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**Working group 20: biodiversity and cultural landscape management related to rural development**

**A comparative study of two agri environmental schemes in cherished landscapes in Wales<sup>1</sup>**

**The farmed landscape of the Llŷn Peninsula**



**(Photo authors own)**

**Abstract**

This paper discusses the current status of agricultural policy application in areas of rural Wales that are designated for the high quality of landscape and biodiversity. Through a comparison between the management models of two agri environment schemes and the implementation of the Welsh Assembly Government's sustainable development commitment, the experiences of private actors (namely farmers) and local government agencies are investigated. Two case studies emphasise particular environmental management requirements associated with upland and lowland systems of the Snowdonia National Park, contrasted with the more intensive lowland system within an area designated for its cultural landscape and wildlife diversity, namely the Llŷn Peninsula Area of Outstanding Natural Beauty ("AONB"). There is a widespread popular acceptance of the Llŷn Peninsula and Snowdonia National Park as 'cherished' landscapes. Both communities are seizing the challenge for their separate futures, for example through local food quality and the labelling of goods of local provenance.

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<sup>1</sup> Since the initial presentation of the paper at the XI World Congress of Rural Sociology in Norway July 2004, further research in the subject area is being sponsored via the University of Wales Bangor's West Wales and the Valleys Objective 1 - Developing Research Skills project, which is part-financed from the European Social Fund (ESF) provided by the EU through the Welsh Assembly Government's Welsh European Funding Office.

## What do we mean by cherished landscapes?

In England, 'landscape' was first used, not as another word for countryside; rather, the term was a technical one employed by painters to distinguish any representation of inland scenery, whether as an object, or background. A fondness for the 'picturesque' from the 18<sup>th</sup> century onwards fostered a way of feeling emotion through the eyes; during this period the emphasis was on the visual aesthetic (Porteous, 1996). In the 19<sup>th</sup> century Constable captured the effects created by legislation that was altering the face of the British countryside forever as the old system of 'common fields' were abandoned in favour of 'enclosed fields'. In the place of the old 'open' landscape, there appeared geometric fields divided by rough hedges. It is this 'enclosure'<sup>2</sup> movement that gave Wales and the two case study areas that are the subject of this paper, namely the upland and lowland systems based in Snowdonia National Park and the more intensive lowland systems found in the Llŷn Peninsula AONB, their present appearance.

In Britain the idea of preserving cherished landscapes dates to 1893 and the launch of the National Trust in response to development threats. The Trust was set up to purchase land to preserve beauty spots and cultural landmarks. It is these pastoral landscapes, wilder areas of Snowdonia and those of pre-war Britain that are often used as a baseline against which current landscape conditions are assessed. However this landscape was itself a relic of man's earlier agricultural endeavours. In some of the more remote parts of Wales the basic elements of earlier agricultural systems remain, which is not always appreciated.

Both Snowdonia National Park and Llŷn Peninsula AONB are remote Less Favoured Areas ("LFA"), where nature conservation and tranquillity go hand in hand. LFAs<sup>3</sup> are areas where the natural characteristics such as geology, altitude and climate produce economic returns appreciably lower than the national average and make it more difficult for farmers to compete. These areas experience problems in maintaining rural family incomes and retaining population. The low and dwindling population is largely dependent on agriculture. However farming in LFAs provides considerable environmental and social benefits.

Focus group and questionnaire surveys carried out during the early summer of 2004 in the Snowdonia National Park and the Llŷn Peninsula AONB asked a random sample of inhabitants of the protected areas "What does the term cherished landscape mean to you", respondents replied that cherished landscapes are "those that are beautiful", "remote and impressive", "special for their wildlife", "important as strongholds of the language", "an area of landscape which one can be proud of", "sources of inspiration", "a reminder of historic relationships", "it has a special place in people's hearts", "it links us to people past and present", "provides economic and spiritual sustenance", "it is appreciated by the public", "it connects us to our cultural roots". Thus it seems that cherished landscapes are those that generate a sense of connectedness between people and place. The relationship between language and landscape within the cherished landscapes of Llŷn and Snowdonia can be observed in inscriptions of memories of place in Welsh language place names, legends and tradition. Furthermore, the relationship between language and landscape is translated environmentally into the products reared and grown from the land and the value which language and landscape is invested with by local communities. As the people have shaped the landscapes, so in turn these landscapes have made the homeland or 'bro'<sup>4</sup>.

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<sup>2</sup> Enclosure of common land had gradually been taking place prior to the 18<sup>th</sup> century. Enclosures of the 18<sup>th</sup> and 19<sup>th</sup> centuries were an integral part of the Agrarian Revolution and were strongly promoted as an integral part of the process, which would ensure 'improvement', although not all enclosures were agrarian. Some were carried out for industrial reasons.

<sup>3</sup> These areas were designated as such by the European Union under the Less Favoured Areas Directive (75/268/EEC).

<sup>4</sup> In Wales 'bro' is a region united by geography, economy and culture into a unit. More specifically, a person's 'bro' is where they are at home, where they know and are known. The Welsh words for the Welsh people, land and language are based on the word for a Welshman 'cymro', formed from 'cym-bro', meaning literally, fellow countryman or someone from the same 'bro'.

## **National Park and AONB landscape designations**

Conservation by means of distinct government-protected sites was introduced in Britain in the late 1940s. In 1945, at the request of the Government, the architect John Dower reported on how National Parks might be introduced in England and Wales. In 1947 at a time when the ‘Romantic’ idea of scenic value still prevailed, a further report from the Sir Arthur Hobhouse committee proposed special legal status for those areas considered to be the finest landscapes in England and Wales in order to preserve them for the nation.

Designation of areas of landscape deemed to be of ‘special’ landscape value has, since 1947, been the major form of landscape conservation and management in Britain. It is as a result of the National Park and AONB landscape designations, that cherished landscapes are conserved, managed and enhanced.

National Park Authorities (“NPAs”) are local authorities in their own right and have their own forward planning, development control functions and other executive powers. Their statutory purposes (as defined by the Environment Act 1995) are:

- “To conserve and enhance the natural beauty, wildlife and cultural heritage of the National Park;
- To promote opportunities for the understanding and enjoyment of the special qualities of the Parks by the public”

If there is a conflict between these two purposes greater weight is given to conservation than to recreational needs, this is known as the ‘Sandford Principle’. In addition to pursuing their two statutory purposes, the National Park Authorities (“NPA”) are also under a duty to foster the economic and social well being of their areas (as amended by the Environment Act 1995, Section 61 (1)). These aims are achieved by controls on development and the provision of incentives that favour beneficial ways of managing the land. Each NPA is required to produce a National Park Management Plan, which sets out the vision for the management of the National Park and guides the allocation of its resources. NPAs encourage owners and occupiers to conserve the quality and biodiversity of their land and most offer grants and technical advice to owners of historic buildings. NPAs have become increasingly interested in preserving the less tangible parts of heritage such as folk memory, oral record, traditions and language.

