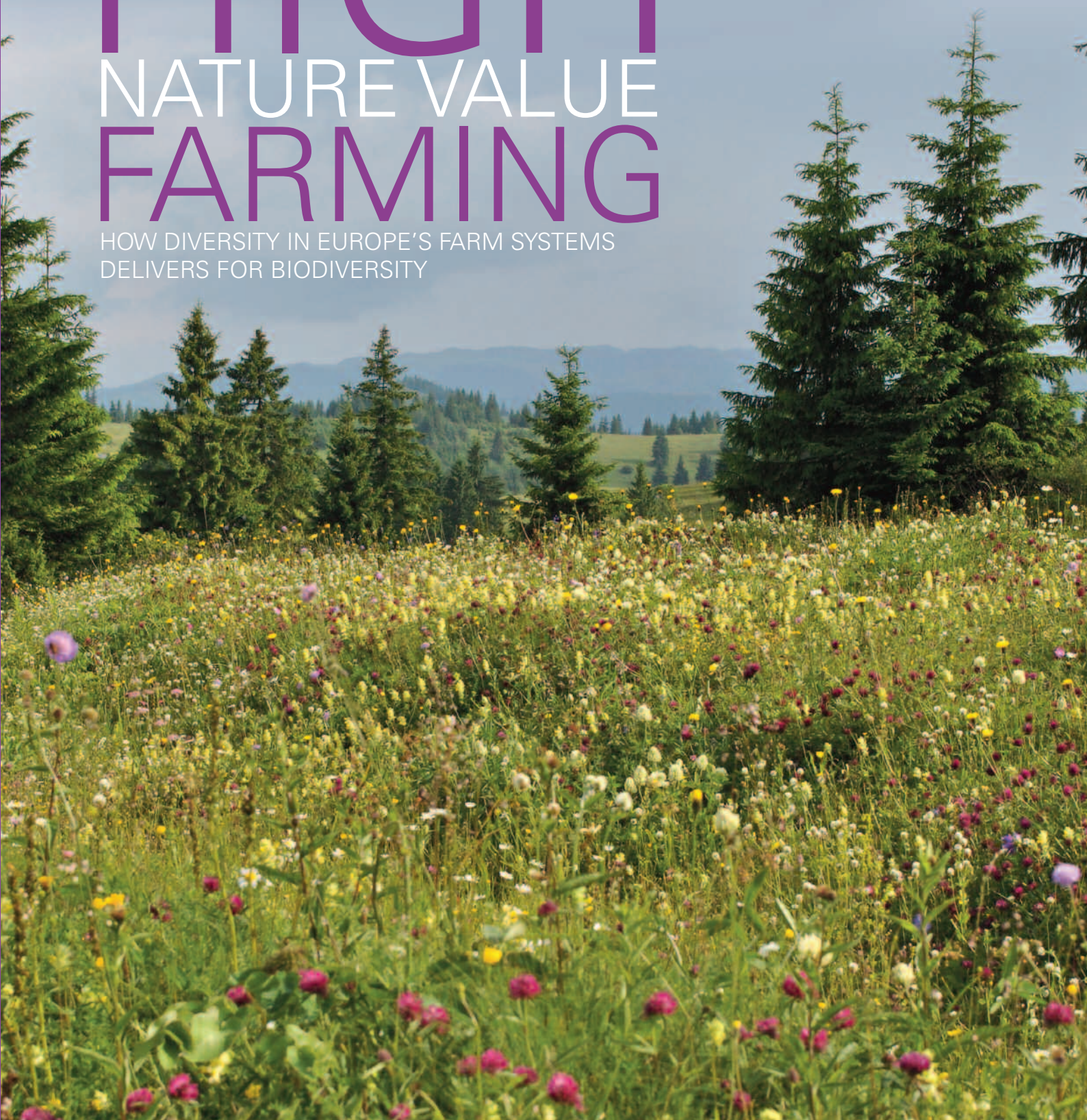


HIGH NATURE VALUE FARMING

HOW DIVERSITY IN EUROPE'S FARM SYSTEMS
DELIVERS FOR BIODIVERSITY



nature's voice



SUMMARY

Across Europe, certain types of farming are especially valuable for the environment. High Nature Value (HNV) farming systems vary from country to country, but all provide important environmental services. Not only do they maintain some of Europe's most threatened habitats and species, but they also contribute to soil carbon storage, the protection of water resources and fire prevention. HNV farming systems are part of a rich cultural heritage. They underpin an active land-managing rural population and often sustain a unique way of life in some of the most economically fragile areas in Europe. We showcase a variety of HNV farming systems, explain their benefits and why greater support of these systems is needed in the new Common Agricultural Policy (CAP).

