaics		
CZECH REPUBLIC		
Mountain/highland grasslands (grassland management schemes)	Available to all eligible farms (in designated areas). Excludes very small farms (limited by minimum size).	Limited intensity of fertilisers use and animal density, timing of grass cut, way of cutting the grass.
Lowland grasslands (grassland management schemes)	Available to all eligible farms (in designated areas). Excludes very small farms (limited by minimum size).	Limited intensity of fertilisers use and animal density, timing of grass cut, way of cutting the grass.
Old orchards (Organic scheme - orchards (part of supported are old orchards))	Available to all eligible farms (in designated areas). Excludes very small farms (limited by minimum size).	Basic management preventing abandonment, supporting management and renewal of orchards.
GERMANY		
Livestock-Farming	None	
Arable-Farming	None	
Permanent-Crop-Farming	None	
Mixed-Farming	None	
GERMANY (BADEN-WUERTTEMBERG)		
Mainly L-farms, M-farms, but also some A-farms and P-farms	Landscape conservation policy	None
Mainly L-farms, M-farms	Extensive grassland use (B1)	None
Mainly L-farms, M-farms	Extensive cultivation of permanent pasture (B2)	None
	Extensive cultivation steep grassland (B3)	None
	Extensive cultivation of species-rich grassland vegetation (B4)	None

	Orchard (C1)	None
Mainly L-farms, M-farms	Wine-growing district locations (C2)	None
Mainly L-farms, M-farms	Endangered breeds (C3)	None
Mainly L-farms, M-farms	Typical grazing area (C4)	None
All farms	Waiver of PSM and chemical-synthetic fertiliser (D1)	None
All farms	Organic Agriculture Introduction and retention (D2)	Meeting all the criteria for organic agriculture
A-farms, M-farms	Fallow vegetation (E3)	None
A-farms, M-farms	Herbicide waiver - agriculture (E5.1)	None
Mainly L-farms, M-farms	Extensive use of valuable habitats (G1.1)	None
Mainly L-farms, M-farms	Cutter bar section (G1.2)	None
Mainly L-farms, M-farms, but also some A-farms and P-farms	Landscape conservation policy measures with focus on biodiversity (grassland assigned)	None
ESTONIA		
Support for the maintenance of semi-natural habitats: • Livestock dominant: management of coastal meadows; management of wooded meadows, wooded pastures and others; management of Nordic alvars; management of floodplain meadows	This support is available for farmers (natural and legal persons, civil law partnerships and other associations of persons without the status of a legal person) and other land managers. Semi-narural habitats on Natura 2000 sites, available through the country. Exclusion: SNH outside Natura 2000 network. Land in the western 4 counties not declared in 2004 cannot be used to claim SAPS and gets no support unless in a Natura 2000 site and participating in the SNH scheme. Any land outwith these counties can only apply for SNH support – no support is available for non-Natura 2000 land, even if it is actively farmed; this land does not show up in any statistics. SNH land on which this payment is paid was made ineligible for receipt of any other CAP (including RDP) support	SNH must be mowed at least once before 1 October using the methods of from-centre-to-apart or from-edge-to-edge or must be grazed; vegetation chopping is allowed only with the permission of a relevant agency; additional feeding of animals is forbidden on the semi-natural habitat; the applicant must include in the map of the reference parcels the valuable landscape elements established additionally by the legislation. Those valuable elements of landscape must not be damaged or removed during the commitment period; participation in training on the maintenance of SNH
Environmentally friendly management scheme (EFM level 2): • Arable dominant: Arable land dominant organic farming. • Farming detached grassland areas: permanent and short-term grassland areas which are only mown. • Mixed farming: organic farming; low intensity conventional mixed farming. • Mosaic landscapes: animal husbandry/dairy farming in mosaic landscapes; arable land in mosaic landscapes; mixed farming in mosaic landscapes.	This support is available for farmers (sole proprietors and companies). Support available for arable land (incl short-term grasslands). Area which is under OF commitment cannot apply for EFM 2. Permanent grasslands and SNH excluded	Requirements cover both EFM1 and EFM2 levels. Preparation of annual environmentally friendly production plan for the whole arable land (certain crop rotation + 15% legumes requirement). In the time period from 1 November to 31 March, at least 30% of cultivated area must be under plant cover. In case of the fields bigger than 20 ha, at least 2 m wide strips (2-5m) covered with perennial flora must be left or established to field edges bordering on the road. Those strips must be mowed and should not be ploughed nor destroyed. The applicant must include in the map of the reference parcels the valuable landscape elements established additionally by the legislation. Those valuable elements of landscape must not be damaged or removed during the commitment period. Compulsory training
Support for organic production: • Livestock dominant: Grassland dominant organic	This support is available for farmers (sole proprietors and companies). The support payments for organic production are granted in 4 groups, considering the crop grown: 1) grasslands (except the grassland used as up to 2-year cover crop) at least 0,2 LU of	Preparation of annual organic production plan for the whole holding (certain crop rotation + 15% legumes requirement). In the time period from 1 November to 31 March, at least 30% of cultivated area must be under plant cover. In case of the

farming which is not SNH. • Arable dominant: Arable land dominant organic farming. • Mixed farming: Organic farming	organically kept animals are kept in an enterprise per hectare a year 2) arable crops; 3) vegetables, medicinal herbs and aromatic herbs, fruit crops and berries; 4) per organically kept animals. Permanent grassland areas which don´t have at least 0,2 LU/ha of organically kept animals excluded from grassland support	fields bigger than 20 ha, at least 2 m wide strips (2-5m) covered with perennial flora must be left or established to field edges bordering on the road. Those strips must be mowed and should not be ploughed nor destroyed. The applicant must include in the map of the reference parcels the valuable landscape elements established additionally by the legislation. Those valuable elements of landscape must not be damaged or removed during the commitment period. Compulsory training. Natural grassland must not be cultivated or fertilized
Support for keeping animals of local endangered breeds: • Livestock dominant: management of coastal meadows; management of wooded meadows, wooded pastures and others; management of Nordic alvars; management of floodplain meadows; Grassland dominant organic farming which is not SNH. • Mixed farming: Organic farming; low intensity conventional mixed farming. • Mosaic landscapes: animal husbandry/dairy farming in mosaic landscapes; mixed farming in mosaic landscapes.	Applicants can be natural and legal persons, civil law partnerships and other associations of persons without the status of a legal person	
GREECE		
Permanent crops dominant	Certain areas of Greece and for specific cultivations (Thira-grapevines, Amfissa-Olives), land size > 0.05 ha. Must be registered on LPIS and IACS	2-year environmental management plan
Livestock dominant	Organic stock farmers, the beneficiaries have at least 35-50% annual income from agriculture. Pig farmers, farmers that didn't have their own designated grazing land, and farmers that overgrazed their land are excluded.	5 year environmental management plan.
Arable dominant	Arable farmers located in two specific areas (Lake Koronia and Argolida) with a slope less than 6%. Farmers who receive funds for cultivating irrigated arable crops the previous years are not eligible.	5-year environmental management plan
Arable dominant, Permanent crops dominant	Must be organic agriculture farmers. Must have at least 35-50% annual income from agriculture. Abandoned lands semi-abandon land (eg where fruit collection is the only activity), frozen or burned lands, cultivation of energy crops for biofuels are excluded.	1) implement a 2-year environmental management plan, 2) no more than 1 following in the land which is no more than 50% of the total area; during this fallow, the fallow land receives no funds, 3) is in line with the requirements of the Cross Compliance
SPAIN		
See regional rows	See regional rows	See regional rows
SPAIN (ARAGÓN)		

There are 24 AE schemes plus several sub-measures. 14 schemes appear to be supportive of some aspect of HNVF although this is hard to determine without more research. There are schemes that directly support mountain livestock (pastures and meadows), and various schemes that support some HNV aspects of dryland arable, low-intensity rice cropping, traditional permanent crops. Mosaics of arable-grass-shrub pastures may also benefit from some schemes.	According to individual scheme criteria	All the schemes have specific farm level requirements
Mountain livestock, grass and shrub steppes (214 Maintenance of native breeds in danger of extinction)	Each 214 scheme has specific agri-environment requirements	Each 214 scheme has specific agri-environment requirements
Mountain livestock (214 Extensive horse grazing in Natura 2000)	Each 214 scheme has specific agri-environment requirements	Each 214 scheme has specific agri-environment requirements
Dryland arable (214 Maintenance of grazing on stubbles)	Each 214 scheme has specific agri-environment requirements	Each 214 scheme has specific agri-environment requirements
Dryland arable (214 Maintenance of stubbles)	Each 214 scheme has specific agri-environment requirements	Each 214 scheme has specific agri-environment requirements
Dryland arable (214 Cultivation of sainfoin to maintain steppe fauna)	Each 214 scheme has specific agri-environment requirements	Each 214 scheme has specific agri-environment requirements
Dryland arable (214 Organic agriculture dryland arable)	Each 214 scheme has specific agri-environment requirements	Each 214 scheme has specific agri-environment requirements
Low-intensity rice (214 Organic rice cropping)	Each 214 scheme has specific agri-environment requirements	Each 214 scheme has specific agri-environment requirements
Traditional permanent crops (214 Organic nuts and fruit dryland)	Each 214 scheme has specific agri-environment requirements	Each 214 scheme has specific agri-environment requirements
Traditional permanent crops (214 Organic olives)	Each 214 scheme has specific agri-environment requirements	Each 214 scheme has specific agri-environment requirements
Mountain livestock, grass and shrub steppes	Each 214 scheme has specific agri-environment requirements	Each 214 scheme has specific agri-environment requirements
Mountain livestock	Each 214 scheme has specific agri-environment requirements	Each 214 scheme has specific agri-environment requirements
FINLAND		
Farms that pasture their animals on semi-natural and permanent grasslands (214 agri-environment: management of traditional biotopes)	Available to wooded pastures that fall outside '50 trees/ha' definition of agricultural area. Typical Scandinavian wooded pastures would benefit from more support.	Management with grazing and/or mowing; no addition of nutrients (through feed)

Farms with semi-natural grasslands that are mown (214 agri-environment: management of traditional biotopes)	Available to wooded pastures that fall outside '50 trees/ha' definition of agricultural area. Typical Scandinavian wooded pastures would benefit from more support.	Management with mowing
Farms with particularly small field sizes relative to the field area (214 agri-environment: measures on managing buffer strips and forest-field ecotones)	Available to wooded pastures that fall outside '50 trees/ha' definition of agricultural area. Typical Scandinavian wooded pastures would benefit from more support.	Measures for establishment and management (mainly mowing) of ecotone habitats (buffer zones, forest/field edge)
Farms with particularly small field sizes relative to the field area (214 agri-environment: measure on establishing and managing buffer zones along water courses)	Available to wooded pastures that fall outside '50 trees/ha' definition of agricultural area. Typical Scandinavian wooded pastures would benefit from more support.	Measures for establishment and management (mainly mowing) of ecotone habitats (buffer zones, forest/field edge)
Farms with semi-natural grasslands that are mown or pastured (214 agri-environment: environmental fallow)	Available to wooded pastures that fall outside '50 trees/ha' definition of agricultural area. Typical Scandinavian wooded pastures would benefit from more support.	Measures for establishment and management (mainly mowing) of ecotone habitats (buffer zones, forest/field edge)
FRANCE		
Extensive dairy system wetlands; Low intensity permanent crop; Mixed beef/crop system	2007-2013 French AE stands on three folds: • PHAE, grassland premium (see following row) • (too) general payments for rotation, less input • targeted payments on N2000 areas and priority water catchments Only Natura 2000 payments can be considered of interest for extensive SNV management. Thus the main criteria are the designation under Natura 2000 and some sparse areas of biodiversity interest outside Natura 2000. All areas outside of designated areas are excluded.	Most requirements stand on extensive management (late mowing, maintenance of extensive practices)
Extensive beef system; Extensive dairy system wetlands (214 - PHAE II - grassland premium)	Eligibility criteria include a minimum share of grassland in the total UAA (50-75% depending on départements). Mixed beef/crop systems are excluded when they are below the eligibility threshold. Non grassland pastures and collective pastures are eligible.	Maintenance of PP and temporary grassland. Formal requirement of 20% of eligible area into 'biodiversity area' = SNV in fact. Max 1.4 LU/ha
HUNGARY		
	Horizontal level: arable lands, grasslands; In case of special nature protection aimed schemes (zonal level): arable lands, grasslands in designated HNVF.	
IRELAND		
All HNV Systems	Open access to all farms but limited to funding available. Exclusion only as a result of financial constraints in extending the schemes.	A farm plan is drawn up that details out an agreed programme of work
ITALY (ABRUZZO)		
Livestock dominant, mixed farming and permanent grassland (214b - Management of grassland)	At least 10 LU; 0.5 < LU/ha of forage < 1.5	The use of chemical inputs is not allowed; at least 90 days of grazing days
All farming systems are potentially included (214a - Organic farming)	–	Organic farming
All farming systems are potentially	–	Crops diversification; organic fertilisers, limits to the use of water

included (214c - Soil fertility)		
ITALY (AOSTA VALLEY)		
Livestock dominant, mixed farming and permanent grassland (214.1 - Forage cultivation)	Min 0.2 ha of permanent grassland/pasture; max 2.2 LU/ha of UAA if livestock is present	Limits to fertiliser and crop protection products application; reduction of livestock density (if higher than 2.2 LU/ha of forage)
Livestock dominant and permanent grassland (214.2 – Alpeggio)	0.1 < LU/ha of forage < 0.5 if livestock is present	Limits to fertilizer and crop protection products application; reduction of livestock density (if higher than 0.5 LU/ha of forage)
Permanent crops (214.3 - Vineyards and orchards)	Min 0.1 ha of vineyards or orchards	Limits to fertiliser and crop protection products application
Livestock dominant, mixed farming (214.4 - Conservation of animal biodiversity)	List of local and rare breeds; max 4 LU/ha of forage; min 1 LU of cattle or 0.6 LU of sheep/goat	Breeding of endangered animal species
All farming systems are potentially included (214.5 - Organic farming)	Max 2LU/ha of forage if livestock is present	Organic farming
ITALY (APULIA)		
All farming systems are potentially included (214c - Conservation of vegetal biodiversity)	List of local flora	Cultivation of endangered vegetal breeds (limits to chemicals)
Arable dominant and permanent crops (214a - Organic farming)		Organic farming
Arable dominant and permanent crops (214b - Soil quality)	Livestock dominant, permanent grassland and mixed farming are excluded	The soil should be amended with a suitable organic substrate (min Corg = 42 q; max N = 340 Kg in non NVZs and max 170 Kg in NVZs)
ITALY (BASILICATA)		
All farming systems are potentially included (214b - Conservation of vegetal biodiversity)		Cultivation of local vegetal species, limits to chemicals
Arable dominant and permanent crops (214c - Conservation and management of landscape elements)	Olive groves are excluded. Also permanent grassland, livestock dominant and mixed farming	Conservation/management of ecological corridors, buffer strips. Restriction to fertiliser and crop protection products application
Arable dominant and permanent crops (214d - Crops for wild animals)	Olive groves are excluded. Also permanent grassland, livestock dominant and mixed farming	Crops for wild animals with no chemicals
All farming systems are potentially included (214a - Organic farming)	LU/ha of forage < 2 and at least 5 ha of forages if livestock is present. Small farms for livestock dominant and mixed farming	Organic farming
ITALY (BOLZANO)		
Livestock dominant and mixed farming (214b - Conservation of animal biodiversity)	0.4 < LU/ha of forage < 2	Breeding of endangered animal species
Arable dominant (214c - Maintenance of traditional arable crops in mountain areas)	Cultivation of local cultivars of different cereals	
Permanent crops (214d -	Vineyards placed in a slope of at least 20%	Establishment of understory crops; limits to fertiliser and crop protection products