The main purpose of AONB designation and subsidiary purposes are:

- “The primary purpose of designation is to conserve and enhance natural beauty.
- In pursuing the primary purpose of designation, account should be taken of the needs of agriculture, forestry, other rural industries and of the economic and social needs of local communities. Particular regard should be paid to promoting sustainable forms of social and economic development that in themselves conserve and enhance the environment.
- Recreation is not an objective of designation, but the demand for recreation should be met so far as this is consistent with the conservation of natural beauty and the needs of agriculture, forestry and other uses.

(Countryside Commission, 1991)

There have been only minor changes to the aims of both AONB and National Park designations since the late 1940s. The Edwards report ‘Fit For The Future’ in 1991 resulted in a rewording of the purposes of a National Park in the Environment Act 1995, to reflect concerns about conservation and education. The embracing of wildlife and the historic environment within natural beauty is also recognised in the 1995 Act. The Minister for Housing and Planning modified this in relation to National Parks, Planning Policy Guidance Note 7 (PPG7) in June 2000 declaring that the landscape qualities of National Parks and AONBs are equivalent (Countryside Agency, 2001a).

AONB and National Parks may be of equal importance for landscape and scenic beauty, but the difference is that NPAs exist and have special powers to conserve and enhance the Parks. With a few exceptions, no such authorities or powers exist for AONBs. The Welsh Assembly Government is responsible for National Parks and AONBs in Wales, advised by the Countryside Council for Wales (“CCW”). National Parks and AONBs are both accorded a high degree of protection against inappropriate development through the planning system. There is no statutory administrative framework for the management of AONBs; rather the administration of planning and development control is the responsibility of those local authorities within whose boundaries they fall (Countryside Agency, 2001b). The implementation of the Countryside and Rights of Way Act 2000 has brought about changes to the funding and management of all the AONBs in England and Wales (pers. com., Llŷn AONB Officer, Spring 2003). Many of the larger AONBs now have a separate small authority unit to carry out the statutory duties with regard to the conservation and management of the AONB.

The wilder, more dramatic landscapes of Britain have become National Parks. However a great deal of countryside of high scenic quality cannot be selected for National Parks status, not because the landscape is any less beautiful, but because opportunities for extensive outdoor recreation (an essential objective of National Parks) are lacking and these extents of countryside have become AONB (Partington, et al 2003).

The primary purpose of AONBs is the conservation of the natural beauty of the landscape, allowing areas that do not have recreational opportunities to be protected outside of the National Parks system. AONB management takes the needs of agriculture, forestry and other rural industries into account as well as the economic and social needs of local communities. Farmers, foresters and other landowners privately own many AONBs. Sustainable forms of social and economic development, which protect and improve the environment, are encouraged within AONB (Cynefin Consultants, 2003).

Little of Wales’ landmass is without some form of landscape protection. Snowdonia, Brecon Beacons and Pembrokeshire Coast National Parks cover 20% of Wales’s landmass and five designated AONBs of similar landscape value to Wales’s National Parks cover 4% of the country, bringing the proportion of Wales given statutory landscape recognition and protection to 25% (Welsh Assembly Government 2004a). In addition to National Parks and AONBs, 546 kilometres of the Welsh coast are also defined as Heritage Coast due to the high landscape value of the coastal area. 40% of Welsh coastal waters are designated candidate marine Special Areas of Conservation (“mSAC”) (Welsh Assembly Government 2004a). Wales also has 963 Sites of Special Scientific Interest (“SSSI”) covering almost 223,000 hectares of land (>10% of Wales) designated to represent the enormous variety of geology, of wildlife habitats and species remaining in Wales; the largest SSSI is the 24,268-hectare Berwyn Mountains, where environmentally sensitive farming and wildlife conservation go hand in hand (George and Roberts, 2002).

In terms of land use, 81% of the land in Wales is used for agriculture, 12% is covered by woodland, and only 8% is categorised as urban (Welsh Assembly Government 2004b). Most designated land in Wales is farmed, or depends upon farming to some degree for its management. Maintenance of beneficial links between man and the land are essential if protected landscapes are to survive. The current emphasis in protected landscapes is on encouraging farmers to become the stewards of both the landscape and the cultural tradition through sensitive management.

### **Llŷn Peninsula AONB case study**

The first case study area, on which this paper focuses is Llŷn Peninsula AONB, which extends west from the mountains of Snowdonia forming the northern limit of Cardigan Bay.

The Llŷn is an area of remarkable contrasts. Although composed mainly of flat and low lying farmland, the landscape of the Peninsula has been transformed by the mountainous backbone of rock strewn volcanic hills,

resulting in spectacular scenery. The geology and landform are reflected in a succession of superb coastal landscapes, with steep craggy cliffs, headlands containing rare coastal heath, sandy and shingle beaches and sand dune systems.

The landscape of Llŷn retains the distinctive marks of a rich historic legacy. The Llŷn has long been an attraction to settlers, especially during the prehistoric period when the principal means of travel was by sea. Positioned alongside an important maritime route, the Llŷn was accessible long before the mountainous Snowdonia region. Around 3000 - 2500 B.C. the first peoples to leave substantial evidence of their existence arrived in Llŷn. The numerous ‘tumuli’<sup>5</sup> scattered across the hillsides of the Peninsula are evidence of their presence. One of the earliest reminders of the past can be found at the Neolithic Axe Factory on the northeastern slopes of Mynydd Rhiw. The Axe Factory produced early tools used by Neolithic and Bronze Age people to create boats, carve wood, and cut up whales. The tools were transported along a sophisticated coastal trading infrastructure to other regions of Wales and as far away as the southern counties of England (Rogers, 1999). Other discernible relics are the mysterious standing stones, possibly of religious significance, left behind by Bronze Age settlers. Numerous of these standing stones can be found embedded in walls and incorporated into the traditional stone built long houses of the region. Circa 500B.C., Llŷn became a magnet for the Celtic Iron Age tribes. These ancestors of the modern day Welsh left their mark in the form of spectacularly sited Iron Age hill-forts such as those found at Tre'r Ceiri<sup>6</sup>, one of Wales most impressive ancient monuments. As the nearest point to Ireland the Peninsula also became colonised in the 3rd century B.C. by the Goidels, a Celtic tribe from Ireland.

### Ynys Enlli



Many Llŷn villages are named after the 6<sup>th</sup> century missionaries who converted local Celts to Christianity. During the 6<sup>th</sup> century early Celtic priests from Brittany established a monastic settlement on Ynys Enlli, an island off Llŷn. With the western seaboard sheltering inhabitants from marauding Saxons the Llŷn became renowned as an important sanctuary. The strenuous journey through mountainous Snowdonia became a religious pilgrimage and the route to Llŷn and Ynys Enlli became known as the ‘Saint’s Road’. Much of what remains of the Llŷn’s small and scattered villages date from the period when the church and monasteries held land in the region.