While it is clear that HNV farming systems vary considerably, there are some obvious uniting issues and some common solutions:

MEMBER STATES MUST RECOGNISE their HNV farming systems, analyse the socio-economic issues they face and identify the specific practices that provide the highest environmental benefits.

ALL HNV FARMLAND MUST BE ELIGIBLE to receive CAP support. This land tends to have a higher proportion of semi-natural features, such as hedges, shrubs and trees, and under current rules may be excluded from Member States' definitions of agricultural land.

GREATER FINANCIAL SUPPORT OF THESE SYSTEMS is urgently needed in the new CAP. A basic HNV farming payment should be introduced, with conditions attached to maintain environmental benefits.

MORE TARGETED AGRI-ENVIRONMENT SCHEMES are needed to support HNV farming systems. They will continue to play a vital role in ensuring all farming systems can deliver environmental benefits. Adequate funding for these is imperative.

A PRO-ACTIVE APPROACH TO WORKING WITH FARMING COMMUNITIES with projects and advice at the local level is needed to improve economic sustainability, while maintaining their environmental benefits.

THE SOCIO-ECONOMIC CAUSES AND ENVIRONMENTAL EFFECTS of abandonment should be researched and assessed as part of preparation for Rural Development Programmes.

Currently the cultivated machairs and fallow areas of the UK's Western Isles support internationally and nationally important populations of breeding and wintering birds such as corncrakes. If policy continues to neglect this type of farming, these birds will be threatened.

Andy Hay (sps-images.com)



The future for butterflies of European importance, such as this large copper, and much other significant wildlife is uncertain as traditional farming systems are disappearing across the continent.



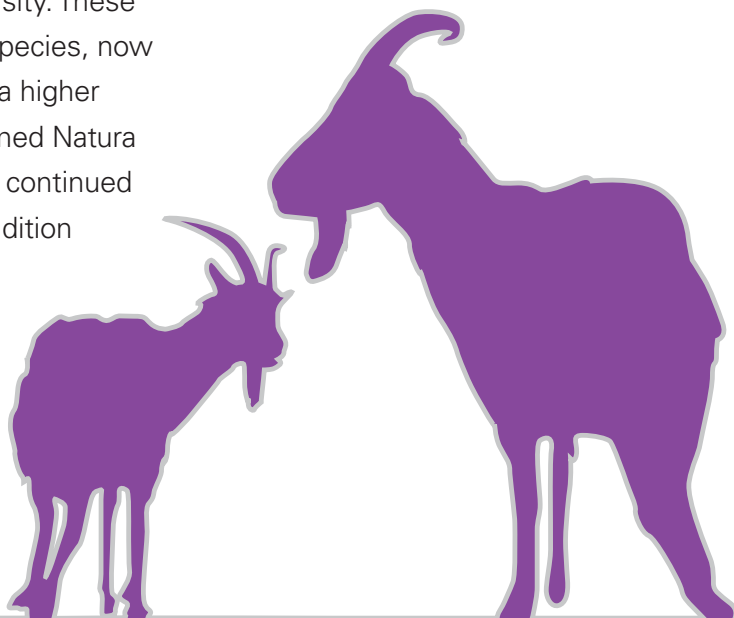
INTRODUCTION

With declines in agricultural employment, it is often argued that income support is required for all farmers to encourage them to continue farming. However, the threat is not equal across all agricultural systems. The risk of farmers giving up is much higher for some types of farming than for others. While farming is never an easy profession, it is the smaller-scale farmers on the more marginal land, in remote areas, using the least intensive practices, who have the lowest farm incomes or indeed operate at a loss. They also receive the least support from agricultural policies, despite being the most in need and producing the most environmental benefits. Unsurprisingly, abandonment of farming activity is an ever-increasing problem in these areas, bringing with it a loss of environmental and cultural values.