Traditional viticulture)		application
Livestock dominant (214f – Alpeggio)	LU/ha of forage < 0.4	At least 60 days of grazing activity during the year; only mowing for cleaning is allowed; the use of chemical input is not allowed
All farming systems are potentially included (214g - Landscape ad habitat conservation)		Conservation/management of buffer strips, hedgerows, peat bogs; mowing and cleaning of: rough grassland, wooded grassland, grassland rich of species placed in mountain areas, hay meadows. Restriction to fertiliser and plant protection products application
Livestock dominant and mixed farming (214a – Forages)	0.4 < LU/ha of forage < 2	The use of chemical input is not allowed; mowing and removing of grass are mandatory
All farming systems are potentially included (214e - Organic farming)		Organic farming
ITALY (CALABRIA)		
Livestock dominant and mixed farming (214b - Conservation of animal biodiversity)	At least 2 ha of UAA; 0.25 < LU/ha of forage < 2 if livestock is present. Small farms are excluded	Breeding of endangered animal species
All farming systems are potentially included (214c - Conservation and management of landscape elements)	At least 2 ha of UAA; 0.25 < LU/ha of forage < 2 if livestock is present. Small farms are excluded	Management/conservation of hedgerows, trees and shrubs and woody plants. Limits to chemicals
All farming systems are potentially included (214a- Organic farming)	At least 2 ha of UAA; 0.25 < LU/ha of forage < 2 if livestock is present. Small farms are excluded	Organic farming
ITALY (CAMPANIA)		
Livestock dominant (214b - Extensive grazing)		At least 180 days of grazing per year, and 0.5 < LU/ha < 1.86
Livestock dominant and mixed farming (214c - Endangered animal breeds)		Breeding of endangered animal species
Permanent crops (214d - Endangered vegetal species)	Exclusion: Arable dominant	Cultivation of endangered vegetal species (limits to chemicals)
Permanent crops (214e- Conservation of varieties of centenary vineyards)		Cultivation of old varieties of vineyards (limits to chemicals)
All farming systems are potentially included (214a - Organic farming)		
ITALY (EMILIA ROMAGNA)		
All farming systems are potentially included (214b - Conservation of (animal and vegetal) biodiversity)	List of local and rare flora and breeds	Cultivation and breeding of endangered species with limits to chemicals
Permanent grasslands (214b - Arable conversion into permanent grassland / maintenance of permanent grassland)		Seeding regimes (use of mix of forages seeds); LU/ha of forage < 1; limits to fertiliser and crop protection products application; at least one mown during the year
Arable dominant (214d -	Hilly and plain areas	Set aside, maintenance of agricultural landscape (e.g. humid areas, grasslands,

Environmental set-aside)		with restrictions to fertiliser and crop protection products application)
All farming systems are potentially included (214a - Organic farming)	At least 6 LU and LU/ha of forage > 0.8/1/1.5 (mountain/hilly/plain respectively) if livestock is present	
ITALY (FRIULI VENEZIA GIULIA)		
Permanent grassland, livestock dominant, mixed farming (214c - Maintenance of grasslands)	0.3 < LU/ha of forage < 1.4 if livestock is present	Mowing at least once a year; no chemicals. Additional reward for nesting findings
Livestock dominant and mixed farming (214d - Maintenance of pastures)	0.3 < LU/ha of forage < 1.4	At least 75 days of grazing activity per year; 70% of animal feedstuff must be from grazing land; yearly cleaning of non-native weeds and shrubs; no chemicals; additional payment for rotation of forages
Livestock dominant, mixed farming and permanent grassland (214e - Protection of animal biodiversity)	List of local and rare breeds	Breeding of endangered animal species
All farming systems are potentially included (214f - Protection of vegetal biodiversity)	List of local and rare flora	Cultivation of endangered vegetal breeds
Permanent crops (214g – Maintenance of traditional extensive fruit growing)	Min 0.15 ha of UAA. 20 < plants/ha < 300	Mowing at least once a year. Shrub cleaning; yearly pruning, no chemicals
All farming systems are potentially included (214h - Maintenance of natural habitats)		Conservation and management of landscape elements (hedgerows, water courses, buffer strips, etc.); crops for wild fauna; no chemicals
All farming systems are potentially included (214a - Organic farming)	Min 0.5 ha; min 2 LU if livestock is present	Organic farming
Arable dominant (214b - Sustainable arable and fruit growing)	Only arable crops in plain areas. Farms not located in the plan are excluded	Rotation plan and cover crops
Permanent crops (214b - Sustainable arable and fruit growing)		Limits to fertiliser and crop protection products application
ITALY (LAZIO)		
All farming systems are potentially included (214d - Conservation and management of landscape elements)	Farms with semi natural and natural features of the landscape	Maintenance of hedge, rows, stonewalls, water courses (limits to chemicals)
All farming systems are potentially included (214a - Organic farming)	Min 2 ha of UAA; 1 < LU/ha of forage < 2 and min 3 LU for livestock dominant. Small farms are excluded.	Organic farming
Arable dominant (214b - Soil Management)		Cover crops (for at least 6 months) or no-till; residuals of cover crops must be ploughed in
Permanent Crops (214b - Soil Management)	Min 1 ha of UAA	Understory crops; ban of chemicals against weeds
Livestock dominant, mixed farming and permanent grassland (214b - Soil Management)	0.5 < LU/ha of forage < 1.5; min 2 ha of UAA. Small farms are excluded.	Conversion of arable in to permanent grassland and pastures; no irrigation and chemicals

Arable dominant (214e - Crops for wild animals)	Min 0.5 ha of UAA	Crops for wild animals and ban of chemicals
Livestock dominant and mixed farming (214f - Protection of animal biodiversity)	List of local breeds	Breeding of endangered animal species
Arable dominant, permanent crops and mixed farming (214g - Protection of vegetal biodiversity)	List of local flora	Cultivation of endangered vegetal breeds (limits to chemicals)
ITALY (LIGURIA)		
Livestock dominant and mixed farming (214b - Protection of animal biodiversity)	List of local and rare breeds	Breeding of endangered animal species
All farming systems are potentially included 214c - Protection of vegetal biodiversity)		Cultivation of endangered vegetal breeds, with limits to fertiliser and plant protection products application
Livestock dominant, mixed farming and permanent grassland (214d - Permanent grassland and pastures)	Min 1 ha of UAA; 0.5 < LU/ha of forage < 2. Small farms are excluded	At least 90 days of grazing activity per year; mowing before the end of July; organic fertilisation
All farming systems are potentially included (214a - Organic farming)	For livestock dominant: min 5LU and max 1 LU/ha of forage	Organic farming
ITALY (LOMBARDY)		
All farming systems are potentially included (214b - Conservation and management of landscape elements)	Farms placed in the plain	Conservation and management of landscape elements eg hedgerows, trees, buffer and humid areas (limits to chemicals)
Arable dominant (214c - Environmental set-aside)	Farms placed in the plain	Set aside, maintenance of agricultural landscape (eg humid areas, grasslands, with restrictions to fertiliser and crop protection products application)
Arable dominant (214d - Conservation of rice fields' biodiversity)	Rice fields	Management of rice fields' edges, establishment of ponds, stubble management
Livestock dominant (214e - Conservation of grasslands' biodiversity)	Farmland placed in the mountains; 0.5 < LU/ha < 2; at least 1 ha of UAA in case of permanent grassland, at least 10 ha of UAA in case of pastures and meadows	For permanent grassland: 'Alpeggio', cutting regime and weeds control; limits to fertiliser and plant protection products application. For pastures and meadows: at least 50 days of 'Alpeggio', limits to fertiliser and plant production products application
Livestock dominant and mixed farming (214f - Conservation of animal biodiversity)		Breeding of endangered animal species
Livestock dominant and permanent grassland (214a - Organic farming)	Permanent grasslands placed in the mountains are excluded. Other farming systems and permanent grassland placed in the mountains	Organic farming
All farming systems are potentially included (214g - Soil quality)		Crop rotation and diversification; limits to fertiliser and crop protection products application; cutting regime
ITALY (MARCHE)		

Livestock dominant, mixed farming and permanent grassland (214c - Conservation of animal biodiversity)	List of local and rare breeds	Breeding of endangered animal species
All farming systems are potentially included (excluding livestock) (214d - Conservation of vegetal biodiversity)	List of local and rare species	Cultivation of endangered vegetal species (limits to chemicals)
Livestock dominant, mixed farming and permanent grassland (214e - Extensification of livestock systems)	0.3 < LU/Ha of UAA < 0.8; farmland in the mountain	At least 130 days of grazing days per year; organic fertilization and mechanical control of weeds
All farming systems are potentially included (214a - Organic farming)	Min 2 ha of UAA; 0.3 < LU/ha of forage < 2 if livestock is present. Small farms are excluded	Organic farming
All farming systems are potentially included (214b - Soil quality)		Organic fertilisation and green manure; underspotry crops in permanent crop systems
ITALY (MOLISE)		
All farming systems are potentially included (214b - Conservation and management of landscape elements)	Some actions are required in specific areas (NVZs, SCIs and SPAs). Farmland outside NVZs, SCIs and SPAs is excluded.	Management/conservation of ecological corridors, buffer strips; crop cultivation for wild animals. No chemicals
Arable dominant and permanent crops (214c - Soil quality)	Farmland placed in a slope of at least 20%. Farmland in no slope sites is excluded	Establishment of cover crops/understory crops, with cutting regime and limits to plant protection products and fertiliser application
All farming systems are potentially included (214d - Crops for wild animals)		Crops for wild animals, with no chemicals
All farming systems are potentially included (214a - Organic farming)		Organic farming
ITALY (PIEDMONT)		
All farming systems are potentially included (214c - Conservation and management of landscape elements)	Only farms in the plain and hilly areas. Exclusion: Farms in the mountain and marginal areas	Maintenance and management of landscape elements e.g. hedgerows, trees, buffer and humid areas (limits to chemicals)
Arable dominant (214d - Crops for wild animals)		crops for wild animals (no chemical inputs)
Livestock dominant and mixed farming (214e - Local and endangered animal breeds)	Only farms with cows/sheep/goats are included	Breeding of endangered animal species
Arable dominant (214f - Conservation of rice fields' biodiversity)	Rice fields	Management of rice fields' edges, establishment of ponds, stubble management, artificial nests
All farming systems are potentially included (214a - Organic farming)		Organic farming
Arable dominant (214b -		Conversion and limits to fertiliser and crop protection products protection

Conversion of arable crops into permanent grassland)		
ITALY (SARDINIA)		
All farming systems are potentially included (214c - Conservation of (animal and vegetal) biodiversity)	List of local and rare flora and breeds	Cultivation and breeding of endangered species with limits to chemicals
All farming systems are potentially included (214d - Little bustard (*Tetrax tetrax*) protection (linked to LIFE07 NAT/IT/000426))	permanent grasslands, improved grasslands, arable crops and fallows included (even partially) within Natura2000 sites	1) Permanent pastures: traditional grazing practices; 2) permanent and improved grassland: restricted management dates (forbidden within 1/3-30/9); cutting regime (from middle to field margins); 3) arable conversion into permanent grassland/pastures; cutting regime; restricted management dates (forbidden within 1/3-30/9); 4) legumes/fodder crops for wildlife; cutting regime and restricted management dates.
All farming systems are potentially included (mainly cropping and livestock systems) (214a - Organic farming)	0.2 < LU/ha of forage < 1.4 if livestock is present	Organic farming
Arable dominant (214b - Soil conservation)		In case of slope >30%: cereal conversion into permanent fodder crops (permanent grassland and pasture). Otherwise: rotation with legumes; tillage regime
ITALY (SICILY)		
Livestock dominant and mixed farming (214d - Local and rare breeds)	List of local and rare breeds	Breeding of endangered animal species
All farming systems are potentially included (214e - Custodian farmers for biodiversity conservation)	List of local and rare species	Cultivation of endangered vegetal species
Permanent crops (214f - Conservation/ management of landscape elements and maintenance of hydrogeological stability)	Olives, vineyards, citrus trees, orchards in terraced landscapes	Maintenance of landscape elements (terraces), understory crops
Permanent crops (214a - Sustainable farming)	Min 2 ha of UAA. Small farms are excluded	Limits to fertiliser and crop protection products application; establishment of understory crops and management of buffer strips
Arable dominant (214a - Sustainable farming)	Min 2 ha of UAA. Small farms are excluded	Specific tillage practices, green manure, no stubble burning, rotation and fertilisation plan, soil analysis, establishment of cover crops and management of buffer strips
All farming systems are potentially included (214b - Organic farming)	Min 2ha (1ha in minor islands); 0.5 < LU/ha of forage < 2 if livestock is present. Small farms are excluded	Organic farming
Arable dominant (214c - Soil quality)	Min 20 ha; only UAA of arable crops with at least 5% slope; areas at risk of desertification and areas at risk of soil erosion . Farms with less than 20 ha of UAA; farms not located in areas at risk of desertification or soil erosion	Specific tillage practices, green manure, no stubble burning, rotation and fertilisation plan, soil analysis
ITALY (TRENTO)		
Livestock dominant, mixed farming and permanent grassland (214b - Management of livestock and	0.5 < LU/ha of forage < 2.5 if livestock is present; at least 1 ha of UAA. Small farms are excluded	Management (cutting regime, limits of fertiliser and protection products application) of permanent grassland, meadows and summer pasture ("Alpeggio")

grassland)		
All farming systems are potentially included (214c - Landscape and habitat conservation (*Crex crex*))		Management of landscape elements; management regimes (especially restricted management and cutting dates)in areas characterised by the presence of *Crex crex*
Livestock dominant and mixed farming (214d - Conservation of animal biodiversity)	Limits of livestock density according to the different animal species	Breeding of endangered animal species
Arable dominant (214e - Conservation of vegetal biodiversity)	Cultivation of local cultivars of Zea mays	Cultivation of endangered animal breeds
All farming systems are potentially included (214f - Crops for wild animals)		Crops for wild animals
Arable dominant and permanent crops (214a - Organic farming)	Other farming systems are excluded	Organic farming
ITALY (TUSCANY)		
Arable dominant and permanent crops (214b - Conservation of landscape and environmental resources)	Only farmland in SCIs, SPAs and surroundings; farms without olive groves. Exclusion: Farms with olive groves, permanent grassland and livestock dominant; (other farmland not placed in protected ares or surrounding can access to 216 payments)	Maintenance of fedges, rows, buffer strips, small woods, ponds and wetlands. No chemicals; use of at least 4 differents native species for hedges, rows and small woods (limits to chemicals)
Permanent crops and arable dominant (214d - Cover/ understory crops in arable and permanent crop systems, where mean slope > 20%)	Only for permanent crops and arable with at least 20% slope. Farms with less than 20% slope are excluded.	Establishment of cover/understory crops, with limits to chemicals
Livestock dominant and mixed farming (214e - Conservation of animal biodiversity)	List of local and rare breeds	Breeding of endangered animal species
All farming systems are potentially included (214f - Conservation of vegetal biodiversity)	List of local and rare species	Cultivation of endangered vegetal breeds, with limits to fertiliser and plant protection products application
Arable dominant and permanent crops (214d - Crops for wild animals)	Exclusion: Olive groves are excluded. Also permanent grassland, livestock dominant and mixed farming	Crops for wild animals
All farming systems are potentially included (214a - Organic Farming)	Min 1 ha of UAA	Organic farming;
All farming systems are potentially included (214c - Soil quality and fertility)	farms with less than 2% of soil organic matter	Fertilization plan with only organic fertilizers, soil analisys, compost (2,5t/ha/year); max till = 30cm; residuals of cover crops must be ploughed in
ITALY (UMBRIA)		
All farming systems are potentially included (214b - Conservation and management of landscape elements)		Conservation/Management of landscape features (i.e. hedgerows, smal woods, buffer strips, trees); limits to chemicals