**(Photo authors own)**

One of Llŷn’s most prominent historical events was the ‘conquest’ of Wales in the 13<sup>th</sup> century by Edward I; an event that was celebrated with a tournament at Nefyn. The rebel Owain Glyndwr launched a famous attack against Edward and his subsequent programme of castle building aimed at keeping the Welsh in subjugation. After Glyndwr’s death the Llŷn left the national arena and by the 15<sup>th</sup> century the region was most noted for agriculture with cattle grazing on low-grade land. A major secondary industry developed with the fishing of Llŷn coastal waters for herring. Shipbuilding developed in the 18<sup>th</sup> century through to the early 20<sup>th</sup> century. During the 20<sup>th</sup> century nearby Porthmadog rose rapidly as a port overshadowing the Llŷn’s maritime importance. Thus agriculture and soft tourism became, and have remained, the Llŷn’s only industries of any significance.

<sup>5</sup> The word tumulus is Latin for a hillock or small mound and the Ordnance Survey use the word on their maps to denote a burial mound of unknown or uncertain type.

<sup>6</sup> 150 huts, which might have supported up to 500 people, can still be seen clearly.

### Farmed landscape at Uwchmynydd



(Photo authors own)

At the foot of Llŷn at Uwchmynydd, the farmed landscape with hedged fields, sprinklings of hedgerow trees, rough pastures and dry heath, is the result of centuries of cultivation. Here, as elsewhere in Llŷn, can be found a collage of patchwork fields, some bearing ancient field patterns, a maze of narrow lanes, small fields enclosed by ‘cloddiau’<sup>7</sup>, stone walls, banks, and hedgerows (Thomas, 1993). Common land at Uwchmynydd, Rhoshirwaun, Rhiw, Bryncroes and Llaniestyn show remnants of classic 19<sup>th</sup> century Parliamentary Enclosures rectilinear fields (Cynefin Consultants, 2003).

The Peninsula is distinctive in that it has a very large proportion of its land surface occupied by semi-natural habitats, a feature recognised in the extent of the landscape that is involved in protection of some form or another. The Peninsula has a RAMSAR site and National Nature Reserve (“NNR”) at Cors Geirch (a postglacial fen between Boduan and Rhydyclafdy) and 20 Sites of Specific Scientific Interest (“SSSI”) (Cynefin Consultants, 2003). The Peninsula has a EU Special Protected Area (“SPA”) between Porthor and Aberdaron; is a European Marine Special Area of Conservation (“mSAC”) and a National Heritage Coastline. The Llŷn Peninsula AONB area, which was designated in 1957, coincides with the Llyn Environmentally Sensitive Area (“ESA”) designation (HMSO, 1997).

The Peninsula is scattered with traditional farmhouses and settlements, with numerous whitewashed or stone buildings, mostly dating back to the 17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> centuries (Cynefin Consultants, 2003).

The Llŷn AONB has a low and ageing population. Over 50% of agricultural workers are between the ages of 45 and 65, with more than 10% working in retirement (Census, 2001). Compared with the rest of the County of Gwynedd, the Llŷn Peninsula is sparsely populated; there are estimated to be a mere 14,400 people living in the AONB area of the Llŷn<sup>8</sup> (161km) yet the mainly coastal AONB is the most densely populated part of the Peninsula (Cynefin Consultants, 2003). Farming and ‘soft tourism’ are the main industries with public services also playing a large role in employment.

Despite economic weaknesses, the language, heritage and traditions remain intact. The mountains of Snowdonia that have shielded the landscape have helped preserve the Llŷn as a bastion of Welsh language and culture. In 2003 a schools census established that 94.4% of the inhabitants of Llŷn aged 3-15 spoke Welsh (pers.comm., Iddon Edwards, CYMAD, March 2003). The agricultural sector is vital to the maintenance of the predominantly farmed landscape, the economy, social structure and language; Welsh is used more widely amongst the farming community than other sectors; a reflection of the contribution of agriculture as a mainstay of the life of the Llŷn over the centuries (Cynefin Consultants, 2003).

Llyn’s farming pattern is of small-scale, traditional, family farms of sheep and cattle with pockets of dairying on better land. Llŷn’s productive land is very sparse and is scattered across the Peninsula. Judicious land use based in small family farms is interspersed with some small fishing communities and tourism, which are mainly located along the coast.

<sup>7</sup> Cloddiau are traditional walls of earth and stone.

<sup>8</sup> These statistics were assembled from 2001 Ward census data for the Llŷn AONB Economic Potential Study.

Growth in consumer demand, along with Llŷn's tourism industry has presented opportunities for locally branded meat and seafood. Successful initiatives include Biff Llŷn and Cig Rose Llŷn farmer co-operatives; Bwyd o'r Mor – Pwllheli Seafood Ltd; and the Llŷn annual food festival. Image promotion of the Llŷn Peninsula and the beauty of the landscape have helped to enhance sales.

Changes in the Common Agricultural Policy ("CAP") subsidy regime have increased the economic significance of environmental conservation as an important aspect of farming within the AONB as elsewhere in the Llŷn. The ESA scheme is located directly within the Llŷn AONB. To a large extent the ESA scheme, established in areas prioritised due to the existence of distinct and valuable landscapes and habitats supported by traditional farming methods, has replaced direct support for food production with conservation measures, especially the protection of biodiversity. This has been of primary importance in the management of the Llŷn AONB. The ESA scheme with aims of maintaining small family farms has played a significant role in enabling Llŷn's sustainable development.

The environmental quality is by far the Llŷn's most important economic asset and conservation of the landscape is a crucial element of sustainable development within the AONB. A study (Cynefin, 2003) found that direct jobs had been created in environmental management and nature conservation, which directly benefit the tourist industry. These types of work derive from farming and the tasks of maintaining and enhancing the high quality landscape. All of these are important facets of the local 'green economy'.

### **Snowdonia National Park case study**

The second case study area is Snowdonia National Park. The northern extremity of Snowdonia reaches to the Menai Strait east of Bangor, follows the Conwy Valley south to Betws y Coed, arrives west at Porthmadog and then traces back towards Caernarfon.

#### **Snowdonia National Park Map**



**(Snowdonia National Park, 2003)**

The main geographical features of Snowdonia are glaciated landscapes with deep 'u' shaped valleys and pyramid shaped peaks on which fluvial processes have acted during the last 10,000 years (Insight Publications, 1998). There is a strong relationship between the coastal zones and inland mountains due to the short geographical distance between zones from sea level to the uplands.

Snowdonia National Park has a variety of landscapes that range from soaring mountain peaks, open moorland and alpine valleys containing rare arctic alpine plants, to ancient old climatic oak woodlands, sensitive coastal dunes and large estuaries such as the Mawddach, Glaslyn and Dyfi (Crew and Musson, 1997).