HNV farming is normally of low intensity – the number of animals grazed on a set area tends to be low, fewer artificial inputs are used and there is a greater mix of features, such as trees, hedgerows and ponds, in the landscape. This low input intervention means that landscapes dominated by HNV farming systems retain the highest levels of farmland biodiversity. These areas support a large number of species, now rare across landscapes farmed at a higher intensity; indeed a majority of farmed Natura 2000 sites are likely to depend on continued HNV farming to maintain their condition and interconnectivity. This is due to the diversity of habitats, the mix of grazed, semi-natural vegetation, some low-intensity crop production and a high diversity of landscape

features. As agricultural activities decline, there is a loss of mosaics and open areas, and the value of the landscape for wildlife generally decreases. In other situations, traditional systems are replaced wholesale with intensified farming or forest plantations, with similar loss of environmental and cultural values.

The following examples illustrate the great variety in HNV farming across the Member States. At first sight, the links between these systems may not be obvious. The key connecting factor is the combination of farming practices in an active farming system. This combination helps secure vital ecosystem services, delivering public goods that are not rewarded by the market and usually not by the CAP either. The types of systems described are those most likely to be sustainable over time as they do not rely on practices which impair the long-term ability of the environment to produce food. These examples show how maintaining active agricultural management and a good quality environment can be co-dependent. In order to maintain Europe's biodiversity, we need to maintain diversity in its farming systems too.



WESTERN ISLES, UK – CATTLE AND SHEEP PRODUCTION

The Western Isles (Outer Hebrides) is a chain of small islands in the Atlantic Ocean off the north-west coast of Scotland. The remote location and oceanic climate together with the varying topography (from sea level to 800 m) and soils give the area an unusual selection of climatic conditions, wildlife and habitats. The machair (calcareous grassland used for fodder) is a priority habitat (EC Habitats Directive) and particularly unusual and valuable for wildlife. Over a third of the world's machair (10,000 ha out of 25,000 ha) is found on the Western Isles.

The main farming activity is low-intensity cattle and sheep production. Livestock are often grazed on common hill ground, while fodder is produced on lower, richer ground. A rich mosaic of habitats has been created by the variety of structures. The production of fodder for cattle is of particular importance for environmental diversity. In some locations, the machair is cultivated with a mixture of local-provenance rye, barley and oats and fertilised with seaweed. Without continued agricultural activity, the machair would lose much of its biodiversity value.

The cultivated machairs and fallow areas support internationally and nationally important populations of breeding and wintering birds including waders, corncrakes, corn buntings, geese and terns, a diverse range of invertebrates such as great yellow bumblebees, and a rich flora. The large areas of common grazing support a suite of moorland habitats and species and are important for water storage. Some of these areas are based on deep peat and suitable management is essential to maintaining carbon stored in the soil.

Agriculture and tourism are the major economic activities. Often family members work part time on a croft, alongside other jobs. In some cases, one person manages several crofts full time. There are also some larger farms.

The keeping of cattle and sheep has decreased significantly over the last 10 years. While this may reflect sensible adjustment of management following the decoupling of subsidies from production, in some areas land management is being abandoned altogether. Since the late 1970s, there has been a significant decrease in the percentage of machair that is cropped. There are also changes in practice: sheep graze the more fertile, lower ground more intensely; cattle numbers are reduced. While abandonment of activity is the main threat to these systems, more intensive production and use of artificial inputs is decreasing habitat quality in others.

Scotland's use of the "historic" model for calculating the Single Farm Payment (SFP) means low-intensity livestock producers receive extremely low direct support from the CAP. In many cases, common land and small crofts receive no payments. Rural Development support can potentially provide important additional income, but the Less Favoured Area (LFA) scheme is biased towards more productive grazing. Agri-environment schemes have limited resources and can be difficult to access. Currently a LIFE+ project targeted at the machair aims to maintain particularly beneficial environmental practices, through beneficial agricultural management and monitoring the environmental effects of activity.