All farming systems are potentially included (214d - Crops for wild animals)	Only in protected areas; farm size: min 3 ha. Small farms and farmland outside protected areas are excluded	Crops for wild animals, with limits to chemicals
Arable dominant and permanent crops (214f - Conservation of vegetal biodiversity)		Cultivation of endangered vegetal species, limits to chemicals
Arable dominant (214g - Conversion of arable into pastures and meadows)	Farm size: min 3 ha. Small farms are excluded	Max 1 LU/ha of forage; use of local seeds of poliannual fodder crops; limits to chemicals
All farming systems are potentially included (214a - Organic farming)	Arable: min 3ha of UAA; permanent crops: min 1ha of UAA. Small farms are excluded	Organic farming
ITALY (VENETO)		
All farming systems are potentially included (214a - Conservation and management of landscape elements)	Mountain areas are excluded	Maintenance of tree stands (ie small woods), hedgerows and shrubs; limits to chemicals
Arable dominant and permanent grasslands (214c - Seminatural habitat and biodiversity conservation)		Limits to fertiliser and crop protection products application; time restrictions on mowing; sowing by using brush harvester or seed stripper, limits to chemicals
Livestock dominant and permanent grasslands (214d - Permanent grasslands and pastures maintenance)		Limits to fertiliser and crop protection products application; time restrictions on mowing; removing of shrubs mechanical or manual, but excluding the period within 15/3 and 15/8; turned displacement of grazing herds
All farming systems are potentially included (214f - Protection of biodiversity (animal and vegetal))	List of local and rare breeds	Breeding of local endangered breeds, limits to chemicals
All farming systems are potentially included (214b - Organic agriculture)		Organic farming
LATVIA		
Livestock dominant, Mixed farming (214/3-sub measure Maintenance of Biodiversity of Grasslands)	Available only for Biologically Valuable Grasslands* Exclude farmland which does not meet the rules of GAEC, including areas with more than 50 separately growing trees on 1ha, as well as areas where tree or shrub clumps covering more than 0.01 hectares. Exclude all silvo-pastoral systems, heathland, dune and fen habitats. Payment available only if applied area at least 1 ha, consisting of plots not smaller than 0.3 ha * Biologically Valuable Grasslands (BVG) are special term for Latvia's RDP sub measure Maintenance of Biodiversity of Grasslands (MBVG) under Agri-environment measure. BVG consists of grassland habitats as meant in habitats Directive and particularly important grasslands for birds, mainly in internationally Important Bird areas.	• Requirements: graze with 0.4 to 0.9 livestock units per 1 ha. Grazing intensity must be chosen within the permitted interval and according to grassland type, location, climate and other conditions to prevent grassland overgrazing; • mow within the period after August 1** until September 15, and the mowed grass shall be collected and removed from the field, or chopped***; • if mowing is done using machinery, it cannot damage soil surface. ** Mowing within the period after August 1 until September 15 in sub measure Maintenance of Biodiversity of Grasslands, This rule historically was made to protect birds from cutting but in recent years has become known that late moving threat natural vegetation of grassland habitats. For grasslands vegetation it is

		critical to allow traditional moving time. For several years NGOs asking Ministry of Agriculture to cancel overall rule of late moving and begin to work on specialized activities that depend on requirements of the certain natural value but there is no success. *** Sub measure Maintenance of Biodiversity of Grasslands allow grass chopping (chopped grass left on the field). Survey of farmers who participate in RDP submeasure MBVG shows that 40% of farmers don't use BVG for hay preparation or grazing, they work only for payments, chopping (crushing) the grass. This method historically was allowed in context that not every BVG is possible immediately to involve in to real farming, it was meant to be better alternative than expected afforestation. It is definitely not acceptable method for the long term, because effect of chopping to vegetation is the same as from excessive fertilization. There is currently no solution to get out of this situation.
Livestock dominant, Mixed farming, Arable dominant (214/3-sub measure Development of Organic Farming)	Available for grasslands and different crop lands if land and farm is certified as complying with rules of Organic farming. Exclude farmland which does not meet the rules of GAEC, including areas with more than 50 separately growing trees on 1ha, as well as areas where tree or shrub clumps covering more than 0.01 hectares. Exclude all silvo-pastoral systems, heathland, dune and fen habitats. Payment available only if applied area at least 1 ha, consisting of plots not smaller than 0.3 ha	A beneficiary is eligible to receive aid if: 1) performs agricultural activity by means of organic farming methods on eligible UAA at least 1 ha, consisting of plots not smaller than 0.3 ha; 2) cross compliance of Articles 4 and 5 and Annexes III and IV of Regulation (EC) No. 1782/2003, the minimum requirements for fertiliser and plant protection product use and other mandatory requirements specified in Annex 9 of the Programme are enforced on the whole territory of the agricultural holding; 3) undertakes voluntary agri-environmental commitments to manage the declared area in line with the aid eligibility criteria and to apply for the aid for five years from the first year of payment; 4) produces organic production in accordance with Council Regulation (EEC) No 2092/91 of 24 June 1991 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs and the requirements of the amendments thereof confirming by the authority accredited in Latvia issued certificate.
THE NETHERLANDS		
Livestock dominant (permanent grass), Type 1, 2 and 3	Only payable to land which is designated as 'search-area'. Farmland bird measures are often rewarded to groups of farmers (ie farms that have organised themselves in official collaboration bodies so-called 'collectieven').	Farmers can opt for different kind of management packages. Each package requires its own set of farm level actions. Eg: postponed mowing regime, inundation of parcels, restrictions on the use of agrochemicals.
Mixed landscape - livestock dominant, Type 2	Only payable to land which is designated as 'search-area'. Farmland bird measures are often rewarded to groups of farmers (ie farms that have organised themselves in official collaboration bodies so-called 'collectieven').	Farmers can opt for different kind of management packages. Each package requires its own set of farm level actions. Eg: maintenance of landscape elements
Arable dominant, Type 3	Only payable to land which is designated as 'search-area'. Farmland bird measures are often rewarded to groups of farmers (ie farms that have organised themselves in official collaboration bodies so-called 'collectieven').	Farmers can opt for different kind of management packages. Each package requires its own set of farm level actions. Eg: maintenance of parcel fringes with specific herbaceous mixture, specific crop rotation schemes for cereal growing
PORTUGAL		
Integrated territorial interventions (ITI) - maintenance of natural grassland with HNV: low-intensity semi-natural grazing (including montado, Type 1)	Only in Integrated territorial Intervention -ITI's: Peneda-Gerês, Montesinho-Nogueira, Douro Internacional, Sabor, Maçãs e Vale Côa, Serra da Estrela e Costa Sudoeste. Low-intensity semi-natural grazing (including montado) outside these areas is excluded.	Maintain eligibility criteria; Maintaining the agricultural area free of weeds shrub throughout the area declared and conducted in accordance with the best practices set out by ELA (local support structure); Keep trees, stone walls and other elements, pasture for sheets important to the landscape and even the hedges or woody shrub, species autochthonous between plots and the extreme, not treating

		with herbicides; Keep water spots accessible to wildlife; Keep tree and shrub vegetation along the water lines, without prejudice cleanings and adjustments necessary for proper drainage; Using only the herbicides advised or organic production; do not make fires.
Integrated territorial interventions (ITI) - maintenance of natural grassland with HNV: mosaic areas composed of agricultural and semi-natural area (Type 2)	Only in ITI's: Peneda-Gerês, Montesinho-Nogueira, Douro Internacional, Sabor, Maçãs e Vale Côa, Serra da Estrela e Costa Sudoeste. Mosaic areas composed of agricultural and semi-natural area outside these areas are excluded.	Maintain eligibility criteria; control of spontaneous woody vegetation dominated by shrubs with more than 50cm; pruning and cleaning of olive trees with a minimum frequency of three years; collect the olives annually, if production justifies; in same cases don't practice the soil tillage according to the contour lines, do not use a plough, or implement rotating disc harrow
Integrated territorial interventions: low-intensity semi-natural grazing (including montado, Type 1); low-intensity permanent crops (Type 1); Mosaic areas composed of agricultural and semi-natural area (Type 2); low-intensity non-irrigated arable crops (Type 1)	Farmers in ITI's areas: Peneda-Gerês, Montesinho-Nogueira, Douro Internacional, Sabor, Maçãs e Vale Côa, Serra da Estrela, Costa Sudoeste, Douro vinhateiro, Tejo Internacional, Serra de Aire e Candeeiros, Castro Verde, Monchique e Caldeirão. Low-intensity semi-natural grazing (including montado), low-intensity permanent crops, and Mosaic areas composed of agricultural and semi-natural area outside these areas are excluded.	None specific to HNV systems
Protection of domestic biodiversity: low-intensity semi-natural grazing (including montado, Type 1); Mosaic areas composed of agricultural and semi-natural area (Type 2)	Livestock with breeding females explored pure line or pure breeding males, enrolled in the studbook livestock or registration of indigenous breeds; stock density <2CH/ha forage surface. Low-intensity semi-natural grazing (including montado) and Mosaic areas composed of agricultural and semi-natural area with animals which aren't registered are excluded.	None specific to HNV systems
Conservation and breeding of genetic resources: Mosaic areas composed of agricultural and semi-natural area (Type 2); low-intensity semi-natural grazing (including montado, Type 1); low-intensity permanent crops (Type 1); low-intensity non-irrigated arable crops (Type 1)	Partnerships and singular or collective persons of private nature of knowledge in the field of exploration, collection, characterization and evaluation, conservation, multiplication and certification of propagating material for the conservation of plant genetic resources.	None specific to HNV systems
Changing modes of agricultural production: low-intensity semi-natural grazing (including montado, Type 1); low-intensity permanent crops (Type 1); Mosaic areas composed of agricultural and semi-natural area (Type 2); low-intensity non-irrigated arable crops (Type 1)	Singular person or collective people, public or private, engaged in agricultural activity; management of communal lands (Baldios). Should not exclude any farms or farmers that can benefit with this funding measure	None specific to HNV systems
Soil conservation: low-intensity semi-natural grazing (including	Singular person or collective people, public or private, engaged in agricultural activity; management of comunal lands (Baldios). Should not exclude any farms or farmers	None specific to HNV systems

montado, Type 1); low-intensity permanent crops (Type 1); Mosaic areas composed of agricultural and semi-natural area (Type 2); low-intensity non-irrigated arable crops (Type 1)	that can benefit with this funding measure.	
ROMANIA		
214/1HNV grasslands; and 214/2HNV grasslands non-mechanised (Types 1 and 2)	Any farmland in IACS in a designated grassland HNV area (Town Hall land-use records) must show more than 50% of the UAA in the commune registered as permanent grassland). Excluded from eligibility for any area payments if: holding under 1 ha (in parcels of over 0.3 ha). More than 25% of parcels have scrub or rocks. More than 50 trees per ha in parcel.	No artificial fertilisers. FYM under 30 kg N sa/ha. Meadows: must be mown at least one per year, mowing after 1 July. Pasture: grazing under 1 LU / ha. No ploughing, rolling, reseeding.
(214/3 Crex crex, Lanius minor and Falco vespertinus (Type 2)	Designated by Bird Life (SOR). Deliberately avoids overlap with measures 214/1 and /2. Excluded from eligibility for any area payments if: holding under 1 ha (in parcels of over 0.3 ha). More than 25% of parcels have scrub or rocks. More than 50 trees per ha in parcel.	No artificial fertilisers. FYM under 30 kg N sa/ha. Meadows: must be mown at least one per year, mowing after 1 July. Pasture: grazing under 1 LU / ha. No ploughing, rolling, reseeding.
214/6 Maculinea sp. (Type 2)	Any farmland in IACS in a designated grassland HNV area (Town Hall land use records must show more than 50% of the UAA in the commune is permanent grassland). Excluded from eligibility for any area payments if: holding under 1 ha (in parcels of over 0.3 ha). More than 25% of parcels have scrub or rocks. More than 50 trees per ha in parcel.	No artificial fertilisers. FYM under 30 kg N sa/ha. Meadows: must be mown at least one per year, mowing after 1 July. Pasture: grazing under 1 LU / ha. No ploughing, rolling, reseeding.
214/7 red-breasted goose in arable areas (Type 3)	Any farmland in IACS in a designated grassland HNV area (Town Hall land use records must show more than 50% of the UAA in the commune is permanent grassland). Excluded from eligibility for any area payments if: holding under 1 ha (in parcels of over 0.3 ha). More than 25% of parcels have scrub or rocks. More than 50 trees per ha in parcel.	No artificial fertilisers. FYM under 30 kg N sa/ha. Meadows: must be mown at least one per year, mowing after 1 July. Pasture: grazing under 1 LU / ha. No ploughing, rolling, reseeding.
214/4 arable green cover (Type 3)		Planting of the green cover crops should be done until the end of September. The following plants can be used as green cover crops: pea, vetch, rape, mustard, lupin, melilot; Only organic fertilizers may be used before the planting of the green crops. Use of chemical fertilisers is forbidden; vegetation should be incorporated into the soil until the end of March. Agricultural activity necessary for the following crop may start only after performing the action mentioned above; Ploughing the grassland within the farm is not permitted
214/5 Organic (Types 1, 2 and 3)	Organic or in organic conversion, but not for grassland (vines, orchards, arable are eligible). Excluded from eligibility for any area payments if: holding under 1 ha (in parcels of over 0.3 ha). More than 25% of parcels have scrub or rocks. More than 50 trees per ha in parcel.	
SLOVAKIA		
Type 1 Semi-natural grassland habitats (pastures and meadows)	Grasslands supported under AEM must be certified as semi-natural grasslands with biodiversity value (according to Grassland Inventory of Slovakia). Available for legal or private entities - registered farmers managing min 1ha of grasslands registered as agricultural land in LPIS. NGOs owning agricultural land mostly in protected areas (including Natura 2000 areas) are excluded from the support as they are not entities having agricultural business	Farmers have to apply habitat specific management. AEP defines agricultural practices for 7 categories of grassland habitats that farmers have to apply on the land.

SLOVENIA		
Humid grasslands and marshy land	Submeasure Preservation of bird habitats on humid extensive meadows in the Natura 2000 areas: geographically limited to the areas designated in the registry of Natura 2000. At least 1 mowing and hay collection per year – only after 1 August. On meadows larger than 1 ha, mowing must be done from the centre outwards. 0–1.9 LSU/ha. No grazing, no use of artificial fertilisers and no pesticides. Submeasure Preservation of grassland habitats of butterflies: location in selected Ecologically Important Areas. No mowing or grazing between 1 July and 20the August, but allowed before and after that. 0,2–1,9 LSU/ha. Compulsory pruning and thinning of woodland and hedges every 2nd year. No use of mineral fertilisers, no use of pesticides. Geographic limitation to bird habitats in Natura 2000 - participation is not possible in case of suitable habitats outside of Natura 2000 or geographic limitation to butterfly habitats registered in selected Ecologically Important Areas.	Cross-compliance; compliant with IACS; maximum LSU < 1.9; compliant with the eligibility criteria
Extensively managed grassland in lowlands; Sub-Mediterranean agricultural landscape; Extensively managed grassland in subalpine areas	Submeasure Preservation of extensive grasslands: 0–0.5 LSU/ha. At least 1 use (grazing or mowing) and hay collection per year. Mowing is done after full flowering of the key grass species, hay is made in the traditional way. No use of fertilisers and pesticides. Submeasure Preservation of extensive karstic pastures: location in selected cadastral units. Minimum size 1 ha, 0.2–1.9 LSU/ha. Use of artificial fertilisers containing nitrogen is not allowed. No use of pesticides. Obligatory clearance by grazing or manual thinning of shrubs. Necessary to prepare a plan of management of the pasture and grazing and to keep a grazing log. Grazing area has to be split up in grazing units, max. 90 normal grazing days (1 LSU/day) per grazing unit. In total, minimum 60 normal grazing days must be achieved. No overgrazing is allowed. Submeasure Preservation of special grassland habitats: location in selected Ecologically Important Areas. No use of soil, grazing or mowing before flowering of grass and the bird offspring is able to fly (before 15 July), but must be done after that. 0.2–1.9 LSU/ha. Compulsory pruning and thinning of woodland and hedges every 2nd year. No use of mineral fertilisers, no use of pesticides. Geographically limited to selected cadastral units or Ecologically Important Areas.	Cross-compliance; compliant with IACS; maximum LSU < 1.9; compliant with the eligibility criteria
Extensive/meadow orchards	Submeasure Meadow orchards: maintenance of grassland by mowing or grazing (also under the trees), registration on the Farm Registry, density 50 - 200 trees/ha, minimum size 0.05 ha, regenerational pruning in 1st or 2nd year of subsidy, pruning, maintenance and regeneration of orchards, max. 150 kg/ha of mineral fertilisers pa.	Cross-compliance; compliant with IACS; maximum LSU < 1.9; compliant with the eligibility criteria
Extensively managed grassland in lowlands; Extensively managed grassland in subalpine areas; Grasslands with trees, trees and shrubs; Humid grasslands and marshy land; Extensive/meadow orchards; Intensively managed grassland	Submeasure Sustainable breeding of domestic animals: Limitation to purchasing of meal (defined per type of animals) and compulsory evidence of purchase, at least 1 grazing or mowing per year, 0.5–1.9 LSU/ha, max. 170 kg of N from mineral fertilisers/ha per year.	Cross-compliance; compliant with IACS; maximum LSU < 1.9; compliant with the eligibility criteria
Sub-Mediterranean agricultural landscape	Submeasure Sustainable breeding of domestic animals: Limitation to purchasing of meal (defined per type of animals) and compulsory evidence of purchase, at least 1	Cross-compliance; compliant with IACS; maximum LSU < 1.9; compliant with the eligibility criteria

	grazing or mowing per year, 0.5–1.9 LSU/ha, max. 170 kg of N from mineral fertilisers/ha per year. Submeasure Preservation of crop rotation: All fields must be included, 5-year crop rotation must have at least 3 crops with max. 60 % of wheats, at least 1 year leguminous crops (or mixture of clover and grass) must be used, growth regulators not allowed for wheat, pesticides can be used on the basis of prognosis. Maximum 170 kg of N from mineral fertilisers/ha per year.	
Sub-Mediterranean agricultural landscape	Submeasures Integrated crop production, Integrated fruit production, Integrated wine production, Integrated horticulture:214-I/7: inclusion of all areas, limited use of fertilisers and pesticides, compulsory fertilising plan and 5-year crop rotation plan, compulsory soil analysis every 5 years, contol by certified organisation. Submeasure Organic farming: limited use of fertilisers and pesticides, no use of regulators, compulsory certification, use of organically produced seeds and plant material. no GMOs. 0,2-0,5 LSU/ha. Geographic limitation of organic beekeeping to designated areas.	Cross-compliance; compliant with IACS; maximum LSU < 1.9; compliant with the eligibility criteria
Grasslands with trees, trees and shrubs; Extensively managed grassland in subalpine areas; Extensively managed grassland in lowlands	Submeasure Breeding of domestic animals in central areas of appearance of large carnivores: Payment only for actually grazed areas, 0.5–1.9 LSU/ha, permanent presence of a shepherd for sheep and goats, use of removable protection nets and fences necessary whenever possible. Geographic limitation to the designated area of large carnivores	Cross-compliance; compliant with IACS; maximum LSU < 1.9; compliant with the eligibility criteria
Alpine pastures (dry open land with special vegetation)	Submeasure Mountain pastures: must be a traditional form of use of agricultural land in mountainous areas, must be a single geographic unit which can contain buildings and have water supply, has shorter vegetation season and diverse soil conditions and biodiversity. The grazing must be seasonal without daily returning to home farm, and must be carried out for at least 80 days on minimum 5 ha grassland. 0.5–1.9 LSU/ha. In case of shepherding, contract with the shepherd is necessary. Grazing Order necessary in case of shared use. Organic farming rules apply for use of fertilisers and pesticides. Manual clearing of shrubs and weeds after the season. Limited to traditional alps.	Cross-compliance; compliant with IACS; maximum LSU < 1.9; compliant with the eligibility criteria
Grasslands with trees, trees and shrubs	Submeasure Preservation of litter meadows: location in selected Ecologically Important Areas. No grazing or mowing before 25 August, obligatory grazing or mowing after that date. 0.2–1.9 LSU/ha. Compulsory pruning and thinning of woodland and hedges every 2nd year. No use of mineral fertilisers, no use of pesticides.	Cross-compliance; compliant with IACS; maximum LSU < 1.9; compliant with the eligibility criteria
SWEDEN		
Type 1	Different level of support and different eligibility rules apply depending on the level of biodiversity and cultural heritage values in each parcel. For the lower level support the same eligibility rules as for SPS apply. For the higher level support the number of trees as well as level of bushes and landscape features allowed is set individually according to environmental needs on each parcel. Individual bushes or landscape features can be a maximum of 0.1 ha big. Pastures that are not eligible for SPS are to some extent compensated with extra support under this scheme. In order to apply the more generous rules of higher level payments the farmer has to adopt additional farming practices compared to lower level support. Such as restrictions on when to graze or mow and what animals to use, prohibition of	All included land can be considered HNV-land since the support is only given to semi-natural pastures and meadows.