Archaeological remains from the Neolithic period, the Roman occupation and the middle ages survive in Snowdonia. Ancient stone burial chambers indicate the inhabitation of Snowdonia by humans since 4,000 BC. The burial chambers at Dyffryn Ardudwy and Capel Garmon date from circa 3,000 B.C. Exceptional Bronze Age burial Cairns is situated at Bryn Cader Faner near Talsarnau. The hillforts at Pen y Gaer, Conwy and Llanbedr y Cennin are evidence of later prehistoric settlements. The roads at Caerhun, Tomen y Mur, Caer Gai and Segontium connect a ring of ancient forts. Edward I's castle at Harlech is a stunning reminder of the mediaeval period.

Snowdonia has been dominated by a pastoral tradition since the Neolithic era. A variety of livestock was farmed in Snowdonia until the Enclosure Acts when sheep displaced cattle as the principal livestock. With the Industrial Revolution, numerous mines and hillside galleries were opened with major impacts on the region and communities. Mining in the region involved gold, lead and copper and with slate quarrying on a grand scale. Throughout this period traditional farming practices were maintained. The post war period saw a vast increase in recreational use.

Snowdonia National Park, established in October 1951, covers an area of 840 square miles, contains Snowdon (3,565 foot) the highest mountain in Wales, and is home to 26,267 inhabitants who live and work in its towns and villages, and on its hill farms. 65% of the population speak Welsh (Census, 2001).

Snowdonia National Park was established to protect beautiful and relatively wild countryside by:

- "Preserving the characteristic beauty of the landscape
- Providing access and facilities for public open-air enjoyment
- Protecting wildlife, buildings and places of architectural and historic interest

Whilst allowing:

- Sustainable farming to continue as before"

(HMSO, 1971)

Strictly speaking Snowdonia National Park is neither 'national' nor a 'park' since less than 25% of the land is owned by public bodies. Farmers, The National Trust and other landowners own the land of the Park and Snowdonia NPA control development, hold land, grant-aid farmers and provide wardens.

Farming, forestry and tourism are the region's major industries. The Parks were designated for everyone to enjoy and the NPAs role is in part to promote access to and provide the opportunities to enjoy the Parks' special qualities. A host of users enjoy Snowdonia for climbing, walking, off-road cycling, horse riding, paragliding, canoeing, kayaking, white water rafting and angling. For all of these activities people have 'de facto' rights of way through the National Park (George and Roberts, 2002).



An estimated 6 million holidaymakers visit Snowdonia every year to enjoy a wide range of leisure activities and over half a million of these visitors walk up the six paths to the summit of Snowdon (pers.comm., NPA Warden, Spring 2004). Because of the ever-increasing number of visitors to Snowdonia, the NPA faces a huge challenge in terms of recreation management. The physical impact on the environment from the level of visiting creates a dilemma. The NPA must supply interpretation, car parks and toilets, clear footpaths and litter; there can be conflicts between activities. In addition a balance needs to be struck between the demands and the impacts which recreation makes on the environment to avoid damaging the assets on which the popularity of the Snowdonia countryside depends (George and Roberts, 2002).

The demographics of Snowdonia have changed dramatically in recent decades. In line with national trends the average age of the population has increased. In Snowdonia the situation is exacerbated by complex factors; young people are moving away from the area to find employment causing great anxiety to farming families and rural communities. In some areas of Snowdonia, problems of depopulation are worsened by remoteness. With 2,354 people per 1,000 hectares in Britain (World Resources Institute, 2004), space is in scarce supply and great demand. People want to own land and its price and scarcity has risen accordingly. In the more accessible and scenic parts of the Park the population is increasing due to retirees and second home investors from outside moving into Snowdonia.

The scenic beauty of Snowdonia's upland farming areas has been partly created by centuries of livestock rearing. Snowdonia National Park is as a 'marginal' farming area as it is on the economic margins of land that can be farmed. Within the Park upland farms are particularly vulnerable to economic and environmental factors because of the adverse climate, terrain and soil.

Snowdonia's poor soils, harsh climate and relief have led to hill sheep farming being the most important form of agriculture. The hardy Welsh Mountain sheep raised in the area are from smaller, hardier breeds than those from lowland farms and they tend to sell for less. Farms in the mountains tend to be small and the farmers find it difficult to make a living. The long history of the transhumance traditional farming system that involved the movement of livestock to high pasture in the summer is a continued management practice. Sheep that graze hill pastures in the summer are brought down the slopes for over wintering. Support via the CAP subsidy regime and LFA status has enabled the continuation of production in many of these farms. Without external support traditional farming and its wider societal benefits cannot survive in the area.

Snowdonia National Park is involved in various schemes that encourage farmers to restore landscape features such as stonewalls and traditional buildings, and protect and enhance specific wildlife habitats such as moorland and native woodland.

The Tir Gofal scheme launched in March 1999 and its predecessor Tir Cymen<sup>9</sup> the whole farm pilot scheme set up in 1992 have helped to maintain the landscape of the Park and ameliorate some of the impacts of recreation<sup>10</sup>. Participants to the scheme enter into NPA administered whole farm management agreements in which farmers adopt environmentally friendly practices, preserve traditional stonewalls and field patterns, maintain 'public rights of way' and keep reasonable stocking levels in return for assistance with the cost of maintaining stiles, footpaths, stone walls and fences (CCW, 2003).

Increasingly farming in the area aims to secure added value to local agricultural products via an emphasis on quality, marketing and branding. For the most part upland farms only sell small quantities of produce and farmers have joined forces and consolidated stock brought to market to attract bigger buyers. There are

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<sup>9</sup> Tir Gofal, a whole farm agri-environment scheme for Wales, encourages farmers throughout Wales to maintain and enhance the agricultural landscape and its wildlife and to provide new opportunities for people to visit the countryside. It replaces the previous schemes such as Environmentally Sensitive Areas and Tir Cymen.

<sup>10</sup> Tir Gofal Agreements are worth on average at £10,000 per year per farm. In the first three years, 293 farms were signed up to the Tir Gofal Scheme in the area.

numerous incidences where producers are joining together their marketing efforts to provide continuity of supply and quantity. The Snowdonia Mountain Lamb cooperative sells Welsh mountain lamb and Welsh black beef; small, traditional breeds evolved through centuries. The NPA provides grants via its Welsh Assembly funded Cae Arbrolfal Eryri (“CAE”) scheme to help farmers with marketing and branding of goods of local provenance (pers. comm., NPA Officer, Spring 2004). Funding from Farming Connect helps farmers with labelling and branding; identifying the needs and willingness to pay of various market-segments; and offers advice on how to meet these demands (pers. comm., NPA Officer, Spring 2004).