HISTORICALLY-BASED CAP PAYMENTS (SFP and LFA) do not provide adequate support for farmers and crofters producing environmental public goods.

AGRI-ENVIRONMENT SCHEMES provide significant benefits but need to be accessible for small-scale applications and may be insufficient to make businesses commercially viable – they only support certain practices.

LOCALLY TARGETED PROJECTS are essential to focus attention on what is needed to maintain HNV farming. LIFE+ can show the way. Rural Development should be used to spread this approach more widely and over the long term.

This case study is endorsed by Martin Scott,
the Conserving Scottish Machair LIFE+
project, www.machairlife.org.uk

Jamie Boyle

Over a third of the world's machair is found on the Western Isles, but the abandonment of traditional farming activities on the islands threatens its survival – and that of dependent, valuable wildlife.





This case study is endorsed by the Pogány-havas Association, www.poganyhavas.ro

Changes in farming activity, such as setting a single mowing date, threaten the mosaic pattern of grassland, which supports a diversity of species across Pogány-havas.

POGÁNY-HAVAS, ROMANIA – LIVESTOCK AND MEADOWS

The Pogány-havas region extends from the valley of the Csík (Ciuc) Basin and out to the eastern edge of Transylvania, and into the Gyimes (Ghimes) Valley. The Csík Basin (215 km²) has a wide, open landscape surrounded by mountains, while Gyimes (232 km²) is a mountain area with deep and narrow valleys. Between them lies Pogány-havas (Pagan Snow Cap), the region's namesake mountain.

In Csík, pastures and forests are managed on behalf of the village shareholders by communal organisations. Cows are grazed on the village pastures in a common herd and milked at home. Arable crops are also grown. In Gyimes, the land is steeper and livestock rearing is the main agricultural activity. There is some common land, but for the most part, smallholders own and manage their own parcels of pasture and forest. Here in the summer months, cows are taken to graze the high pastures, returning to the village in autumn. In both regions, hay meadows are owned and managed by individual families, creating a mosaic of habitats mown and manured at different times and in different ways – an ideal management system for supporting diversity.

A long list of species, habitats and landscape features make the area unique in terms of nature and wildlife. The Csík Basin is home to species typical of wetlands and fens. Temporary ponds are inhabited by the spectacular large branchiopods, a 'living fossil' crustacean group. The wet meadows and shallow waters are good habitats for amphibians, like the common frog and great crested newt. There are important corncrake populations, and the white stork also nests in high densities. The Gyimes Valley provides space for many rare species, such as brown bears, reliant on forests and grasslands, especially species-rich mountain hay meadows. Orchids and rare mountain flowers abound here. Typical birds include three species of eagle and eight species of woodpecker.

As in the rest of Transylvania, farm holdings are small. A survey of two case study areas found that some families have an additional source of income, but most people describe themselves as retired or without another job. On average, agricultural activity has declined. In the past 10 years, decreases of 10% in cow keeping and 20% in hay meadows have been recorded in the areas surveyed (although this disguises large local variations). The main reason for giving up farming was that the products made no profit or had no market at all. Many people were uncertain about their farm's future, although just over half believed they had a successor to take over.

Only farmers owning more than 1 ha of land in parcels of more than 0.3 ha are eligible for CAP support, and in Gyimes 45% are smaller than this, with 20% in Csík excluded from any kind of support. While agri-environment aims to maintain the environmental value of the area, the measures introduced have in some cases been counter-productive. For example, the setting of a single mowing date reduces the mosaic pattern of long and short grass on which many species thrive. Local projects have been important for maintaining HNV farming in the area. For example, the Pogány-havas Microregion Association supported by local councils, NGOs and entrepreneurs works on a range of projects to increase local incomes, preserve the region's cultural heritage, and record and conserve the natural environment.

HNV FARMED AREAS need to be eligible for support: minimum size requirements mean that the most important systems may not receive any payment.