	supplementary feeding etc.	
Type 2	Requires a certain extent of landscape features, such as stonewalls, open ditches and cultural heritage sites. The feature has to be found on or adjacent to the farms arable land in order to enter the scheme. (Landscape features in semi-natural pastures and meadows are maintained within that specific support.) Possibly excludes farms with very few landscape features.	None specific to HNV systems
Type 2	"The ley cannot be ploughed for 3 years and has to be grazed or mowed every year. It is not allowed to use chemical plant protection products. No obvious exclusions.	None specific to HNV systems
Type 1	AE support coupled with non-productive investments for restoration of semi-natural pastures and meadows is granted for land that has high biodiversity or cultural heritage values coupled to agricultural maintenance, but have become overgrown. No obvious exclusions, but applications are chosen based on priorities of the region.	Restoration in accordance with a pre-approved plan.
UK (ENGLAND)		
All HNVF systems	A range of Entry Level (ELS) and Higher Level Stewardship (HLS) options are available across the country. ELS supports land management that goes beyond GAEC and is open to all farmers and landowners. Organic ELS is similar but only organic and organic/conventional mixed farming systems not receiving Organic Farming Scheme aid. Upland ELS open to all farmers with land in Severely Disadvantaged Areas, regardless of the size of the holding. HLS involves more complex types of management and agreements are tailored to local circumstances. HLS applications will be assessed against specific local targets and agreements will be offered where they meet these targets and represent good value for money. Theoretically all HNVF farm systems could be supported by this measure. Stewardship has over 80% uptake in England, though with a large proportion (over 80%) of agreements being for Entry Level options. Historically many HNVF areas (within and outwith LFA) would have been within an Environmentally Sensitive Area Scheme - the move to Stewardship has seen many HNVF farms needing to look to ELS (at lower payment rates) or HLS (with even more complex requirements). Farms are not excluded per se but many HNVF farms in particular may be discouraged by the rates on offer. In some parts of England, land that is HNVF falls outwith normal agricultural production categories and hence is not eligible for support.	Actions required by farmer will depend on type of agri-environment measure being implemented.
UK (NORTHERN IRELAND)		
All HNVF systems	Originally defined by an Environmentally Sensitive Area (ESA) which incorporated a high percentage of N Ireland's HNV farmland, more recently made countrywide (NICMS) but due to financial constraints it is now targeted specifically to areas containing Natura 2000 sites then areas with the ESA. Theoretically all HNVF farm systems could be supported by this measure, however the reduction of funding means that many HNVF systems cannot enter the scheme, particularly those outside Natura 2000 sites	Yes, each field is given a classification based on the type of vegetation, payment is then based farming the land to a specific set of prescriptions.
HNVF Systems with areas of Improved and semi-improved grassland - 214 Organic Aid Scheme	Support is only available to horticultural land, arable land, improved and semi-improved land	Yes registration and approval from a certified organic body
UK (SCOTLAND)		

All HNVF systems	Yes. Land Managers Options (LMO) and Rural Priorities (RP) schemes are available across the country. A wide range of measures are available though only those more relevant to biodiversity conservation are likely to benefit the HNV on HNVF farms. Exclusion: Theoritically all HNVF farm systems could be supported by this measure. However, the lack of any specific HNV focused measure means that many HNVF systems are unable to enter the schemes, especially outside protected areas.	Actions required by farmer will depend on type of agri-environment measure being implemented.
UK (WALES)		
All HNVF systems	Previous schemes (Tir Cymen - closed in 1998; Tir Gofal - opened in 1999; Tir Cynnal - entry level scheme opened in 2005) were all closed and replaced by once scheme Glastir in January 2012. The entry level element of the Glastir scheme is open to all farmers >3 hectares of land. This element provides a 'gateway' to access other Glastir elements. As with previous agri-environment schemes there is a points threshold and each applicant will have to meet or exceed the threshold to gain entry to the scheme. The number of points required will depend on the size of the farm, with a larger farm requiring more points. Theoretically all HNVF farm systems could be supported by these measures. However, the lack of any specific HNV focused measures and fact that uptake of previous schemes was low (though Welsh MTE unable to provide figures on how low as plethora of schemes and combinations of schemes make it difficult to disentangle) means that many HNVF farms unlikely to have benefited markedly from the schemes	Entry to all schemes including new dependent on achieving sufficient points - based on undertaking particular actions. GAEC and Cross Compliance. Farm level actions required depend on elements taken up.
Measure 216 Non-productive investments [5]		
GERMANY		
	None	
ESTONIA		
All support eligible HNVF systems partly involved	This support is available for farmers (natural and legal persons, civil law partnerships and other associations of persons without the status of a legal person) and other land managers. The support for the establishment or restoration of stonewalls can only be applied for in rural area, where stonewalls are traditional. The establishment or restoration of stonewalls on purely forest land is not eligible.	The suitable location, the materials to be used (what kind of stones and from where they will be taken) and the layout characteristic of the region will be approved by the National Heritage Board. It is forbidden to take stones from burial mounds, seashores, valuable landscape elements etc. The height of a stone wall must be at least 60 cm, depending on the region. It is not recommended to cultivate land, to use fertilisers or plant protection products within at least 1.5 m of the stone wall. The applicant must ensure the preservation of the stone wall for 5 years at least.
FINLAND		
Farms that pasture their animals on semi-natural and permanent grasslands	Available to wooded pastures that fall outside '50 trees/ha' definition of agricultural area. Typical Scandinavian wooded pastures would benefit from more support.	Restoration of semi-natural areas for consequent grazing/mowing.
Farms with semi-natural grasslands that are mown	Available to wooded pastures that fall outside '50 trees/ha' definition of agricultural area. Typical Scandinavian wooded pastures would benefit from more support.	Restoration of semi-natural areas for consequent grazing/mowing.

[5] Source: DE: BMELV 2011; EE: RDP and annual monitoring reports; FI: RDP and official budget; IT: APR; PT: National government: http://www.ifap.min-agricultura.pt/portal/page/portal/ifap_publico/GC_drural/GC_proder/GC_mzd_R.

ITALY (APULIA)		
All farming systems are potentially included		Establishment/recovery of stone walls, wetlands and buffer strips
ITALY (BASILICATA)		
All farming systems are potentially included		Establishment/recovery of landscape elements: hedgerows, trees, water courses, stone walls, terraces. Restriction to fertiliser and plant protection products application
ITALY (CAMPANIA)		
All farming systems are potentially included		Establishment/recovery of hedgerows, trees, terraces and sote walls (limits to chemicals)
All farming systems are potentially included	Natura 2000 areas. All Farmland not placed in Natura2000 areas is excluded	Establishment/recovery of buffer areas and humid areas (limits to chemicals)
ITALY (EMILIA ROMAGNA)		
Arable dominant	Hilly and plain areas; wetlands are eligible	Establishment/recovery of unfarmed features (limits to chemicals)
ITALY (FRIULI VENEZIA GIULIA)		
All farming systems are potentially included		Establishment/recovery of stonewalls and terraces, edges, rows, buffer strips, small woods, ponds and wetlands, natural grasslands
ITALY (LAZIO)		
All farming systems are potentially included	Natura 2000 areas. All Farmland not placed in Natura2000 areas is excluded	Establishment of ponds, small lakes, wetlands, buffer strips, stone walls (limits to chemicals)
ITALY (LIGURIA)		
All farming systems are potentially included		Establishment/recovery of stonewalls, hedge, rows; ponds and wetlands (limits to chemicals)
ITALY (LOMBARDY)		
All farming systems are potentially included		Establishment/recovery of landscape elements: hedgerows, trees, water courses, ponds
ITALY (MOLISE)		
All farming systems are potentially included		Establishment of hedgerows, trees, water courses, stone walls, terraces, buffer strips, humid areas (no chemicals)
ITALY (SICILY)		
All farming systems are potentially included		Establishment/recovery of buffer strips, and terraces
ITALY (VENETO)		
All farming systems are potentially included		Establishment of new green infrastructures (ecological corridors); recovery of features for wildlife shelter. Limits to chemicals; a connected action under measure 214 has to be undertaken
PORTUGAL		
Integrated territorial interventions (ITI) - maintenance of natural grassland with HNV: low-intensity semi-natural grazing (including montado) (Type 1)	Only in ITIs: Peneda-Gerês, Montesinho-Nogueira, Douro Internacional, Sabor, Maçãs e Vale Côa, Serra da Estrela e Costa Sudoeste. Low-intensity semi-natural grazing (including montado) outside these areas are excluded	Maintain eligibility criteria; Maintaining the agricultural area free of weeds shrub throughout the area declared and conducted in accordance with the best practices set out by ELA (local suppot structure); Keep trees, stone walls and other elements, pasture for sheets important to the landscape and even the hedges or woody shrub, species autochthonous between plots and the extreme, not treating with herbicides; Keep water spots accessible to wildlife;

		Keep tree and shrub vegetation along the water lines, without prejudice cleanings and adjustments necessary for proper drainage; Using only the herbicides advised or organic production; do not make fires
Integrated territorial interventions (ITI) - maintenance of natural grassland with HNV: Mosaic areas composed of agricultural and semi-natural area (Type 2)	Only in ITIs: Peneda-Gerês, Montesinho-Nogueira, Douro Internacional, Sabor, Maçãs e Vale Côa, Serra da Estrela e Costa Sudoeste. Mosaic areas composed of agricultural and semi-natural area outside these areas are excluded.	maintain eligibility criteria; control of spontaneous woody vegetation dominated by shrubs with more than 50cm; pruning and cleaning of olive trees with a minimum frequency of three years; collect the olives annually, if production justifies; in same cases don't practice the soil tillage according to the contour lines, do not use a plough, or implement rotating disc harrow
Integrated territorial interventions: low-intensity semi-natural grazing (including montado, Type 1); low-intensity permanent crops (Type 1); Mosaic areas composed of agricultural and semi-natural area (Type 2); low-intensity non-irrigated arable crops (Type 1)	Farmers in ITI areas: Peneda-Gerês, Montesinho-Nogueira, Douro Internacional, Sabor, Maçãs e Vale Côa, Serra da Estrela, Costa Sudoeste, Douro vinhateiro, Tejo Internacional, Serra de Aire e Candeeiros, Castro Verde, Monchique e Caldeirão. Low-intensity semi-natural grazing (including montado), low-intensity permanent crops, mosaic areas composed of agricultural and semi-natural area, low-intensity non-irrigated arable crops outside these areas are excluded.	None specific to HNV systems
SWEDEN		
Type 1	AE support coupled with non-productive investments for restoration of semi-natural pastures and meadows is granted for land that has high biodiversity or cultural heritage values coupled to agricultural maintenance, but have become overgrown. No obvious exclusions, but applications are chosen based on priorities of the region.	Restoration in accordance with a pre-approved plan.
Types 1 and 2	Support is given for several different actions that can benefit biodiversity, cultural heritage, water quality, climate etc. No obvious exclusions, but applications are chosen based on priorities of the region.	For example rebuilding old stonewalls, creating zones for birds on arable land, growing red-listed weeds.

Annex 6 Inventory of HNVF support under EAFRD Axis 1 and Axis 3 and (Pillar 1) Article 68 by Member State (2007-13 programming period)

Source: individual Member State case studies, unless otherwise stated.

1.1 Inventory of HNVF support under EAFRD - Axis 1[6]

HNVF systems[3]	Eligibility/ Exclusion criteria	Farm level requirements
Measure 111 Vocational training and information actions		
AUSTRIA		
Monitoring of rare plants and animals - extensively cultivated grassland in low areas	None	Observation of specific rare plant and animal species, documentation and declaration of the observations.
Monitoring of rare plants and animals - Semi-intensively cultivated meadows and pastures	None	Observation of specific rare plant and animal species, documentation and declaration of the observations.
Monitoring of rare plants and animals - traditional orchards	None	Observation of specific rare plant and animal species, documentation and declaration of the observations.
BELGIUM (FLANDERS)		
BULGARIA		
All types of HNVF systems described in Task 1 Table2	All beneficiaries of measure 214 and 141 have to undertake a training course in agri-environment	
ESTONIA		
All support eligible HNVF systems partly involved	Available to: • Agricultural produces; • Private forest holders; • Employees of agricultural, rural or forest holdings or of agricultural produce or forestry products processing plants; • Agricultural or rural produce or forestry products processing entrepreneurs; • Trainers, advisers or information specialists (in case of information activities only). Applicant may be a training institution, research institution or an educational institution (for the purposes of Section 2 of the Adult Education Act).	Support is granted for the development of in-service training system; acquisition and improvement of training materials; e-learning; acquisition of information technology and software for adult education

[6] Source: BG: RDP Annual Report for 2011; CY: Official figures and expert judgment; DE: BMELV 2011; IE: MTE; National government http://www.ifap.min-agricultura.pt/portal/page/portal/ifap_publico/GC_drural/GC_proder/GC_mzd_R; RO: RAPIP; UK: MTE (NI), http://www.crofting.org/uploads/news/srdpdiscussion.pdf (Sc).