### **The impacts of change on ‘cherished landscapes’**

In the Llŷn Peninsula and in Snowdonia National Park, as in Wales and in the rest of Britain, there is little of any of the landscape that is genuinely natural or untouched by human hand. Since 5,000 years ago during the early Neolithic period Britain transformed bog, marsh and woodlands to farmland. The pastoral landscape of the Llŷn and the dramatic mountain scenery of Snowdonia owe much to the dynamic interaction between people and their natural environments and generations of farmers in particular. Traditional pastoral farming involved management practices that did not over-exploit the natural carrying capacity of the land. (Bignal and McCracken 2000). The abundance of lowland and upland pastures, the hayfields and meadows and heath have supported a major increase in the plants and animals of open and successional landscapes.

From the 18<sup>th</sup> century until the early 20<sup>th</sup> century pastoral and mixed farming systems developed that differed by region, with breeds of livestock suited to the local environment and markets. Upland and hill areas produced livestock for finishing in the lowlands. Post war Government incentives encouraged intensification, mechanisation and specialisation. When John Dower reported on how National Parks might be introduced in England and Wales in 1945 he recommended the maintenance of established farming uses, however one critical aspect of the changing landscape has been the development of new farming methods (Bignal and McCracken 2000). Farmers who once sustained the landscape have been responsible for changing it. Today, many habitats and species are at risk due to changes in farming practices (Buckwell, 1997).

Key changes which have taken place since 1945 have had a significant impact on the landscapes in many parts of Wales; traditional field patterns have been altered with changes to field boundaries and seasonal colour has been lost with the disappearance of heather, gorse and flower meadows. Ancient oak woodlands have now all but disappeared. A number of areas have witnessed serious environmental degradation, for example some lowlands have lost their flower rich meadows; small wetlands have been drained, and purple coastal heaths have been reduced to small fragments. Numerous heaths have been created by human activity and their nature has depended on continued management, but farming changes have seen the demise of many traditional practices. The village poor no longer need common land, grazing practices have changed and the heaths have become abandoned to gorse scrub or they have been destroyed by the plough, limed and fertilised. Hedges have been uprooted to make larger fields and areas of moorland have been planted with conifer (Thomas, 1993).

As in the rest of Britain, many landscapes in Wales have been forced to change in a response to economic demands taking precedence over environmental and cultural priorities. Thus far the Llŷn Peninsula and Snowdonia National Park retain a wealth of wildlife species (e.g., bottle-nosed dolphins, cought, osprey the rare Snowdon Lily), ecosystems and cherished landscapes, many of which are of British and international importance. However as farmers now trade in a global market, there is substantial financial pressure in the Llŷn and Snowdonia National Park as elsewhere on the traditional farming practices that have helped to shape the landscape and the culture. As in other areas of Britain, rural areas of Wales are changing in the face of globalisation, economic restructuring, migration, and other social and policy changes (Roberts, 2002). Major challenges include population changes, climate change, moves towards renewable sources of

energy such as wind farms, EU enlargement and as well as the introduction of the new Single Farm Payment ("SFP"), cross-compliance, and decoupling as part of the new reforms of the CAP.

The human ecosystems of the Llŷn Peninsula and Snowdonia National Park are in a great state of dynamic change at a number of scales. Both the Llŷn and Snowdonia are facing serious issues with regard to an increasing number of second homes. Whilst many communities can stand a certain percentage of second homes, once it becomes a majority the community begins to die. Pockets within Llŷn and Snowdonia face problems regarding the sustainability of rural communities in the face of depopulation and the break up of community life from the lack of affordable housing for local people. Where village communities die out, major changes will unavoidably take place for the wildlife and the landscape. This is true also where monocultural systems are developed on a wide scale, or traditional upland grazing systems cease to operate; the human inhabitants, the wildlife and the landscape feel the affects. When cherished rural landscapes are altered in any way, this damages the 'bro' (homeland) or 'sense of place'. It is now widely recognised that protected landscapes cannot survive or achieve their aims without local support.

The Llŷn and Snowdonia both suffer from low economic activity, with GDP per head in some parts below the average for the rest of Wales and the Valleys Objective 1 region, which in turn is nearly 30% below the UK and EU averages. In both Llŷn and Snowdonia there are too few economic opportunities for the young and too great a rate of out-migration. Llŷn and Snowdonia are also amongst the most deprived throughout Wales in terms of access to essential facilities, services and centres of work. The landscapes of the Llŷn Peninsula and Snowdonia National Park are dependent upon environmentally sensitive farming and represent a key economic asset. In the present day these rare landscapes promote a rich cultural heritage and provide economic benefits, which lay the foundations of a multi million pound 'soft tourism' industry. With sustainable development the Llŷn Peninsula and Snowdonia National Park have great capacity to increase revenue from the environmental resources of the countryside.

The importance of cherished landscapes makes them a focus for initiatives aimed at conservation and the sustaining of the rural economy. In turn, conservation and enhancement leads to employment on the land, the retention of indigenous rural skills (for example rural crafts and land management skills, the production of organic food and local branding), a high quality of life for inhabitants and an attraction for investors. Visitors attracted by the landscape encourage support for footpath and dry stonewall repairs, hedge laying, woodland planting and the maintenance and repair of traditional buildings. In this way cherished landscapes become important economic drivers.

### **Recognition of the environmental aspects of agriculture and the influence on policy development**

High price supports and some of the CAP structural support measures have had damaging effects on the rural environment (Bignal and McCracken 2000). Whilst the CAP promoted the modernisation of agriculture, Food Mountains and negative effects on the air and global climate, water, soil and on landscape and biodiversity accompanied this transformation. The unnecessary damage largely resulted from an over-expansion and over-intensification of agriculture. However the CAP has not had only negative environmental impacts (Buckwell, 1997).

Agri-environmental policy, which emerged from a failure of 1950s and 60s policy mechanisms to balance productivity with the pressures on the rural environment at an acceptable cost, began with Regulation 797/85, which provided the basis for the establishment of ESAs (Whitby, 1994; Potter, C. 1988).

In the 1990s a variety of initiatives governed by the EC agri-environment Regulation 2078/92 and some environmental provisions in the Objective 1 and 5b structural measures encouraged environmentally friendly farming, playing a constructive role in environmental protection. Also the CAP has enabled the continuation of production in some farming systems, which may not have survived under world market

conditions (pers. comm., Julian Salmon, Director of the CLA Wales, July 2004), with important consequences for preserving cherished environmental and landscape features.

The growing emphasis on rural as opposed to exclusively agricultural development was acknowledged in the 1996 document ‘Cork Declaration, Rural Europe - Future Perspectives’ (Winter, 1998). Regulation 1257/99, also known as the Rural Development Regulation (“RDP”), was aimed at simplifying the framework for supporting rural development by combining nine former regulations into one to provide a wide range of schemes (Falconer, and Ward, 2000). The RDP placed an emphasis on ‘second pillar’ initiatives, allowing individual countries to present ‘packages’ designed to deliver sustainable rural development in their respective situations<sup>11</sup> (Defra 2001).