HNV FARMERS NEED TO BE SUFFICIENTLY REWARDED for the public goods they are already providing with existing management techniques.

A ONE-SIZE-FITS-ALL APPROACH to agri-environment does not work. Measures need to be based on the specific requirements in the area and target specific outcomes.

EXTREMADURA UPLANDS, SPAIN – GOAT GRAZING AND ORCHARDS

The uplands of northern Extremadura range from approximately 400 to over 2000 metres above sea level, occupying the foothills and southern slopes of the Iberian Central System.

The landscape is a rich mosaic of habitats of European conservation importance such as Iberian grasslands, meadows, heaths, matorral and oak woodlands. Extensive grazing by goats, sheep and suckler cattle maintains the mosaic structure, prevents the development of homogenous, dense vegetation and the build-up of dry plant material, thus reducing the risk and intensity of forest fires.

The mosaic farmland supports numerous species of European importance, including marsh fritillary, Iberian sooty copper, African grass blue and southern festoon butterflies; lesser mouse-eared bats, and reptiles, such as the spectacular Iberian emerald lizard. Red and black kites, booted and short-toed eagles also rely on the mosaic of open habitats.

At low to mid altitudes, the landscape is interspersed with olive groves and tree crops such as figs, chestnuts and cherries. Land parcels are small and mostly on terraces with stonewalls. The olive, fig and chestnut trees are mostly old and managed with low intervention.

The orchards are valuable for many bird species including finches, the little owl and the blue-winged magpie. Where the understorey is allowed to flourish in the spring, there are very diverse populations of flora and invertebrates. The trees, stonewalls, terraces and

patches of scrub provide valuable habitats for invertebrates, birds, mammals and reptiles.

Holdings are mostly small, with over 90% having only 1-10 hectares, and orchards are generally combined with other sources of family income. Livestock farming is more often full-time, and though holdings are small, graziers may have large flocks and use of large common grazings. Most land is unfenced, so goats and sheep must be shepherded. Cattle can be left unattended, if visited regularly. Seasonal movement of livestock is carried out on foot.

More intensive land uses of very limited biodiversity value are also present, including tobacco and intensive fruit crops, such as raspberries in polytunnels. These farming types are more profitable and receive the main attention from the regional government and farm advisory services.

The HNV farming systems generate very low incomes, and economic returns have declined continuously since the 1980s. Livestock farming is labour intensive and the returns per hour of labour are very low. These types of farming are declining, leading to a loss of the semi-natural farmland mosaic. The likely result is a simplified landscape of dense forest and intensive crops, less attractive for tourism and more vulnerable to destructive wild fires.

The CAP Single Farm Payment in Spain uses the “historic” system. This means low-intensity orchards and livestock systems receive very low payments. Agri-environment measures in Extremadura have developed slowly over the last 20 years, with the main focus on schemes for integrated and organic crop production, and only minor measures for HNV farming. There are no schemes for upland grazing, hay meadows or traditional orchards. LFA payments are not available to part-time or very small farms.

TRADITIONAL ORCHARDS AND SEMI-NATURAL PERMANENT PASTURES need higher levels of basic CAP support to encourage their maintenance, including forest grazing.

AGRI-ENVIRONMENT MEASURES should be combined with investment aids to support socio-economic sustainability and nature-friendly practices in these farming systems.

LOCAL PROJECTS ARE URGENTLY NEEDED to work directly with farmers in seeking solutions to socio-economic, market and land management issues. EU rural development funds should support such projects across the vast HNV farming landscape of north Extremadura.

Across Spain's Extremadura region, traditional farming systems, which benefit wildlife, are declining as they become less profitable. Without government and policy support, they are seriously at risk of disappearing.

This case study is endorsed by Professor Fernando Pulido, University of Extremadura (Department of Forest and Agronomic Environment), <http://www.unex.es/>



The patchwork of strip fields that dominates Poland's Małopolskie Voivodship is a haven for farmland birds. Unless such farming methods are supported, this patchwork will disappear and the birds along with it.