HNVF systems[3]	Eligibility/ Exclusion criteria	Farm level requirements
	HUNGARY	
	Beneficiaries of the following measures are obliged to take part in the training courses: Modernisation of agricultural holdings, Adding value to agricultural and forestry products, Setting up of young farmers, Supporting semi-subsistence agricultural holdings undergoing restructuring, Agri-environment payments, Forest-environment payments. From the HNVF point of view, the measure has relevance because the training courses offer information on sustainable farming.	
	IRELAND	
All HNV Systems	Only available to farmers participating in an agri-environment scheme. Unlikely, farmers interested in vocational training are also likely to join an agri-environment scheme, though with present funding insufficient for the demand for agri-environment scheme some farmers may be no longer be able to take part.	No
	ROMANIA	
Types 1 and 2	Directed at semi-subsistence farmers (141) and young farmers (112). Extra points in selection for being in LFA, having low level of education, and receiving Axis 2 support. Holdings under 2 ESU are excluded. 45% 0f UAA is in holdings under 2 ESU.	Nothing beyond GAEC
	SWEDEN	
Types 1 and 2	Support given for on farm advice as well as courses and exchange of knowledge in other ways. No obvious exclusions, but applications are chosen based on priorities of the region.	No
Measure 112 Setting up of young farmers		
	CYPRUS	
Low-intensity cereals		
Cereals with olives/carobs		
Olive groves		
Almond groves		
Upland vineyards		
Farmland mosaics		
	ESTONIA	
-	Agricultural sole proprietors and private limited companies with natural person shareholders (starting agricultural production/already active).	-
	IRELAND	
All HNV Systems	Open to all eligible farmers. No exclusion criteria	No
	PORTUGAL	
Low-intensity semi-natural grazing (including montado) (Type 1)	Must be between 18 and 40 years old with professional competencies at the time of the first installation. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Low-intensity permanent crops (Type 1)	Must be between 18 and 40 years old with professional competencies at the time of the first installation. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Intensive production (Not yet addressed by the Portuguese	Must be between 18 and 40 years old with professional competencies at the time of the first installation. Should not exclude any farms or farmers that can benefit with	None specific to HNV systems

HNVF systems[3]	Eligibility/ Exclusion criteria	Farm level requirements
official authorities) (Type 3)	this funding measure.	
ROMANIA		
Types 1 and 2	Recipient must be younger than 40 years old, with high school/vocational training, and farm between 6-40 ESU. Any farm below 6 ESU will be excluded. This is a significant share as 45% 0f UAA are holdings below 2 ESU and 16% of UAA by holdings 2-8 ESU (350,000 holdings).	Nothing beyond GAEC
113 Early retirement		
IRELAND		
All HNV Systems	Open to all eligible farmers. No exclusion criteria.	No
Measure 114 - Use of advisory services		
ESTONIA		
All support eligible HNVF systems partly involved	Available to: • agricultural producer active in the territory of a village, a town or a small town, owning or using on legal basis at least 0,3 ha of profit yielding land; • private forest holder, owning or using on legal basis at least 0.3 ha of profit yielding land on the territory of a village, town or small town.	-
SWEDEN		
Types 1 and 2	Support given for on farm advice as well as courses and exchange of knowledge in other ways. No obvious exclusions, but applications are chosen based on priorities of the region.	No
Measure 121 Modernisation of agricultural holdings		
BELGIUM (FLANDERS)		
GERMANY		
Agricultural investment support (for livestock, arable, permanent crops, and mixed)	No	
ESTONIA		
All support eligible HNVF systems partly involved	-	-
IRELAND		
All HNV Systems	Open to all eligible farmers. No exclusion criteria.	No
PORTUGAL		
Low-intensity semi-natural grazing (including montado) (Type 1)	To be eligible can be either a singular person or collective people engaged in agricultural activities. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Low-intensity permanent crops (Type 1)	To be eligible can be either a singular person or collective people engaged in agricultural activities. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Mosaic areas composed of agricultural and semi-natural area (Type 2)	To be eligible can be either a singular person or collective people engaged in agricultural activities. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Intensive production (Not yet	To be eligible can be either a singular person or collective people engaged in	None specific to HNV systems

HNVF systems[3]	Eligibility/ Exclusion criteria	Farm level requirements
addressed by the Portuguese official authorities) (Type 3)	agricultural activities. Should not exclude any farms or farmers that can benefit with this funding measure.	
Low-intensity semi-natural grazing (including montado) (Type 1)	Must be between 18 and 40 years old with professional competencies at the time of the first installation. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Low-intensity permanent crops (Type 1)	Must be between 18 and 40 years old with professional competencies at the time of the first installation. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Intensive production (Not yet addressed by the Portuguese official authorities) (Type 3)	Must be between 18 and 40 years old with professional competencies at the time of the first installation. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
ROMANIA		
Types 1 and 2	50% co-funding required. Smaller farms will not be able to provide co-funding.	Nothing beyond GAEC
UK (NORTHERN IRELAND)		
All HNVF systems eligible to apply for this although limited availability	The scheme was originally weighted to those farmers operating in the Less Favoured Areas where it was deemed that the need for genuine modernisation was greatest. This weighting did not apply to recent Tranches. The exclusion, other than lack of financial resources to meet the demands of the scheme. (People queued overnight outside Government buildings to put in an application)	None specific to HNV systems
UK (SCOTLAND)		
Element concerned with Crofting Counties Agricultural Support Scheme (Livestock Dominant HNVF Systems within Crofting Counties)	Support is only for owners or tenants on registered crofts and only for specific business-improvement oriented eligible activities. Excludes HNVF farms not meeting criteria. Within crofting countries works on common grazings are eligible for support but unclear how easy this is to access in practice - as the committee needs to apply and be regarded as a business in order to do so. Uptake has declined in recent years because: all works proposals require competitive quotes; grant paid on actual costs only; reduction in grant rates; loss of replacement fencing grant; loss of rotational reseeding grant.	Need to continue in agricultural use, retain the assets concerned, take out relevant insurance for the works and comply with relevant standards. Works on protected areas carry additional conditions/constraints.
Measure 122 – Improvement of the economic value of forests		
PORTUGAL		
Low-intensity semi-natural grazing (including montado) (Type 1)	Only available to NGO farming and forestry. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Low-intensity permanent crops (Type 1)	Only available to NGO farming and forestry. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Mosaic areas composed of agricultural and semi-natural area (Type 2)	Only available to NGO farming and forestry. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Low-intensity non-irrigated arable crops (Type 1)	Only available to NGO farming and forestry. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Measure 123 Adding value to agricultural and forestry products		
CYPRUS		
Grazed scrublands/phrygana		

HNVF systems[3]	Eligibility/ Exclusion criteria	Farm level requirements
Grazed carob & olive groves		
Farmland Mosaics		
Low-intensity cereals		
Cereals with olives/carobs		
Olive groves		
Upland vineyards		
ESTONIA		
All support eligible HNVF systems partly involved	-	-
ROMANIA		
Types 1, 2 and 3	50% co-funding required. Smaller farms will not be able to provide co-funding.	Nothing beyond GAEC
Measure 124 Cooperation for development of new products, processes and technologies in the agriculture and food sector and in the forestry sector		
PORTUGAL		
Low-intensity semi-natural grazing: montado (Type 1)	Available to: small companies with less than 750 employees or a turnover of less than EUR 200 million engaged in the production, processing or marketing of agricultural products legal persons with public or private functions or activities in the areas of research and development; and, singular people carrying agricultural activity, silviculture or engaged in processing and marketing of agricultural or forestry associations and cooperatives sectors of agricultural, forestry and agro-food operating centres and technological agricultural or forestry. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Intensive producers (Type 3)	Available to: small companies with less than 750 employees or a turnover of less than EUR 200 million engaged in the production, processing or marketing of agricultural products legal persons with public or private functions or activities in the areas of research and development; and, singular people carrying agricultural activity, silviculture or engaged in processing and marketing of agricultural or forestry associations and cooperatives sectors of agricultural, forestry and agro-food operating centres and technological agricultural or forestry. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Measure 125 Infrastructure related to the development and adaptation of agriculture and forestry		
GERMANY		
Support for agriculture and forestry infrastructure (for livestock, arable, permanent crops, and mixed)	No	
PORTUGAL		
Development of irrigation - intensive production (Not yet addressed by the Portuguese official authorities) (Type 3)	Must be a group of agricultural entrepreneurs (more than 10). Must have more than 100 ha. Public administration bodies and public interest entities are eligible.	None specific to HNV systems
Modernisation of traditional and collective irrigation systems (low-intensity semi-	Must be a group of farmers, such as irrigation cooperatives or other legal persons, or alone or in partnership with public administration organisations. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems

HNVF systems[3]	Eligibility/ Exclusion criteria	Farm level requirements
natural grazing, including montado) (Type 1)		
Modernisation of traditional and collective irrigation systems (low-intensity permanent crops, Type 1)	Must be a group of farmers, such as irrigation cooperatives or other legal persons, or alone or in partnership with public administration organisations. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Modernisation of traditional and collective irrigation systems (Mosaic areas composed of agricultural and semi-natural area, Type 2)	Must be a group of farmers, such as irrigation cooperatives or other legal persons, or alone or in partnership with public administration organisations. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Modernisation of traditional and collective irrigation systems - intensive production (Not yet addressed by the Portuguese official authorities) (Type 3)	Must be a group of farmers, such as irrigation cooperatives or other legal persons, or alone or in partnership with public administration organisations. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
ROMANIA		
Types 1 and 2	Open only to organisations/federations of land owners which are registered in the National Register of organisations for land improvements, and Town Halls and their associations. As such, unless the Town halls or other organisations are sensitive to HNV farmers' requirements, the HNV farmers cannot take advantage of this measure.	Nothing beyond GAEC
Measure 126 Restoring agricultural production potential		
GERMANY		
Flood and coastal defence	No	
Measure 132 Participation of farmers in food quality schemes		
CYPRUS		
Low-intensity cereals (133 + 132)		
Cereals with olives/carobs (133 + 132)		
Olive groves (133 + 132)		
Almond groves (133 + 132)		
Upland vineyards (133 + 132)		
Farmland mosaics (133 + 132)		
PORTUGAL		
Low-intensity semi-natural grazing (including montado, Type 1)	Individuals or collective people engaged in agricultural activities are eligible. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Low-intensity permanent crops (Type 1)	Individuals or collective people engaged in agricultural activities are eligible. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems

HNVF systems[3]	Eligibility/ Exclusion criteria	Farm level requirements
Mosaic areas composed of agricultural and semi-natural area (Type 2)	Individuals or collective people engaged in agricultural activities are eligible. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Measure 133 Information and promotion of quality products		
CYPRUS		
Low-intensity cereals (133 + 132)		
Cereals with olives/carobs (133 + 132)		
Olive groves (133 + 132)		
Almond groves (133 + 132)		
Upland vineyards (133 + 132)		
Farmland mosaics (133 + 132)		
PORTUGAL		
Low-intensity semi-natural grazing (including montado, Type 1)	Groups of farmers (individual or in partnership) are eligible. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Low-intensity permanent crops (Type 1)	Groups of farmers (individual or in partnership) are eligible. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Mosaic areas composed of agricultural and semi-natural area (Type 2)	Groups of farmers (individual or in partnership) are eligible. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems
Measure 141 Semi-subsistence farming (transitional measure)		
BULGARIA		
Livestock dominant/ Subsistence, semi-subsistence and family farming/Mixed small holding with low intensity cropping	Semi-subsistence farmers with economic size 1 to 4 ESU (1,200 – 4,800 EURO of standard gross margin). All semi-subsistence farmers with ESU more than 4 ESU are not eligible for support.	No specific requirements targeted at HNV farming systems
ROMANIA		
Types 1 and 2	Holdings 2-8 ESU (350,000 holdings) are included. Must be at least 2 ESU which prevents many potential applicants from participating as 45% 0f UAA is in holdings under 2 ESU.	Nothing beyond GAEC
Measure 142 Producer groups (transitional measure)		
ROMANIA		
Types 1, 2 and 3	Producer groups must include at least 5 members. Must market at least 75% of its own output through the producers' group. Must prove by his accounting system a minimum value of the marketed production - for the product's group to be recognised, of minimum 10,000 Euro, RON equivalent. Smaller groups/potential groups with less than 5 members, less than 75% of product sold through the group, and less than 10,000 Euro sales through the group are excluded.	Nothing beyond GAEC
Measure 143 Providing farm advisory and extension services (transitional measure)		

HNVF systems[3]	Eligibility/ Exclusion criteria	Farm level requirements
BULGARIA		
All types of HNVF systems described in Task 1 Table2	All farmers applying for agri-environmental payments and semi-subsistence support	
ROMANIA		
Types 1 and 2	Those targeted are semi- subsistence farmers; young farmers and their setting up, farmers applying for measure 214; farmers (only natural persons) applying for measure 221; other farmers (commercial farms, members of producer groups or other associative forms), for the general advisory/extension services within the measure. There is a minimum 2 ESU which prevents many potential applicants from participating as 45% 0f UAA is in holdings are under 2 ESU.	Nothing beyond GAEC

1.2 Inventory of HNVF support under EAFRD - Axis 3[7]

HNVF systems	Eligibility and exclusion criteria	Farm level requirements
311 – Diversification into non-agricultural activities		
BELGIUM (FLANDERS)		
GERMANY		
Diversification (for livestock, arable, permanent crops, and mixed)	No	
ESTONIA		
All support eligible HNVF systems partly involved	Micro agricultural producers s who provide occupation to up to 10 persons and whose annual return on sales and/or balance sheet total does not exceed 2 million EUR In case of small projects, the annual sales revenue has to be more than 2400 EUR and in case of big projects, the annual sales revenue of the entrepreneur has to be more than 31 955,8 EUR	• In the provision of goods and services, the development of mobile solutions, and the implementation of information technology, incl. new technologies for bringing the producer and the consumer closer to each other; • Provision of services for rural enterprises and for rural population, incl. the development of multi-functional service centres, agricultural services; • Investments into bio-energy production in case the energy is predominantly marketed; • Creation and improvement of accommodation service in rural area, if the number of beds is not bigger than 30 (this restriction is not valid in case of holiday villages and camps).
PORTUGAL		
Low-intensity semi-natural grazing (including montado, Type 1)	Owners of an agricultural holding or members of their household are eligible. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems.
Low-intensity permanent crops (Type 1)	Owners of an agricultural holding or members of their household are eligible. Should not exclude any farms or	None specific to HNV systems.

[7] Source: DE: BMELV 2011; IT: APR; National government http://www.ifap.min-agricultura.pt/portal/page/portal/ifap_publico/GC_drural/GC_proder/GC_mzd_R; RO: RAPIP.

HNVF systems	Eligibility and exclusion criteria	Farm level requirements
	farmers that can benefit with this funding measure.	
Mosaic areas composed of agricultural and semi-natural area (Type 2)	Owners of an agricultural holding or members of their household are eligible. Should not exclude any farms or farmers that can benefit with this funding measure.	None specific to HNV systems.
Measure 312 Support for business creation and development		
ROMANIA		
Types 1, 2 and 3		Up to 70% funding for creating micro-enterprises, as well as developing the existing ones in the non-agricultural sector in rural areas. Encouraging the business initiatives that are promoted especially by the young people and women. Encouraging crafts and other traditional activities. Reducing the level of dependence on agriculture
Measure 313 Encouragement of tourism activities		
ROMANIA		
Types 1 and 2	Maximum 200,000 €/project. For non-profit public interest investments, 100% funding. 70% support for agro-tourism projects. 50% for other investments in rural tourism. Requirements for 30-50% co-finance will prohibit small farmers from taking advantage of the measure.	To increase and improve the small scale tourism accommodation facilities; To develop the information and promotion tourism centres; To create leisure facilities in order to ensure the access to the tourism natural areas
Measure 321 Basic services for the economy and rural population		
ESTONIA		
All support eligible HNVF systems partly involved		
Measure 322 Village renewal and development		
ESTONIA		
All support eligible HNVF systems partly involved		
ROMANIA		
Types 1, 2 and 3	Open only for local authorities, or NGOs who manage cultural heritage sites.	100%, up to 500,000 Euros, for cultural heritage NGOs. 1m Euros for Local Council. 3m Euros max for inter-community development association (several councils).
Measure 323 Conservation and upgrading of the rural heritage		
GERMANY		
Improving rural heritage (for livestock, arable, permanent crops, and mixed)	No	
GERMANY (BADEN WUERTTEMBERG)		
All farms		No
ESTONIA		
All support eligible HNVF systems partly involved		
ITALY (ABRUZZO)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage. Preparation of Natura2000 management plans
ITALY (AOSTA VALLEY)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage. Preparation of Natura2000 management plans
ITALY (APULIA)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage

HNVF systems	Eligibility and exclusion criteria	Farm level requirements
ITALY (BASILICATA)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage
ITALY (BOLZANO)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage. Preparation of Natura2000 management plans
ITALY (CALABRIA)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage
ITALY (CAMPANIA)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage
ITALY (EMILIA ROMAGNA)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage. Preparation of Natura2000 management plans
ITALY (FRIULI VENEZIA GIULIA)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage. Preparation of Natura2000 management plans
ITALY (LAZIO)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage. Preparation of Natura2000 management plans
ITALY (LIGURIA)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage. Preparation of Natura2000 management plans
ITALY (LOMBARDY)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage. Preparation of Natura2000 management plans
ITALY (MARCHE)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage. Preparation of Natura2000 management plans
ITALY (MOLISE)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage. Preparation of Natura2000 management plans
ITALY (PIEDMONT)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage. Preparation of Natura2000 management plans
ITALY (SARDINIA)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage. Preparation of Natura2000 management plans
ITALY (SICILY)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage
ITALY (TRENTO)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage. Preparation of Natura2000 management plans
ITALY (TUSCANY)		

HNVF systems	Eligibility and exclusion criteria	Farm level requirements
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage. Preparation of Natura2000 management plans
ITALY (UMBRIA)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage. Preparation of Natura2000 management plans
ITALY (VENETO)		
All farming systems are potentially included	–	Conservation and upgrading of the rural heritage. Preparation of Natura2000 management plans
PORTUGAL		
Low-intensity semi-natural grazing (including montado, Type 1)	Farmers in ITI's areas are eligible: Peneda-Gerês, Montesinho-Nogueira, Douro Internacional, Sabor, Maçãs e Vale Côa, Serra da Estrela, Costa Sudoeste, Douro vinhateiro, Tejo Internacional, Serra de Aire e Candeeiros, Castro Verde, Monchique e Caldeirão. Low-intensity semi-natural grazing (including montado) outside these areas are excluded.	None specific to HNV systems
Low-intensity permanent crops (Type 1)	Farmers in ITI's areas: Peneda-Gerês, Montesinho-Nogueira, Douro Internacional, Sabor, Maçãs e Vale Côa, Serra da Estrela, Costa Sudoeste, Douro vinhateiro, Tejo Internacional, Serra de Aire e Candeeiros, Castro Verde, Monchique e Caldeirão. Low-intensity permanent crops outside these areas are excluded.	None specific to HNV systems
Mosaic areas composed of agricultural and semi-natural area (Type 2)	Farmers in ITI's areas: Peneda-Gerês, Montesinho-Nogueira, Douro Internacional, Sabor, Maçãs e Vale Côa, Serra da Estrela, Costa Sudoeste, Douro vinhateiro, Tejo Internacional, Serra de Aire e Candeeiros, Castro Verde, Monchique e Caldeirão. Mosaic areas composed of agricultural and semi-natural area outside these areas are excluded.	None specific to HNV systems
Low-intensity non-irrigated arable crops (Type 1)	Farmers in ITI's areas: Peneda-Gerês, Montesinho-Nogueira, Douro Internacional, Sabor, Maçãs e Vale Côa, Serra da Estrela, Costa Sudoeste, Douro vinhateiro, Tejo Internacional, Serra de Aire e Candeeiros, Castro Verde, Monchique e Caldeirão. Low-intensity non-irrigated arable crops outside these areas are excluded.	None specific to HNV systems