The Declaration of the Berlin Council, March 1999 (Regulation 1259/99) indicated the political will to take environmental concerns into account in all agricultural activities. Regulation 1259/99 made the granting of agricultural aid subject to the fulfilment of ecological conditions and stipulated environmental requirements in relation to the granting of direct support (Vidal, 2001). Regulation 1259/99 also established a framework of support for sustainable rural development; and reforms in the agricultural commodity sectors; complemented by closely integrated measures to support rural development and to protect and improve the environment (Defra 2001).

Agri-environment policy development now reflects more closely the changing concerns of society over farming and the environment. It is now recognised that the countryside and its residents depend heavily upon farming and its farmers for the achievement of environmental and conservation objectives. The success of agri-environmental schemes depends upon individual farmers who upon the adoption of a scheme must incorporate the associated activities within the farm business. Individual farmers therefore play a decisive role in fulfilling policy objectives (Madsen, 2003).

In addition to providing food, agriculture in Wales contributes to cherished landscapes, it helps to maintain the culture and the language and it supplies rich and diverse wildlife and habitats, historic features and public access. These ‘environmental’ aspects of agriculture have influenced the directions of Welsh Assembly Government policy development. Substantial progress has taken place in agri-environmental support in Wales since devolution from centralised government in 1999.

### **Agri-environmental payments for protecting and enhancing the environment**

Farming in protected areas produces significant social and environmental benefits and there is an argument for funding protected areas with Environmental and Cultural Landscape Payments (“ECLP”) (Buckwell, 1997). There are a number of schemes in Britain under which farmers are paid for countryside management. The largest agri-environment scheme in the UK is the ESA. Within the ESA farmers enter into voluntary ten-year agreements to undertake specific management practices and, if they so wish, enhance, extend or restore features of particular conservation value. Farmers within the scheme are compensated by annual payments for managing their land in ways that may be less profitable, but are more sensitive to the environment. Each ESA has its own specific environmental features that make it unique. Consequently, land management requirements differ from area to area, as do the payments. The Llyn ESA, which coincides with the Llŷn Peninsula AONB, was designated in 1988 and to date approximately 300 farms are beneficiaries of ESA agreements covering in total 15,000 hectares (pers. Comm., Llyn ESA Officer, March

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<sup>11</sup> For example, in Wales the package includes a range of socio-economic and agri-environmental measures such as Tir Gofal (farm support scheme), accompanied by additional measures drawing down structural funds in support of the Wales SPD. The FWPS and WGS now also operates against a backdrop of strategic initiatives such as the Woodlands for Wales strategy, Adfywio (grant scheme funded by the Welsh Assembly Government to help rural economic recovery in Wales), the Welsh Woodland Network and Wales’ contribution to the UK Biodiversity Action Plan.

2003). Under the ESA scheme farmers are paid grants to farm in accordance with a tier of environmental regulations. The designation of the Lleyn ESA has been instrumental in encouraging farmers to retain traditional landscape and wildlife features.

Agri-environment measures that pay farmers to protect and enhance the environment have helped to enhance wildlife habitats including lowland wet grassland and heathland, creating new sources of employment and income:

- “The Countryside Stewardship scheme created an estimated 300 new jobs in 1995, and has maintained the incomes of nine out of ten participating farmers
- Tir Cymen created 200 new jobs in three pilot areas of Wales
- ESA schemes have been shown to create employment and new sources of farm income in rural areas
- Support for organic farming benefits birds and other wildlife. Organic farming is more labour intensive than conventional agriculture and offers scope for job creation in local processing and marketing”

(Rayment 1998)

#### **Payments for Environmentally Friendly Farming Wales (£ million)**

	<b>2000-01</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>
Tir Gofal	4.5	5.7	11.1	13.4
Organic Farming Scheme	3.1	1.6	2.5	2.7
Other Environmental Schemes	13.6	13.5	10.8	6.3

**(Welsh Assembly, 2004a)**

From 1st April 1999, the Tir Gofal Scheme (Tir Gofal means ‘Land Care’) in Wales came into operation replacing a number of earlier the former Welsh Office and CCW schemes, including the Farm and Conservation Grant Scheme, the Welsh Habitat Scheme, ESA and Tir Cymen and the Orchards and Parkland Scheme.

The whole farm environmental scheme, which was developed for the former Welsh Office by the CCW and which has EU funding, is run by the CCW and administered and monitored by Snowdonia National Park.

The scheme encourages farmers throughout Wales to maintain and enhance the agricultural landscape and its wildlife, and takes forward the experience of previous systems in a single whole farm scheme. It is the first scheme in Wales and in Europe aimed at promoting whole farm conservation and management. Tir Gofal differs from previous schemes in that it brings farming and conservation into a different level of partnership (pers. comm., NPA Officer, Winter 2003).

Tir Gofal has been designed to meet the requirements of the UK Biodiversity Action Plan, as well as contribute to the enhanced management of the Natura 2000 network (AGRA Ceas Consulting, 2003). Tir Gofal also provides a practical demonstration of the principles of sustainable development. All Tir Gofal agreements incorporate a basic Whole Farm Section that seeks to ensure that the management of all the land entered into the scheme is compatible with good environmental practice over and above the requirements of

the Code of Good Agricultural Practice. The Whole Farm Section is aimed primarily at the protection of landscape, wildlife and historic features as well as the maintenance of opportunities for public access to the countryside. In addition, any existing wildlife habitats on the farm must be managed according to standard prescriptions that set specific requirements in terms of grazing levels, pesticide usage and the application of fertilisers. Under the Voluntary Options Section of the scheme, farmers may opt to receive payments in return for managing their land according to a set of detailed prescriptions, compliance with which is mandatory once included in the agreement.

There are four main objectives to Tir Gofal:

1. Habitat restoration and creation dealing with biodiversity at a 'landscape scale' (encouraging biodiversity).
2. Landscape management (preserving local rural character).
3. Historic and archaeological features (protecting archaeological sites, traditional farm buildings and field boundaries, and other historic features).
4. Access (public access paths across land).

(AGRA Ceas Consulting, 2003).

None of the earlier schemes were widely available; they excluded many farmers, and lacked an archaeological heritage component. Tir Gofal is open to farmers, landholders, tenants or owners. The area of land entered must be the 'whole farm', i.e. the whole business and must be a minimum of three hectares in area. If accepted into the scheme landholders must sign a ten-year agreement (with a five year break clause) and agree to these elements:

1. Land management.
2. Creating new permissive access.
3. Capital works.
4. Training for farmers.

(AGRA Ceas Consulting, 2003).

In 2004 there were over 2,200 Tir Gofal agreements across Wales covering some 220,000 hectares, with over £30 million invested as a result. (WAG, July 2004). Tir Gofal payments help to maintain the viability of farms, in addition to local communities.