This case study is endorsed by Stanisław Tworek, ornithologist in the Małopolska region, Institute of Nature Conservation, Kraków, www.iop.krakow.pl

MALOPOLSKIE VOIVODSHIP, POLAND – ARABLE

In the south-east of Poland, the Malopolskie Voivodship (the province that includes Krakow) has a diverse and varied landscape. The Tatra mountains form the border with Slovakia, while to the east and north are the gentler, forested Beskidy hills. Within the province are a large number of protected areas, including five national parks. The lowland farmed landscape is made up of a patchwork of strip fields interspersed with forest and individual trees. In large areas of this province, small-scale arable farming still dominates.

The average farm size is around 4 ha. Diversity is provided by the division of the area into small strip fields sown with a variety of crops as well as some small orchards producing apples and other fruit. Fields, which are normally less than half a hectare, are long and thin. Most fields are only a few metres wide and are divided from the next by a thin strip of semi-natural vegetation. A few livestock are normally kept around the farm buildings and the waste fertilises the fields. The use of artificial fertilisers and herbicides is usually limited due to high prices and limited cost-effectiveness for agricultural production under these circumstances.

This type of farmland remains a haven for farmland birds. Research has shown the importance of the habitat, in particular for quails, yellowhammers, red-backed shrikes, grey partridges, corn buntings, yellow wagtails and skylarks. The diversity of crops, harvested at different times, and the unploughed grass strips provide safe nesting habitat. They also provide plenty of insects over the summer due to the low-level use of artificial inputs and seed food contributed by unfarmed landscape features as well as the crops and stubbles. The habitat is also of high importance for other farmland biodiversity, such as butterflies and bees, and wild flowers associated with crops (segetal flora). The low use of artificial inputs means the farming systems rely less on fossil fuels, have

a lower impact in terms of greenhouse gases and, potentially, better long-term sustainability.

The majority of farmers are part time and often the whole family is involved. Most produce is for the family's own use or small-scale direct sales. As farming becomes relatively less financially attractive compared to other economic activities, it has declined and land is being abandoned. As it reverts to scrub, the diversity of farmland species and habitats declines. This is more of an issue close to large urban centres where wages are relatively higher. Many farmers have no successor as their children find better paid city jobs. Change is also happening in suburban areas, where farmers are specialising in highly intensive vegetable production.

Although farming is small scale, many holdings are big enough to apply for direct support. This can provide an additional income, though the overall payment is normally small. These areas are also usually eligible for LFA payments. However, most farmers do not apply for more sophisticated land management payments, such as agri-environment schemes, as these require much more effort to access the payment and the financial rewards are not high enough. Even in cases where a substantial payment is made per hectare, the small farm size means the total payment remains low.

GREATER LEVELS OF SUPPORT are needed for small-scale farming if current practice is to continue.

GREATER LEVELS OF ADVICE would help farmers to access agri-environment schemes that could contribute to maintaining beneficial practices.

FURTHER RESEARCH into the impacts of increasing incomes in urban centres is needed.

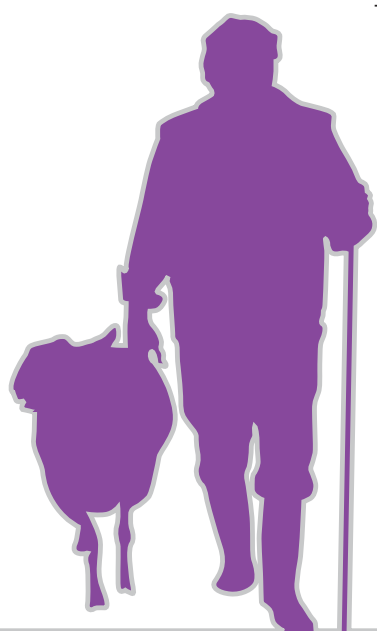
CONCLUSIONS

The European institutions and Member States need to recognise the enormous significance of HNV farming systems for our environment and cultural heritage and the great risk that they will be lost. These systems currently receive the smallest amounts of EU support while delivering the highest public benefits. It is essential that this changes in the next funding period.

Policy makers must recognise that HNV farming can be economically small scale and often part time. It is not always possible, nor desirable for it to be forced into the current model of “professional” farming. The combination of socio-economic challenges together with the high importance of these systems in terms of providing environmental goods merits special attention.