1.3 Inventory of HNVF support under EAFRD - Article 68[8]

HNVF systems[3]	Eligibility/Exclusion criteria	Farm level requirements
Article 68		
SPAIN		
Aid for sheep/goats: Mountain livestock, Grass and shrub steppes, Mosaics of arable-grass-shrub pastures, Dehesa, Dryland arable	Some regions require farmers to be in a producers' association. Can exclude some farmers which are not in producer associations.	No
Aid for sheep/goats in quality schemes: Mountain livestock, Grass and shrub steppes, Mosaics of arable-grass-shrub pastures, Dehesa, Dryland arable	Only for farmers participating in approved quality schemes. Can exclude some farmers which are not in quality schemes.	depends on the quality scheme but normally the requirements are not relevant to HNVF
SPAIN (ARAGÓN)		
Aid for sheep/goats in LFA: Mountain livestock, Grass and shrub steppes, Mosaics of arable-grass-shrub pastures, Dehesa, Dryland arable	None	
Aid to compensate special disadvantages of suckler cow producers: Mountain livestock	Eligibility criteria: Max 1.5 LU/ha. No exclusion criteria which would apply to HNVF.	
FINLAND		
Farms that pasture their animals on semi-natural and permanent grasslands	One of the payments is support to farms with cattle (does not require grazing). Typical Scandinavian wooded pastures would benefit from more support.	No specific action
FRANCE		
Mountain milk premium: Extensive dairy system mountains	This premium is a top up payment for dairy farmers in high mountain, mountain and piémont (±hills) LFA areas. It is paid 20€/1000 litre up to 98,000 litres. No exclusions	No
Sheep/Goat premium: Extensive pastoral/grazing system sheep/goat	This premium is for every farmer having more than 25 goats or 50 ewes, with a minimal productivity of 0.7 lamb/ewe. No other requirement.	
IRELAND		
Species rich dry grasslands	Only for specific farms within the Burren area, Co Clare. Limited to a specific area of Ireland so unavailable to	Yes, The farmer is paid for the production of species rich grasslands and therefore carries out specific farm level actions to achieve this

[8] Source: ES: National government http://www.magrama.gob.es/es/ganaderia/temas/produccion-y-mercados-ganaderos/pagos-directos/regimen-de-pago-unico-y-otras-ayudas/default.aspx, El Periódico de Aragón 6/5/2013; FI: Official budget for 2013; IE: Burren farming for Conservation Programme staff; PT: National Government http://www.ifap.min-agricultura.pt/portal/page/portal/ifap_publico.

HNVF systems[3]	Eligibility/Exclusion criteria	Farm level requirements
	other areas of similar habitat outside of the Burren	
THE NETHERLANDS		
Livestock dominant (permanent grass), Types 1 and 2	Only available for those farmers that need a boat to reach their parcels.	No
PORTUGAL		
Low-intensity permanent crops: traditional olive groves (Type 1)	There are specified eligible counties for this support. Traditional olive groves must be equal to or greater than 0.3ha. Plot must be at least 30 years old. Tree density must at least 60 trees/ha and less than or equal to 240 trees/ha. Any olive grove which fails to meet these criteria is not eligible. Isolated trees are also excluded.	• control spontaneous woody vegetation dominated by shrubs greater than 50cm; • prune and clean olive trees at least once every three years; • collect the olives annually, if production justifies; • in same cases don't practice the soil tillage according to the contour lines, do not use a plough, or implement rotating disc harrow
Upkeep of agroforestry spaces without tree cover (extensive grazing with small ruminants, low-intensity semi-natural grazing, Type 1)	Refers to spaces agro forest without tree cover with use forage. There are specified eligible counties for this support. Minimum area of 1ha. Low-intensity semi-natural grazing outside of eligible counties or with less than 1ha will be excluded.	None specific to HNV systems
Upkeep of agroforestry spaces without planted (extensive grazing with small ruminants, mosaic areas composed of agricultural and semi-natural area, Type 2)	Refers to spaces agro forest without tree cover with use forage. There are specified eligible counties for this support. Minimum area of 1ha. Mosaic areas composed of agricultural and semi-natural area outside of eligible counties or with less than 1ha will be excluded.	None specific to HNV systems
Maintenance of agro-forestry-pastoral of *Quercus rotundifolia* and *Quercus pyrenaica* montado (low-intensity semi-natural grazing: montado, Type 1)	Minimum area of 1 ha with montado of *Quercus rotundifolia* (10% minimum coverage). HNV farms with montado of Quercus suber are exluded.	None specific to HNV systems
Support the maintenance of HNV irrigated pastures called '*Lameiros*' (low-intensity semi-natural grazing, Type 1)	The lameiros area must be equal to or greater than 0.3ha. Irrigated *lameiros* pastures below 0.3ha are excluded.	• stocking density greater than 0.15 LU/ha of forage surface and equal to or less than 2CN/ha of useful agricultural surface; • maintain grazing compatible with maintaining grazing forage capacity of the *lameiro*, preserving the floristic values; • do not carry out soil tillage (except in the presence of weeds and with the permission of the ministry of agriculture); • do not cut hay in upland marshes, unless for maintaining cultural landscape; • maintain well-functioning traditional irrigation systems and existing drainage

Annex 7 HNVF area estimates apportioned to ecosystem types for calculation of HNV maintenance and restoration costs

This Annex explains, for each Member State, how the estimated HNVF areas were apportioned to different ecosystem types for the purpose of calculating maintenance and restoration costs, as described in Section 9.2. The apportionment below is based on the interpretation of information on farming systems and land cover provided by Member State experts (this information is summarised in Annex 2).

Austria

The expert report estimates that alpine meadows and pastures cover 5-35% of HNV area, semi-intensively cultivated meadows and pastures cover 10%, traditional vineyards and orchards cover 2-5%, arable cropland covers 5-20% of HNV. Mosaic farming covers 25-60% of HNV. It is therefore assumed that the HNV area is 40% semi-natural grassland, 4% permanent crops, 16% arable. The remaining 40% of mixed farming is split into 5% arable and fodder crops, 20% improved grassland, 15% semi-natural grassland.

Belgium: Wallonia

HNV semi-natural grassland or heath-dominated farms make up 10% of HNV (assumed to consist of 8% grassland and 2% heath); whilst the other 90% of HNV consists of small patches on intensive farms. This is assumed to consist of: 60% semi-natural grassland, 15% improved grassland important for bird populations or other species, 10% arable incl. fodder crops interspersed with farmland features (hedges, trees, ponds) or otherwise important for species, and 5% grazed heath. The division of grazing habitats between heath and grassland was based on the relative areas of Annex I habitats reported under Article 17 (ETC/BD 2008).

Belgium: Flanders

The total area of HNV farmland is estimated to be 151,450 ha (1,350 ha in Natura 2000, 820 ha other protected grasslands, 94,000 ha type 3 HNV in mainstream farming, 55,280 ha type 2 small-scale mosaic mixed farming landscape). HNV semi-natural grassland and heath habitats make up 1.5% (split into 1% grassland and 0.5% heath). Improved grassland and arable with important bird populations or hamsters makes up 62% of HNV, and this is assumed to consist of 40% improved grassland and 22% arable. Mixed farming makes up 36.5%, consisting of degraded semi-natural grassland, field boundary features, ponds, small woodlands, and traditional orchards (assumed to be 30% degraded semi-natural grassland with farmland features, and 6.5% permanent crops).

Bulgaria

58% of HNV is livestock grazing systems with semi-natural pastures and meadows. Mixed farming covers 38% of the HNV area. This consists of mixed farms with low density grazing mainly on semi-natural grassland (including common land grazing and some improved grassland). In this area farms produce their own fodder from meadows and have some low intensity crops; many areas are considered officially to be family gardens. It is therefore

assumed that half of the mixed area is semi-natural grassland (24%), a quarter is permanent crops (7%) and a quarter is arable (7%). At least 2% of HNV is traditional orchards and nut plantations. Another 2% of HNV is identified as being intensively managed arable that is especially important for the feeding of breeding and migrating birds.

Cyprus

Arable is reported as 9.5% of HNV, permanent crops (including grazed groves) as 7.5%, and grazed scrub as 53%. The remaining 30% is farmland mosaics, and it is assumed that this consists of vineyards, almond and olive groves (10% permanent crops), small-scale low intensity arable with dry stone walls etc (10%) and grazed scrub (10%).

Czech Republic

The majority of the HNV area consists of upland semi-natural grassland (65-85%, assumed to be 74%). There are also quite large areas of semi-natural grassland on large farms that also manage intensive grassland (20-30%, assumed to be 24%), with a few patches of arable with nesting birds eg corncrake (assumed to be 0.5%). Small areas of grassland are important for nesting birds in lowland arable systems (assumed to be 1%). There is a small area of traditional orchards (assumed to be 0.5% permanent crops). Mosaic farming landscapes are very rare, as is HNV arable, and is not counted here. NB the current estimate of overall HNV area ONLY includes area of farmland (grasslands) within Natura 2000 sites - 247,000 ha.

Denmark

HNV consists of grazing on semi-natural grassland including grey dunes (assumed to be 75%), heath and dune scrub (assumed to be 20%) and bog (assumed to be 4%), plus 1% as semi-natural unfarmed features on arable farms. No complete expert report was available so this is based on the information in Opperman et al (2012) and the relative areas of Annex I habitats reported under Article 17 (ETC/BD 2008).

Estonia

The Estonian estimate only covers Type 1 HNV. It is estimated that 65% of HNV farmland is semi-natural grassland - coastal meadows (30%), alvars (10%), and other meadows (25%). 35% of HNV is wooded semi-natural pastures and meadows.

Finland

Over 90% of HNV is semi-natural grassland that is grazed and/or mown, including grazed forest and wooded pastures on an estimated 2% (NB these are not eligible for CAP support and so are not included in the UAA). Farms with very small parcel sizes occupy the remaining 10%, and this is estimated to consist mainly of small patches of semi-natural grassland in forest (5%), some wooded pasture (4%) and small patches of arable eg fodder crops (1%). Permanent crops are present only on small areas. NB the Finnish report does not separate HNV areas into type 1, 2 or 3, so here the estimates are listed as mainly as type 1.

France

The latest estimate of HNV (Teruti 2008) states that HNV consists of high altitude permanent grassland ("Alpages"), other low-productivity permanent grassland, heath / grassland with bushes or unused natural grassland, groves/copses on grassland, and hedges. It is assumed that only half the heath and natural grassland is used for agriculture. This therefore divides into: semi-natural/natural grassland consisting of “Alpages”, other permanent grassland, and hedges (“bocage”) (61%), wooded pasture consisting of copses on grassland (16%), and heath and shrubby grassland (23%).

Germany

The official HNV estimates report 44% grassland, 33% landscape elements, 11% arable, 6% fallow, 5% traditional orchards, and 1% other habitat types. For the purposes of the calculation it is assumed that the 33% landscape elements divide to grassland (20%), arable (10%), and permanent crops (3%). The 6% fallow is assigned to the arable area. The 1% other habitat is assumed to be grazed heath.

Greece

The HNV area consists of 10% low-input arable, 10% HNV permanent crops, and 55% livestock dominant systems (assumed to be 30% sclerophyllous scrub, 15% heath and 10% semi-natural grassland). The 20% of HNV mixed farming area is assumed to consist of 5% semi-natural grassland, 5% scrub grazing, 5% low-input arable and fodder cropping, and 5% permanent crops. 5% of HNV is not accounted for in the expert report, and this is assumed to also be small-scale scrubby grazing. The division of grazing habitats between scrub, heat and grassland was based on the relative areas of Annex I habitats reported under Article 17 (ETC/BD 2008).

Hungary

Type 1 semi-natural grasslands are reported on 30-35% of HNV (assumed to be 40%); wooded pastures on 1-3% (assumed to be 3%); arable-dominated small or large scale systems on 30%; and traditional permanent crops on 5%. Mixed mosaic farming systems known as tanya occupy 15-20% (assumed to be 22%); it is assumed that these are made up of semi-natural grassland (10%), arable and fodder crops (10%) and permanent crops (2%).

Ireland

HNV farmland consists of low-intensity grazing on permanent rough grazing land, either on-farm or as common land. Mixed landscapes consist of upland vegetation mixed with semi-natural grassland, or farms with semi-natural grassland transitioning to areas of improved grassland. It is therefore assumed that the HNV area is 80% heath, 14% semi-natural grassland, 5% blanket bog, and 1% improved grassland (NPWS 2008).

Italy

Extensive grazing systems on 74% of HNV are assumed to be 50% semi-natural grassland, 20% sclerophyllous scrub, 4% wooded pasture (on Sardinia, similar to Spanish dehesa). Arable-dominated HNV makes up 11% (including cereals, forage crops, rice, fallow).

Permanent crops make up 9%. Mixed farming makes up 6%, assumed to be 1% semi-natural grassland, 2% scrub, 2% cereals and forage cropping, and 1% permanent crops.

Latvia

It is assumed that the HNV area is 2% semi-natural grassland (including heath grazing and fen meadow), and 23% arable-dominated. Mixed/organic farms occupy 75% of HNV area, and it is assumed this consists of 50% semi-natural grassland, and 25% arable/fodder crops. Organic farming is relatively new in Latvia, and it still corresponds mainly to mixed low intensity farm units, therefore it is assumed that the farmland has more grass and fodder than arable. There is no data on mosaic HNV farmland or permanent crops, so these are not considered here. The area of wooded pasture/meadow and juniper scrub is only 460 ha and is therefore not considered here. (NB around 40% of farmers who receive payment for biologically valuable grassland just crush/mulch the grass in order to receive the payment, and do not integrate the grassland into the productive farming system).

Lithuania

It is assumed that 80% of HNV is semi-natural grassland, 10% is heath, fen or bog grazing, and 5% arable and 5% improved grassland areas are important for bird populations. No expert report was available so this is based on the information in Opperman et al (2012). The division of grazing habitats between scrub, heat and grassland was based on the relative areas of Annex I habitats reported under Article 17 (ETC/BD 2008).

Luxembourg & Malta

Luxembourg and Malta were not included in this analysis, due to lack of data on HNV. As they have less than 0.01% of the EU's UAA, this does not have much influence on the overall cost estimate.

Netherlands

One third of HNV consists of patches of semi-natural grassland and heath with extensive grazing (assumed to be 30% grassland and 4% heath, according to proportions of grassland and heath habitat reported by Netherlands under the Habitats Directive). Improved grassland important for wintering birds and some extensive arable with fallow occupies 47% and 3% of HNV area respectively. Mixed farming areas are on 16% of HNV, and it is assumed this is mainly semi-natural grassland (13%) and some arable and fodder cropping (3%).

Poland

It is assumed that 80% is semi-natural grassland (pasture and meadows), 8% is heath, fen or bog grazing, 2% is permanent crops, and 5% of arable and 5% of improved grassland are important for bird populations. No expert report was available so this is based on the information in Opperman et al (2012). The division of grazing habitats between scrub, heat and grassland was based on the relative areas of Annex I habitats reported under Article 17 (ETC/BD 2008).

Portugal

Extensive grazing takes up 78% of HNV, assumed to be 50% semi-natural grassland, 10% heath, 8% sclerophyllous scrub grazing (baldios), and 10% montado (wooded pasture). Low-intensity non-irrigated arable crops with a high proportion of fallow occupy 15% of HNV. Low-intensity permanent crops occupy 4% of HNV. Mosaic farming areas make up 3% of HNV, and it is assumed these consist of 1% semi-natural grassland, 1% permanent crops, 1% arable.

Romania

60% of HNV is extensive semi-natural grazing; 10% is traditional orchards; 10% is arable important for migrating birds. The 20% mixed farming is assumed to consist of meadows on 10% and arable on 10%.

Slovakia

The majority of HNV farmland is on semi-natural grasslands, relatively accurately mapped to 87% of HNV area. Permanent crops occupy 2% of HNV. The mosaic farming area is 10% of HNV. This is assumed to split into 3% semi-natural grassland, 2% improved grassland, 2% permanent crops (vineyards and orchards), 3% arable. This split is for the **lower** total estimated HNV area of 364,454 ha, which excludes potential HNV land (arable in Natura 2000 and abandoned grasslands). The higher estimate of 775,394 ha includes these areas, but there is no estimate for type 3 arable HNV. (Abandoned agricultural area is recorded as 237,000 ha, but there is insufficient information on its biodiversity value to be able to assume this is all HNV area). The 1% unaccounted for in the expert report is also assumed to be semi-natural grassland.