### **Comparison between the management models of Llŷn ESA and Tir Gofal, Snowdonia National Park**

A pilot study of farmers, project managers and administrative officers involved with Environmentally Friendly Farming ("EFF") was undertaken in the summer of 2004. This complements an ongoing and detailed survey of farmers in the catchment areas for the two schemes. Further research in the subject area aims to assess factors that affect farmer's ability to participate in the two EFF schemes, which are compared.

The Llŷn ESA was introduced in January 1989 during the earliest round of such initiatives in the UK (Thomas, 1993) and as such has been around for 15 years, during which time the devolution from central government in Westminster and local government reorganisation has taken place in Wales. Surveys undertaken of ESAs have demonstrated environmental benefits from the scheme. The scheme is drawing to a conclusion and has closed to new applicants.

Targeting nationally important features via the ESA indicated a higher concern within the scheme for regional characteristics. The emphasis of the ESA was on encouragement to safeguard, rather than payment for improvement. ESAs operated on both a whole farm and a part farm basis and the tiered approach offered either discretionary or compulsory landscape and land use objectives with associated prescriptions. One of the main complaints about the ESA scheme during the July 2004 surveys was that it has been too bureaucratic and lacked flexibility. One questionnaire respondent stated that a more flexible approach to agri-environmental schemes that allowed integrated operational plan making on-farm was essential (pers. comm., July 2004).

The establishment of the Welsh Assembly Government was associated with the Tir Cymen pilot scheme in three areas, or 10% of Wales; Snowdonia National Park was one of these areas and while the schemes all-Wales successor (Tir Gofal) is an endorsement of its success, some values have been lost in the extension. This scheme is now set to be the EFF for all Wales, geographically, if not for all farmers, due to funding levels limiting the numbers accepted into the scheme.

Both the ESA and Tir Gofal have been concerned with the provision of payments to farmers for the maintenance and enhancement of wildlife, landscape, historic and archaeological features and the provision of access opportunities. However the fundamental difference has been that Tir Gofal is not targeted at specific geographic areas (AGRA Ceas Consulting, 2003), although local targets are often applied. Tir Gofal is available to any farmer or landowner throughout the whole of Wales. It is a scheme for the wider countryside whilst the ESA targeted specially designated areas. The policy development that led to Tir Gofal reflects dissatisfaction with area-targeted schemes that did not provide opportunities for farmers across Wales. Tir Gofal entry is dependent on environmental merit and gives a wider scope for environmental enhancements that have included the creation of new habitats such as woodland and the restoration of landscape features such as hedges and stone walls. Other enhancements have included the provision of new public access, the creation of streamside corridors, and the management of arable land without the use of pesticides.

Tir Gofal was originally a competitive scheme but this has had to be modified. New entrants to Tir Gofal must apply through a strict scoring system and a number are not successful (AGRA Ceas Consulting, 2003). Under the present regime the number of applicants for Tir Gofal are limited and it is perceived that preference is shown to those farmers within the National Parks (pers. comm., July 2004). One survey questionnaire respondent remarked that the scoring of schemes has to date favoured the smaller un-intensive farms and very large ecologically diverse holdings. This is proving to be politically unsatisfactory because family farms are not profiting to as great an extent as the smaller farms and very large holdings (pers. comm., July 2004). Several farmers remarked that they considered the administrative arrangements to be far too slow; other farmers reported that they found the entry standards too demanding (pers. comm., July 2004).

There is also the important recognition that some environmental benefits cannot be delivered on isolated farms (WAG, 2003). This is an important criticism of all the agri-environmental schemes to date. Some important issues can only be addressed via a concerted action across a number of neighbouring farms, e.g., safeguarding traditional landscape features, dealing with public access issues and enhancing biodiversity across a broad landscape (WAG, 2002). As a result there are now numerous calls to complement Tir Gofal with a broader and wider approach and there is pressure from farmers who believe that if they all contribute through modulation towards agri-environmental funding then they should all be able to benefit (WAG, 2003). The new SFP and changes to how farmers receive support may go some way to solving the latter dilemma.

Tir Cynnal the new entry-level agri-environment scheme is expected to broaden the opportunities for farmers in Wales to take part in agri-environment work and spread the available funding more widely. Tir Cynnal provides farmers with opportunities to undertake agri-environment work by following a basic set of

conditions to protect the areas and features of environmental importance on their land. Tir Cynnal involves levels of environmental protection that are greater than the legal or cross-compliance requirements of the SFP<sup>12</sup>, but which are not as demanding as those in the Tir Gofal scheme. Land subject to an agreement under the closed ESA scheme will be eligible for an agreement under Tir Cynnal when the ESA agreement has run for its prescribed duration.

### End note

So far, the security and clarity of future financial resources for land management in Wales has been scanty. Whilst the all-Wales agri-environment scheme, Tir Gofal, has the potential to make an impact on wildlife and landscape conservation whilst promoting opportunities for access to, and enjoyment of the countryside, its popularity far exceeds the ability to fund Tir Gofal agreements more widely.

The current period of reform of the CAP involves the SFP, cross compliance and decoupling. Whilst the SFP scheme will allow farmers to focus on their businesses and farm in response to market needs rather than chase subsidies as they have done in the past (pers. comm., Julian Salmon, Director of the CLA Wales, July 2004), the reform package of full decoupling under EU Regulations pose some challenges. The SFP is subject to farmers meeting minimum standards in significant areas such as the environment and animal health and welfare. In addition, farmers must also keep land in good agricultural and environmental condition. In order for the SFP and Tir Cynnal to be wholly successful, training in environmental management will now need to be a component of the schemes.

The new CAP is planned to give farmers the freedom to produce what the market wants, with the majority of support paid independently from the volume of production, thus severing the links between subsidies and production, enabling farmers to become more competitive and further improve the quality of their produce (pers. comm., Julian Salmon, Director of the CLA, Wales, July 2004). In order to avoid land abandonment, regions such as Wales are encouraged to implement measures targeted at specific sectors. Thus the reformed CAP can be easily used by policy makers to bring about support for environmentally friendly production, especially in the geographically and economically marginal farming areas. Flexible and adaptable policies are needed to unlock the potential of protected areas and their inhabitants so that they can meet public demands, manage change and prosper. Flexible and adaptable policies will also need sensitive and sensible policy implementation at ground level with farmers helping themselves.

All farmers within Wales should have the opportunity to offer environmental benefits and ideally the Welsh Assembly's resources should aim to provide the highest possible environmental gain. In the long term there is a strong case for providing a widely available whole farm scheme designed to bring all agricultural land in Wales to a basic level of environmental care and to introduce a scheme to help farmers work together in joint action to tackle problems. However in the short term, recognising that resources are limited, perhaps value for money may be achieved by targeting priority areas. As the case studies have shown, areas designated for national and international environmental importance are a fundamental priority as they are an irreplaceable asset to Wales and its inhabitants. In addition to their established roles of protecting nature and culture (Bignal and McCracken 2000) they also have other important environmental, social and economic function and advocate sustainable development. They are models of sustainable agriculture, soft tourism and other important resource uses. Moreover the communities within these cherished landscapes offer important lessons for other rural communities as they struggle with growth and change.