Estimates suggest that HNV farmland could still cover around 30% of the European farmed area. These farming systems are vital for maintaining the good condition of many Natura 2000 sites, protected species and the wider farmed environment around them. HNV farming can also employ large numbers of people and is integral to the social fabric and resilience of areas where these farming systems dominate.

Unless we maintain these systems, we will fail to meet international and European commitments, such as the 2020 biodiversity target, and lose vital ecosystem services such as carbon and water storage. Not only will the environmental effects be disastrous, but we will also lose a vital part of Europe's culture and diversity.



The case studies in this document illustrate that while HNV systems vary considerably (and these differences are part of their value), there are clearly some uniting issues and some common solutions. We call for an integrated approach across the EU, combining targeted basic support with ambitious agri-environment schemes operating at the landscape scale. In addition, proactive projects to address specific issues on the ground are needed.

The case studies are endorsed by ...

... **Martin Scott, the Conserving Scottish Machair LIFE+ project, www.machairlife.org.uk**



CONSERVING SCOTLAND'S MACHAIR
A' DÌON MACHAIRICHEN NA H-ALBA

"The machairs of the Hebrides are an intimate patchwork of habitats, supporting a unique and beautiful

assemblage of wild animals and plants. This mosaic is created and maintained by the interplay of the physical environment and the crofting agricultural systems that have for centuries benefited islander and wildlife alike. Machair habitat and agriculture are completely inter-dependent and the resulting biodiversity is of the very highest value to society, both nationally and internationally."

... **the Pogány-havas Association, www.poganyhavas.ro**



"Small-scale family farming is essential in Transylvania. It provides families with food, a livelihood, resilience to economic crises, and many free goods and services such as a beautiful landscape and a rich natural and cultural heritage."

... **Professor Fernando Pulido, University of Extremadura (Department of Forest and Agronomic Environment), www.unex.es**

"The cultural landscape of the northern Extremadura uplands is a fascinating mosaic of woods, pastures, meadows and small-scale cropping fed by a labyrinth of water channels and sustained by kilometres of monumental hand-built stone terraces. The creators of this landscape, combining family farming and livestock raising, have handed down to us a heritage that is on the point of being lost due to its limited economic competitiveness. Ideally, the market should generate a sufficient return to reward the enormous public goods value of these farming systems. But in the absence of this, the public goods should be rewarded through ambitious programmes of territorial contracts, designed to ensure the economic and ecological sustainability of the High Nature Value farming systems."

... **Stanisław Tworek, ornithologist in the Małopolska region, Institute of Nature Conservation, Kraków, www.iop.krakow.pl**

"Although my studies indicate that the diversity of crops and the heterogeneity of habitats should be maintained through the conservation of habitat patches not used for farming purposes, the continuation of low-intensity farming is more important for maintaining the farmland avifauna."



Andy Hay (fspb-images.com)



The RSPB recognises the significance of High Nature Value farming systems for our environment and cultural heritage. These systems are at risk. We believe that integrated, proactive approaches must be adopted to maintain them and to protect Europe's rich culture and biodiversity.



Common Agriculture Policy reform will determine the future of Europe's countryside wildlife. CAP reform is a key component of the RSPB's Stepping Up for Nature campaign. Find out more at www.rspb.org.uk/steppingup



BirdLife International is a global Partnership of conservation organisations that strives to conserve birds, their habitats and global biodiversity, working with people towards sustainability in the use of natural resources. The BirdLife Partnership operates in more than 100 countries and territories worldwide. BirdLife Europe supports the European and Central Asian Partnership for BirdLife International and is present in 45 countries and in all EU Member States.

www.birdlife.org



The European Forum on Nature Conservation and Pastoralism brings together ecologists, nature conservationists, farmers and policy makers. This non-profit network exists to increase understanding of nature conservation and the cultural value of certain farming systems, and to inform work on their maintenance.



This publication was produced in 2011 and part-financed by the European Union. Sole responsibility lies with the author, and the European Commission is not responsible for any use that may be made of the information contained herein.