Slovenia

It is assumed that 90% of HNV is semi-natural grassland, 5% is arable, 5% is permanent crops. No expert report was available so this is based on the information in Opperman et al (2012).

Spain

Mountain and steppe livestock systems are combined to 42% of HNV; divided as semi-natural grazing on 40% of HNV, assumed to be grassland on 14%, heath grazing on 16% and sclerophyllous scrub grazing on 10% (1 of HNV (based on the proportions of grassland, heath and sclerophyllous scrub habitats reported by Spain under the Habitats Directive, see Concha et al 2013), and it is assumed that another 2% of improved grassland occurs within these areas. Dehesa (wooded pasture) occupies 20% of HNV. The HNV arable area includes extensive arable (16% of HNV) and rice (0.5% of HNV). Another 6% of HNV consists of permanent crops. Mixed farming areas take up 15.5% of HNV, with 0.5% as micro-scale mosaics of vegetables and orchards (assumed to be permanent crops) and 15% as mosaics of arable-grass-shrub pastures, and permanent crops (olives, vines); it is assumed that this is quarter grassland (4%), a quarter heath or scrub (2% and 2%), quarter arable (4%), and the rest permanent crops (3%). The division of grazing habitats between scrub, heat and grassland was based on the relative areas of Annex I habitats reported under Article 17 (ETC/BD 2008).

Sweden

Estimates are only available for livestock systems and grassland, which is assumed to be 75% semi-natural grassland or degraded (slightly improved) semi-natural grassland, 20% grazed heath, and 5% wooded meadows/pastures and grazed mountain pastures with trees in “fäbod” areas. No data is available for mixed farming, arable, or permanent crops. There is no HNV in the arable and permanent crop categories, and for the small area of mixed farming in southernmost Sweden, the permanent grassland and fallow land is counted in the overall grassland figure.

UK

At least 98% of HNV is grassland or rough grazing. It is assumed that this includes 30% heath grazing, 20% blanket bog (the UK NEA registers 2,832,000 ha of bog and fen, 1,623,000 ha bracken and heath, 1,692,481 ha semi-natural grassland, but it is assumed that not all of the bog and fen area is grazed (NEA 2011)). It is assumed here that there is also up to 0.5% arable spring cereals on HNV mixed farms and up to 0.5% improved grassland important for wintering bird populations.

Annex 8 Projected total EU additional costs (€) in 2020 of maintaining and restoring Type 1 HNVF within different ecosystems

Note. Due to missing data these cost estimates do not include HNVF areas for Malta and Luxembourg, but given their small area of farmland (>0.01% of EU UAA) this is unlikely to significantly affect these broad cost estimates.

Explanation of table contents and cost calculations

The estimated costs of maintaining and restoring Type 1 HNVF in each ecosystems are presented in the tables below. Here, by way of example we explain the calculation of maintaining and restoring semi-natural grasslands, according to in lowest estimate of HNV area, as set out in Table 1 and Table 2.

Table 1 establishes the additional costs of key measures that are expected to be needed to **maintain** the ecosystem and prevent degradation in the face of each on-going pressure in 2020 according to the reference scenario (ie taking into account expected changes in land use drivers, policy measures and funding etc). The table firstly indicates the expected **% area at risk** each year from each key pressure in 2020. As described in Chapter 9 of the main report this is based on an assessment in the Target 2 Costs Study of the baseline degradation rates from a review of current evidence extrapolated to 2020 through expert judgements taking into account expected changes in drivers and policy measures, including CAP reforms, and funding levels etc. At the time of the finalisation of the degradation projections in the Target 2 Costs Study the main greening elements of the reform proposals made by the Commission were adopted, but demands by Member States and the European Parliament for increased flexibility and a reduced Pillar 2 budget were expected to result in the reforms having limited overall beneficial impacts on HNVF land. From the subsequent agreements on CAP reform it is apparent that there will probably be greater declines in agri-environment funding for biodiversity than anticipated in the Target 2 Costs Study, in part due to the decline in Pillar 2 funding under the agreed MFF but also as a result of the option for Member States to transfer some funding from Pillar 2 to Pillar 1. However, overall the resulting differences between the assumptions adopted in the Target 2 Costs Study and the likely final CAP and MMF agreements are likely to be relatively small.

From the review of literature conducted for the Target 2 Costs Study it is clear that the greatest area of uncertainty concerns the estimations of the extent of each ecosystem that is degraded by each pressure. For this reason minimum and maximum estimates of these pressures are used in the calculations.

The table then identifies the most commonly used **Key Measures** (ie practical interventions) that address each key Pressure. The average **unit cost of each key measure** is based on an assessment of the typical costs of the measure. For semi-natural ecosystem types they are taken from the Target 2 Costs Study, which drew on the preceding rural land use costs study (Hart et al, 2011), but also the study's own compiled database of over 600 estimates of the costs of specific practical ecosystem maintenance and restoration measures.

The column labelled '**% area applied to'** indicates the proportion of the area at risk from the pressure that the measure needs to be applied to. For example, in the semi-natural costing below (Table 1), it is considered that mowing is not required in all areas at risk of abandonment, but on average over 25% of semi-natural grasslands. Also a variety of possible measures may be used to overcome some pressures, for example, threats from intensification may be countered through the maintenance of traditional mowing (rather than a switch to silage) and the protection and management of farmland habitat features. The optimal combination of these measures under typical circumstances is therefore estimated. These estimates are all taken from the Target 2 Costs Study, and are primarily based on expert assessments by the study team.

Finally the '**instrument**' column indicates if the costs of these measures need to be compensated for, and if the principal means of doing this is through agri-environment measures (indicated as AEM). In some cases the required measures, such as the protection of farmland habitat features, are broadly equivalent to GAEC cross-compliance requirements that the landowner must undertake to receive CAP payments, and therefore have no additional costs.

The total cost of the use of each key measure is then calculated by multiplying the annual area of the ecosystem that is expected to be at risk in 2020 from each key pressure by the current cost of each key measure needed to address it, and then multiplying the product by the percentage of the area under pressure over which the key measure is needed.

Thus, in Table 1, the rate of degradation from abandonment in semi-natural grasslands in 2020 according to the reference scenario is expected to be between 0.2% - 1.0% per year. This key pressure needs to be addressed through two measures, the maintenance of extensive grazing and the maintenance of traditional mowing. On average it is considered that the maintenance of grazing is required over 90% of the area at risk and mowing over 25%. Thus, taking the minimum abandonment pressure extent estimate of 0.2%, the cost of the grazing measure is the area of HNVF within the ecosystem, which is 27,139,702 ha (according to the low estimate) x 0.2% x 150 € x 90%, which is €7,327,720. As indicated in the 'instrument' column it is considered that the costs of these measures need to compensated for, and the principal means of doing this is through agri-environment measures (AEM).

The products of each line are then summed to provide the estimated total additional cost of maintaining the HNVF type in the ecosystem in the 2020. Thus the likely additional cost of **maintaining** ecological condition in semi-natural grassland HNVF areas, according to the **lowest** likely area of the HNVF type, is between €36 and 148 million per year,

Table 2 then calculates the cost of **restoring areas that are expected to be degraded in 2020 through the cumulative impacts of each key pressure** according to the reference scenario. The calculation is carried out in a similar way to that described above for maintenance costs, but it is firstly assumed that restoration is only required on **15%** of the degraded area. The calculation is then repeated in Table 3 according to the aim of restoring **100%** of the degraded area.

In each case the area to be restored also takes into account the area that is expected to be restored under the reference scenario (ie through existing policy measures and other drivers, such as declining air pollution loads). Most restoration actions are only likely to be required once up to 2020, so the costs are normally one-off costs. Because the restoration actions may be carried out any time between this study's baseline year of 2010 and 2020 the costs of one-off actions are divided by 10 to provide an average cost up to 2020.

The cost calculations for the other Type 1 HNVF ecosystems presented below are carried out in the same way, with the exception of sclerophyllous scrub. There were inadequate data for the latter ecosystem to quantify individual key pressure and to estimates the costs of specific key measures to deal with them. Therefore the estimates of maintenance and restoration costs for sclerophyllous scrub are based on overall degradation levels and the average costs of general maintenance measures and combined restoration measures.

Table 1: Projected additional costs (€) in 2020 of maintaining and restoring the lowest estimated area of HNVF within semi-natural grassland ecosystems on the basis of current costs of key maintenance and restoration measures and expected key pressure levels in 2020 - Annual ongoing maintenance needs in 2020

Key Pressure	% Area at risk in 2020		Key measure	Current annual	% area	Instrument	Annual costs in 2020	
	Min	Max		costs (€/ha/y)	applied to		Min	Max
Annual ongoing maintenance needs in 2020								
Abandonment and under management	0.200%	1.000%	Extensive grazing	150	90%	AEM	7,327,720	36,638,598
	0.200%	1.000%	Mowing	200	25%	AEM	2,713,970	13,569,851
Overgrazing	0.000%	0.000%				GAEC		
Grassland management intensification	0.500%	1.800%	Mowing	200	90%	AEM	24,425,732	87,932,636
	0.500%	1.800%	Farmland habitat feature protection		100%	GEAC	-	-
	0.500%	1.800%	Farmland habitat feature management	154	6%	AEM	1,253,854	4,513,875
Hydrological modification	0.100%	1.000%	Maintenance of hydrology	35	8%	AEM	75,991	759,912
Inappropriate burning and wildfires	?	?	Fire prevention and control					
Loss of habitat features	0.100%	2.000%	Farmland habitat feature protection		100%	GEAC	-	-
	0.100%	2.000%	Farmland habitat feature management	154	6%	AEM	250,771	5,015,417
MAINTENANCE TOTAL							*36,048,038*	*148,430,290*

Notes: All costs are gross costs in Euros and based on current values using cost estimates from as close to 2012 as possible. Costs are all additional to existing (baseline) measures and expected measures (ie the reference scenario) up to 2020. Costs and totals are rounded to three significant figures [to be done when finalised]. Duplicate costs are removed where “below” or” above” is indicated in the Instrument column. See section for details of the methods, excluded costs and limitations.

Total HNVF area in the ecosystem, based on **lowest estimate of HNVF** in each Member States, = 27,139,702 ha.

Table 2: Projected additional costs (€) in 2020 of maintaining and restoring the lowest estimated area of HNVF within semi-natural grassland ecosystems on the basis of current costs of key maintenance and restoration measures and expected key pressure levels in 2020 - Additional restoration needs to reverse current degradation

Key Pressure	% Area requiring restoration in 2020		Key measure	Sub measure	Current one-off	% area	Instrument	Average annual costs over 2010-2020	
	Min	Max			costs (€/ha)	applied to		Min	Max
Abandonment and under management	0.750%	8.750%	Restoration grazing		1,450	90%	AEM	26,562,984	309,901,478
	0.750%	8.750%	Restoration mowing		840	10%	AEM	1,709,801	19,947,681
	0.750%	8.750%	Scrub clearance		3,350	10%	AEM	6,818,850	79,553,253
Over-grazing	0.000%	0.000%					GAEC	-	-
Grassland management intensification	0.000%	0.000%	Reduce soil fertility		14,000	5%	AEM	-	-
	0.000%	0.000%	Reseeding		1,000	10%	AEM	-	-
Hydrological modification	0.750%	0.900%	Hydrological restoration		500	100%	AEM	10,177,388	12,212,866
Inappropriate burning and wildfires	?	?	Reseeding		1,000	1%	AEM	-	-
Loss of habitat features	3.000%	9.000%	Restoration of hedgerows etc		503		AEM	-	-
Restoration total								*45,269,024*	*421,615,278*
Total maintenance and restoration costs in 2020								**81,317,062**	**570,045,568**
Total maintenance and restoration costs over 2014 - 2020								**569,219,435**	**3,990,318,975**

Notes: All costs are gross costs in Euros and based on current values using cost estimates from as close to 2012 as possible. Costs are all additional to existing (baseline) measures and expected measures (ie the reference scenario) up to 2020. Costs and totals are rounded to three significant figures [to be done when finalised]. Duplicate costs are removed where "below" or" above" is indicated in the Instrument column. See section for details of the methods, excluded costs and limitations.

Total HNVF area in the ecosystem, based on **lowest estimate of HNVF** in each Member States, = 27,139,702 ha.

Table 3: Projected additional costs (€) in 2020 of maintaining and restoring the highest estimated area of HNVF within semi-natural grassland ecosystems on the basis of current costs of key maintenance and restoration measures and expected key pressure levels in 2020 - Annual ongoing maintenance needs in 2020

Key Pressure	% Area at risk in 2020		Key measure	Current annual	% area	Instrument	Annual costs in 2020	
	Min	Max		costs (€/ha/y)	applied to		Min	Max
ANNUAL ONGOING MAINTENANCE NEEDS IN 2020								
Abandonment and under management	0.200%	1.000%	Extensive grazing	150	90%	AEM	9,520,771	47,603,855
	0.200%	1.000%	Mowing	200	25%	AEM	3,526,212	17,631,058
Overgrazing	0.000%	0.000%				GAEC		
Grassland management intensification	0.500%	1.800%	Mowing	200	90%	AEM	31,735,904	114,249,253
	0.500%	1.800%	Farmland habitat feature protection		100%	GEAC	-	-
	0.500%	1.800%	Farmland habitat feature management	154	6%	AEM	1,629,110	5,864,795
Hydrological modification	0.100%	1.000%	Maintenance of hydrology	35	8%	AEM	98,734	987,339
Inappropriate burning and wildfires	?	?	Fire prevention and control					
Loss of habitat features	0.100%	2.000%	Farmland habitat feature protection		100%	GEAC	-	-
	0.100%	2.000%	Farmland habitat feature management	154	6%	AEM	325,822	6,516,439
Maintenance total							*46,836,552*	*192,852,739*

Notes: All costs are gross costs in Euros and based on current values using cost estimates from as close to 2012 as possible. Costs are all additional to existing (baseline) measures and expected measures (ie the reference scenario) up to 2020. Costs and totals are rounded to three significant figures. Duplicate costs are removed where "below" or" above" is indicated in the Instrument column. See section for details of the methods, excluded costs and limitations.

Total HNVF area in the ecosystem, based on **highest estimate of HNVF** in each Member States, = 35,262,115 ha.

Table 4: Projected additional costs (€) in 2020 of maintaining and restoring the highest estimated area of HNVF within semi-natural grassland ecosystems on the basis of current costs of key maintenance and restoration measures and expected key pressure levels in 2020 - Additional restoration needs to reverse current degradation

Key Pressure	% Area requiring restoration in 2020		Key measure	Current one-off	% area	Instrument	Average annual costs over 2010-2020	
	Min	Max		costs (€/ha)	applied to		Min	Max
Abandonment and under management	0.750%	8.750%	Restoration grazing	1,450	90%	AEM	34,512,795	402,649,278
	0.750%	8.750%	Restoration mowing	840	10%	AEM	2,221,513	25,917,655
	0.750%	8.750%	Scrub clearance	3,350	10%	AEM	8,859,606	103,362,075
Over-grazing	0.000%	0.000%				GAEC	-	-
Grassland management intensification	0.000%	0.000%	Reduce soil fertility	14,000	5%	AEM	-	-
	0.000%	0.000%	Reseeding	1,000	10%	AEM	-	-
Hydrological modification	0.750%	0.900%	Hydrological restoration	500	100%	AEM	13,223,293	15,867,952
Inappropriate burning and wildfires	?	?	Reseeding	1,000	1%	AEM	-	-
Loss of habitat features	3.000%	9.000%	Restoration of hedgerows etc	503		AEM	-	-
Restoration total							*58,817,208*	*547,796,959*
Total maintenance and restoration costs in 2020							**105,653,760**	**740,649,699**
Total maintenance and restoration costs over 2014 -2020							**739,576,320**	**5,184,547,891**

Notes: All costs are gross costs in Euros and based on current values using cost estimates from as close to 2012 as possible. Costs are all additional to existing (baseline) measures and expected measures (ie the reference scenario) up to 2020. Costs and totals are rounded to three significant figures. Duplicate costs are removed where "below" or" above" is indicated in the Instrument column. See section for details of the methods, excluded costs and limitations.

Total HNVF area in the ecosystem, based on **highest estimate of HNVF** in each Member States, = 35,262,115 ha.