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<sup>12</sup> Claimants to the new Single Farm Payments will have to meet environmental, animal health and welfare, public health and plant health conditions under a range of existing European laws, to improve the sustainability of agriculture and to give extra protection to the environment, soil, wildlife habitats and the landscape.



## Bibliography

AGRA Ceas Consulting (2003) *Mid Term Evaluation of the Rural Development Plan for Wales*, Final Report of the Welsh Funding Office.

Bignal, E.M. and McCracken, D.I. (2000) *The nature conservation value of European traditional farming systems*, *Environ Rev./Dossiers Environ*, 8(3): 149-171

Brouer F., Lowe P., (eds.) (2000) *CAP Regimes and the European Countryside*, Wallingford Oxfordshire: CAB International

Buckwell, A (April 1997) *Towards a Common Agricultural and Rural Policy for Europe*, Report of an Expert Group, Directorate General VI/A1

Buller H, Wilson GA and Höll A (Eds.) (2000) *Agri-environmental policy in the European Union*, Ashgate Publishing Ltd, Gateshead: England

CCW (Winter 2003) Tir Gofal – the way ahead, *Adain y Ddraig* - Issue 36

CCW, National Trust, WDA, WTB, Environment Agency Wales, RSPB, Heritage Lottery Fund and CADW (2001) *Valuing Our Environment*, Countryside Council for Wales

CCW (1999) The Living Environment of Wales' *State of the Environment Report*, Countryside Council for Wales

Council Regulation (EC) No 2078/92 of 30 June 1992 on agricultural production methods compatible with the requirements of the protection of the environment and the maintenance of the countryside.

Council Regulation (EC) No 1257/1999 of 17 May 1999 on support for rural development from the European Agricultural Guidance and Guarantee Fund (EAGGF)

Council Regulation (EC) No 1259/99 establishing common rules for direct support schemes under the common agricultural policy.

Council Directive 75/268/EEC of 28 April 1975 on mountain and hill farming and farming in certain less-favoured areas

Countryside Agency (2001a) *Area of Outstanding Natural Beauty Management Plans*, A guide, CA23

Countryside Agency (November 2001b), *Areas of Outstanding Natural Beauty: A guide for AONB partnership members*, CA 24: England, p. 6.

Countryside Commission (1991) *Areas of Outstanding Natural Beauty: A policy statement*, CCP 356, p. 5.

Crew, P and Musson, C., (1996) *Snowdonia from the Air: Patterns in the Landscape*, Royal Commission on the Ancient and Historical Monuments of Wales: Aberystwyth

Cynefin Consultants (2003) *Economic Potential Study of Llŷn Peninsula AONB*, prepared on behalf of Gwynedd Council, by Professor Tom Pritchard, Susan Roberts, Professor D Jones-Evans, Rhys Roberts and Graham Wild

- Defra (2000) *Rural White Paper: Our Countryside: The Future - A Fair Deal for Rural England*, Department for Environment Food and Rural Affairs: England
- Defra (2001) *Drivers of Countryside Change - Final Report*, Department for Environment, Food & Rural Affairs
- Falconer, K and Ward, N (January 2000) *Modulation and the Implementation of Common Agricultural Policy Reform in the UK*, Centre for Rural Economy Working Paper Series, Working Paper 50
- George, G and Roberts, S (2002) *E-MBA Countryside Management, Countryside Recreation Management Module*, University of Wales Bangor, The School of Business and Regional Development
- HMSO (1971) *National Parks and Access to the Countryside Act 1949 and the Countryside Act 1968*, Department of the Environment; Welsh Office
- HMSO (1997) *The Environmentally Sensitive Areas (Lleyn Peninsula) Designation (Amendment) Order 1997*, Statutory Instrument 1997 No. 972
- Insight Publication (1998) *Insight Compact Guide North Wales/Snowdonia*, Langenscheidt Publishers, Inc
- Madsen, Lene Møller (2003) *New woodlands in Denmark: The role of private landowners*, Urban Forestry & Urban Greening: Urban & Fischer Verlag
- Partington, R., Maliphant, A and Robinson, T., (2003) *National Park Designation: a Review of How the Criteria Are Applied*, Countryside Agency: Special Areas Branch
- Porteous, J.D. (1996) *Environmental Aesthetics: ideas, politics and planning*, Routledge: London and New York
- Potter, C. (1988) Environmentally Sensitive Areas in England and Wales, *Land Use Policy* 5,301-313
- Rayment Matthew, *Nature Conservation, Jobs and Local Economies*, RSPB, 1998
- Rogers, C (1999) *Walking on the Lleyn Peninsula*, Mara Publications
- Roberts, S (2002) *A UK Evaluation of Regulation (EEC) No 2080/92, of 30 June 1992, Community Aid Scheme for Forestry Measures in Agriculture*, MA Thesis, University of Wales Bangor.
- The National Trust (2000) 'Llyn - A special place' "Llyn - Lle arbennig"
- Thomas, E (1993) *The socio-economic context of agri-and ecological change on Lleyn Peninsula*: PhD University of Liverpool
- Vidal, Claude. (2001) *Extensive areas account for at least 42% of agricultural land*, European Communities: Eurostat
- Welsh Assembly Government (2002) *Farming for the Future – A New Direction for Farming in Wales*, The Department for Environment, Planning and the Countryside, Cardiff: Wales
- Welsh Assembly Government (2003) *Welsh Farming Facts and the Environment: Consultation of a New Approach. An Entry Level Agri- Environmental Scheme for Wales*, Cardiff: Wales

Welsh Assembly Government (2004a) *Farming Facts and Figures*, The Department for Environment, Planning and the Countryside, Cardiff: Wales

Welsh Assembly Government (2004b) Key Environment Statistics for Wales, 2004, *Statistical Bulletin* 8/2004

Welsh Assembly Government (July 2004) Over £0 million invested in enriching the Welsh countryside, *Gwlad: Agricultural and Rural Affairs Information from the Welsh Assembly Government*, Issue 30, p. 19

Whitby, M. (ed.) (1994) *Incentives for Countryside Management: The Case of Environmentally Sensitive Areas*. CAB International

Winter, M (1998) From MacSharry to Cork and Beyond: *CAP Reform, Environmental Agriculture and Integrated Rural Development*, Paper presented to RGS-IBG Annual Conference, Kingston, with Pete Gaskell.

Winter, M (1999) *Whole Farm Integrated Management and the contribution to biodiversity*, Paper presented to ADAS International Conference on Agriculture and the Environment, University of Warwick, April, with D R Wade, D G Chapple and R M Laverick.

World Resources Institute, Retrieved July 12, 2004, *World Population Data*, from <http://www.wri.org/wri>