Table 5: Projected additional costs (€) in 2020 of maintaining and restoring the lowest estimated area of HNVF within heathland and tundra ecosystems on the basis of current costs of key maintenance and restoration measures and expected key pressure levels in 2020 - Annual ongoing maintenance needs in 2020

Key Pressure	% Area at risk in 2020		Key mitigation measure	Current annual	% area	Instrument	Annual costs (€) in 2020	
	Min %/y	Max %/y		costs (€/ha/y)	applied to		Min	Max
Agricultural abandonment and under-grazing	0.100%	1.200%	Low intensity grazing	116	100%	AEM	1,031,033	12,372,400
	0.100%	1.200%	Rotational burning	5	10%	AEM	4,444	53,329
	0.100%	1.200%	Mowing	248	10%	AEM	220,428	2,645,134
	0.100%	1.200%	Scrub cutting	100	10%	AEM	88,882	1,066,586
Over-grazing	0.000%	0.000%	Grazing regulation			GAEC	-	-
Inappropriate burning and wild fires	?	?	Burning management plans			GAEC	-	-
	10.0%	10.0%	Fire prevention & control	1	100%	AEM	888,822	888,822
Drainage and low water tables	0.060%	0.120%	Regulation			Other	-	-
Maintenance total							*2,233,609*	*17,026,271*

Notes: All costs are gross costs in Euros and based on current values using cost estimates from as close to 2012 as possible. Costs are all additional to existing (baseline) measures and expected measures (ie the reference scenario) up to 2020. Costs and totals are rounded to three significant figures [to be done when finalised]. Duplicate costs are removed where “below” or” above” is indicated in the Instrument column. See section for details of the methods, excluded costs and limitations.

Total HNVF area in the ecosystem, based on **lowest estimate of HNVF** in each Member States, = 8,888,219 ha.

Table 6: Projected additional costs (€) in 2020 of maintaining and restoring the lowest estimated area of HNVF within heathland and tundra ecosystems on the basis of current costs of key maintenance and restoration measures and expected key pressure levels in 2020 - Additional restoration needs to reverse current degradation

Key Pressure	% requiring restoration in 2020		Key measure	Sub measure	Current one-off costs (€/ha)	% area applied to	Instrument	Average annual costs (€) over 2010-2020	
	Min	Max						Min	Max
Agricultural abandonment and under-grazing	1.450%	15.500%	Tree and invasive species removal		100	5%	AEM	64,440	688,837
Over-grazing	0.000%	0.000%	Vegetation re-establishment		75	2%	AEM	-	-
Inappropriate burning and wild fires	0.300%	1.500%	Vegetation re-establishment		75	5%	AEM	9,999	49,996
	0.300%	1.500%	Tree and invasive species removal		100	5%	AEM	13,332	66,662
Drainage and low water table levels	0.075%	0.750%	Hydrological restoration	Drain blocking	169	95%	AEM	107,025	1,070,253
	0.075%	0.750%		Turf stripping	71	5%	AEM	2,366	23,665
Restoration total								*197,163*	*1,899,412*
Total maintenance and restoration costs in 2020								**2,430,772**	**18,925,684**
Total maintenance and restoration costs over 2014 -2020								**17,015,406**	**132,479,786**

Notes: All costs are gross costs in Euros and based on current values using cost estimates from as close to 2012 as possible. Costs are all additional to existing (baseline) measures and expected measures (ie the reference scenario) up to 2020. Costs and totals are rounded to three significant figures [to be done when finalised]. Duplicate costs are removed where "below" or" above" is indicated in the Instrument column. See section for details of the methods, excluded costs and limitations.

Total HNVF area in the ecosystem, based on **lowest estimate of HNVF** in each Member States, = 8,888,219 ha.

Table 7: Projected additional costs (€) in 2020 of maintaining and restoring the highest estimated area of HNVF within heathland and tundra ecosystems on the basis of current costs of key maintenance and restoration measures and expected key pressure levels in 2020 - Annual ongoing maintenance needs in 2020

Key Pressure	% Area at risk in 2020		Key mitigation measure	Current annual	% area	Instrument	Annual costs (€) in 2020	
	Min %/y	Max %/y		costs (€/ha/y)	applied to		Min	Max
Agricultural abandonment and under-grazing	0.100%	1.200%	Low intensity grazing	116	100%	AEM	1,262,621	15,151,456
	0.100%	1.200%	Rotational burning	5	10%	AEM	5,442	65,308
	0.100%	1.200%	Mowing	248	10%	AEM	269,940	3,239,277
	0.100%	1.200%	Scrub cutting	100	10%	AEM	108,847	1,306,160
Over-grazing	0.000%	0.000%	Grazing regulation			GAEC	-	-
Inappropriate burning and wild fires	?	?	Burning management plans			GAEC	-	-
	10.0%	10.0%	Fire prevention & control	1	100%	AEM	1,088,467	1,088,467
Drainage and low water tables	0.060%	0.120%	Regulation			Other	-	-
Maintenance total							*2,735,317*	*20,850,667*

Notes: All costs are gross costs in Euros and based on current values using cost estimates from as close to 2012 as possible. Costs are all additional to existing (baseline) measures and expected measures (ie the reference scenario) up to 2020. Costs and totals are rounded to three significant figures. Duplicate costs are removed where "below" or" above" is indicated in the Instrument column. See section for details of the methods, excluded costs and limitations.

Total HNVF area in the ecosystem, based on **highest estimate of HNVF** in each Member States, = 10,884,666 ha.

Table 8: Projected additional costs (€) in 2020 of maintaining and restoring the highest estimated area of HNVF within heathland and tundra ecosystems on the basis of current costs of key maintenance and restoration measures and expected key pressure levels in 2020 - Additional restoration needs to reverse current degradation

Key Pressure	% requiring restoration in 2020		Key measure	Sub measure	Current one-off costs (€/ha)	% area applied to	Instrument	Average annual costs (€) over 2010-2020	
	Min	Max						Min	Max
Agricultural abandonment and under-grazing	1.450%	15.500%	Tree and invasive species removal		100	5%	AEM	78,914	843,562
Over-grazing	0.000%	0.000%	Vegetation re-establishment		75	2%	AEM	-	-
Inappropriate burning and wild fires	0.300%	1.500%	Vegetation re-establishment		75	5%	AEM	12,245	61,226
	0.300%	1.500%	Tree and invasive species removal		100	5%	AEM	16,327	81,635
Drainage and low water table levels	0.075%	0.750%	Hydrological restoration	Drain blocking	169	95%	AEM	131,065	1,310,650
	0.075%	0.750%		Turf stripping	71	5%	AEM	2,898	28,980
								-	-
Restoration total								*241,449*	*2,326,053*
Total maintenance and restoration costs in 2020								**2,976,766**	**23,176,720**
Total maintenance and restoration costs over 2014 -2020								**20,837,360**	**162,237,041**

Notes: All costs are gross costs in Euros and based on current values using cost estimates from as close to 2012 as possible. Costs are all additional to existing (baseline) measures and expected measures (ie the reference scenario) up to 2020. Costs and totals are rounded to three significant figures. Duplicate costs are removed where "below" or" above" is indicated in the Instrument column. See section for details of the methods, excluded costs and limitations.

Total HNVF area in the ecosystem, based on **highest estimate of HNVF** in each Member States, = 10,884,666 ha.

Table 9: Projected additional costs (€) in 2020 of maintaining and restoring the lowest estimated area of HNVF within Sclerophyllous scrub ecosystems on the basis of current costs of combined maintenance and restoration measures and expected general degradation levels in 2020

Activity	Cost €/ha	Area required over		Cost in 2020*	
		Min	**Max**	**Min**	**Max**
Maintenance required in 2020*2	200	0.80%	2.00%	8,253,823	20,634,556
Restoration required 2010-2020	2,000	2.70%	17.70%	27,856,651	182,615,823
Total				**36,110,474**	**203,250,380**
Total costs over 2014 -2020				**252,773,315**	**1,422,752,658**

Notes: All costs are gross costs in Euros and based on current values using cost estimates from as close to 2012 as possible. Costs are all additional to existing (baseline) measures and expected measures (ie the reference scenario) up to 2020. Costs and totals are rounded to three significant figures [to be done when finalised]. See section for details of the methods, excluded costs and limitations.

Total HNVF area in the ecosystem, based on **lowest estimate of HNVF** in each Member States, = 5,158,639 ha.

Table 10: Projected additional costs (€) in 2020 of maintaining and restoring the highest estimated area of HNVF within Sclerophyllous scrub ecosystems on the basis of current costs of combined maintenance and restoration measures and expected general degradation levels in 2020

Activity	Cost €/ha	Area required over		Cost in 2020*	
		Min	**Max**	**Min**	**Max**
Maintenance required in 2020*2	200	0.80%	2.00%	10,562,506	26,406,265
Restoration required 2010-2020	2,000	2.70%	17.70%	35,648,457	233,695,442
Total				**46,210,963**	**260,101,707**
Total costs over 2014 -2020				**323,476,742**	**1,820,711,950**

Notes: All costs are gross costs in Euros and based on current values using cost estimates from as close to 2012 as possible. Costs are all additional to existing (baseline) measures and expected measures (ie the reference scenario) up to 2020. Costs and totals are rounded to three significant figures. See section for details of the methods, excluded costs and limitations.

Total HNVF area in the ecosystem, based on **highest estimate of HNVF** in each Member States, = 6,601,566 ha.

Table 11: Projected additional costs (€) in 2020 of maintaining and restoring the lowest estimated area of HNVF within mire ecosystems on the basis of current costs of key maintenance and restoration measures and expected key pressure levels in 2020 - Annual ongoing maintenance needs in 2020

Key Pressure	% Area at risk in 2020		Key measure	Current annual costs (€/ha/y)	% area applied to	Instrument	Annual costs in 2020	
	Min %/y	Max %/y		costs (€/ha/y)	applied to		Min	Max
Disturbed hydrology and drainage	35.000%	50.000%	Integrated catchment management	0	100%	management planning		
Disturbed hydrology and drainage	35.000%	50.000%	Water level management	8	5%	AEM	748,996	1,069,994
Lack of grazing and mowing	0.800%	1.000%	Mowing	400	5%	AEM	855,995	1,069,994
Lack of grazing and mowing	0.800%	1.000%	Extensive grazing	100	95%	AEM	4,065,977	5,082,472
Over-grazing	0.000%	0.000%				GAEC	-	-
Burning and wildfires	?	?	Fire prevention & control	0	100%	regulation		
Human induced erosion	?	?			100%	regulation		
Maintenance total							*5,670,968*	*7,222,460*

Notes: All costs are gross costs in Euros and based on current values using cost estimates from as close to 2012 as possible. Costs are all additional to existing (baseline) measures and expected measures (ie the reference scenario) up to 2020. Costs and totals are rounded to three significant figures [to be done when finalised]. Duplicate costs are removed where “below” or” above” is indicated in the Instrument column. See section for details of the methods, excluded costs and limitations.

Total HNVF area in the ecosystem, based on **lowest estimate of HNVF** in each Member States, = 5,349,970 ha.

Table 12: Projected additional costs (€) in 2020 of maintaining and restoring the lowest estimated area of HNVF within mire ecosystems on the basis of current costs of key maintenance and restoration measures and expected key pressure levels in 2020 - Additional restoration needs to reverse current degradation

Key Pressure	% requiring restoration in 2020		Key measure	Current one-off	% area	Instrument	Average annual costs over 2010-2020	
	Min	Max		costs (€/ha)	applied to		Min	Max
Disturbed hydrology and drainage	1.000%	7.500%	Ditch blocking	170	100%	AEM	909,495	6,821,212
Disturbed hydrology and drainage	1.000%	7.500%	Vegetation re-establishment	75	10%	AEM	40,125	300,936
Disturbed hydrology and drainage	1.000%	7.500%	Removal of degraded peat	315	10%	AEM	168,524	1,263,930
Afforestation	2.250%	3.750%	Ditch blocking	170	100%	AEM	2,046,364	3,410,606
Afforestation	2.250%	3.750%	Scrub and tree clearance	150	100%	AEM	1,805,615	3,009,358
Afforestation	2.250%	3.750%	Vegetation re-establishment	75	90%	AEM	812,527	1,354,211
Peat extraction	0.300%	1.500%	Removal of degraded peat	315	50%	AEM	252,786	1,263,930
Peat extraction	0.300%	1.500%	Ditch blocking	170	50%	AEM	136,424	682,121
Peat extraction	0.300%	1.500%	Vegetation re-establishment	75	90%	AEM	108,337	541,684
Lack of grazing and mowing	6.000%	17.500%	Scrub and tree clearance	150	5%	AEM	240,749	702,184
Burning and wildfires	0.000%	0.000%	Vegetation re-establishment	75	5%	AEM	-	-
Human induced erosion	0.000%	0.750%	Vegetation re-establishment	75	50%	AEM	-	150,468
RESTORATION TOTAL							*6,520,945*	*19,500,641*
TOTAL COSTS IN 2020							**12,191,913**	**26,723,100**
TOTAL COSTS OVER 2014 - 2020							**85,343,391**	**187,061,702**

Notes: All costs are gross costs in Euros and based on current values using cost estimates from as close to 2012 as possible. Costs are all additional to existing (baseline) measures and expected measures (ie the reference scenario) up to 2020. Costs and totals are rounded to three significant figures [to be done when finalised]. Duplicate costs are removed where "below" or" above" is indicated in the Instrument column. See section for details of the methods, excluded costs and limitations.

Total HNVF area in the ecosystem, based on **lowest estimate of HNVF** in each Member States, = 5,349,970 ha.

Table 13: Projected additional costs (€) in 2020 of maintaining and restoring the highest estimated area of HNVF within mire ecosystems on the basis of current costs of key maintenance and restoration measures and expected key pressure levels in 2020 - Annual ongoing maintenance needs in 2020

Key Pressure	% Area at risk in 2020		Key measure	Current annual costs (€/ha/y)	% area applied to	Instrument	Annual costs in 2020	
	Min %/y	Max %/y					Min	Max
Disturbed hydrology and drainage	35.000 %	50.000 %	Integrated catchment management	0	100%	management planning		
Disturbed hydrology and drainage	35.000 %	50.000 %	Water level management	8	5%	AEM	984,642	1,406,631
Lack of grazing and mowing	0.800%	1.000%	Mowing	400	5%	AEM	1,125,305	1,406,631
Lack of grazing and mowing	0.800%	1.000%	Extensive grazing	100	95%	AEM	5,345,199	6,681,498
Over-grazing	0.000%	0.000%				GAEC	-	-
Burning and wildfires	?	?	Fire prevention & control	0	100%	regulation		
Human induced erosion	?	?			100%	regulation		
Maintenance total							**7,455,145**	**9,494,761**

Notes: All costs are gross costs in Euros and based on current values using cost estimates from as close to 2012 as possible. Costs are all additional to existing (baseline) measures and expected measures (ie the reference scenario) up to 2020. Costs and totals are rounded to three significant figures. Duplicate costs are removed where "below" or" above" is indicated in the Instrument column. See section for details of the methods, excluded costs and limitations.

Total HNVF area in the ecosystem, based on **highest estimate of HNVF** in each Member States, = 7,033,156 ha.

Table 14: Projected additional costs (€) in 2020 of maintaining and restoring the highest estimated area of HNVF within mire ecosystems on the basis of current costs of key maintenance and restoration measures and expected key pressure levels in 2020 - Additional restoration needs to reverse current degradation

Key Pressure	% requiring restoration in 2020		Key measure	Current one-off costs (€/ha)	% area applied to	Instrument	Average annual costs over 2010-2020	
	Min	Max					Min	Max
Disturbed hydrology and drainage	1.00	7.50	Ditch blocking	170	100	AEM	1,195,637	8,967,274
Disturbed hydrology and drainage	1.00	7.50	Vegetation re-establishment	75	10	AEM	52,749	395,615
Disturbed hydrology and drainage	1.00	7.50	Removal of degraded peat	315	10	AEM	221,544	1,661,583
Afforestation	2.25	3.75	Ditch blocking	170	100	AEM	2,690,182	4,483,637
Afforestation	2.25	3.75	Scrub and tree clearance	150	100	AEM	2,373,690	3,956,150
Afforestation	2.25	3.75	Vegetation re-establishment	75	90	AEM	1,068,161	1,780,268
Peat extraction	0.30	1.50	Removal of degraded peat	315	50	AEM	332,317	1,661,583
Peat extraction	0.30	1.50	Ditch blocking	170	50	AEM	179,345	896,727
Peat extraction	0.30	1.50	Vegetation re-establishment	75	90	AEM	142,421	712,107
Lack of grazing and mowing	6.00	17.50	Scrub and tree clearance	150	5	AEM	316,492	923,102
Burning and wildfires	0.00	0.00	Vegetation re-establishment	75	5	AEM	-	-
Human induced erosion	0.00	0.75	Vegetation re-establishment	75	50	AEM	-	197,808
Restoration total							***8,572,538***	***25,635,854***
Total costs in 2020							**16,027,684**	**35,130,615**
Total costs over 2014 - 2020							**112,193,785**	**245,914,303**

Notes: All costs are gross costs in Euros and based on current values using cost estimates from as close to 2012 as possible. Costs are all additional to existing (baseline) measures and expected measures (ie the reference scenario) up to 2020. Costs and totals are rounded to three significant figures. Duplicate costs are removed where "below" or" above" is indicated in the Instrument column. See section for details of the methods, excluded costs and limitations.

Total HNVF area in the ecosystem, based on **highest estimate of HNVF** in each Member States, = 7,033,156 ha.