Land Use Policy Group

The GB statutory conservation, countryside and environment agencies

CONCEPTUAL MODELS TO GUIDE ENVIRONMENTAL LAND MANAGEMENT POLICY

Prepared for
The Land Use Policy Group
by
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www.lupg.org.uk

ENGLISH NATURE
Rural Development Service
SCOTTISH NATURAL HERITAGE
ENVIRONMENT AGENCY
Cyngor Cefn Gwlad Cymru Countryside Council for Wales
The Countryside Agency Landscape Access Recreation
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The Land Use Policy Group

The Land Use Policy Group (LUPG) of the GB statutory nature conservation, countryside and environment agencies comprises the Countryside Agency, Countryside Council for Wales, English Nature, Environment Agency, Joint Nature Conservation Committee, Scottish Natural Heritage and the Rural Development Service. The LUPG aims to advise on policy matters of common concern related to agriculture, woodlands and other rural land uses. It seeks to improve understanding of the pros and cons of policy mechanisms related to land use, particularly farming and forestry; to develop a common view of desirable reforms to existing policies; and to promote these views. www.lupg.org.uk

The Countryside Agency

The Countryside Agency (CA) is the statutory body working to conserve and enhance England's countryside, spread social and economic opportunity for the people who live there, help everyone, wherever they live and whatever their background to enjoy the countryside and share this priceless asset. The Landscape, Access and Recreation (LAR) division was established from 1 April 2005 as one of two distinctive new divisions (the other is the Commission for Rural Communities). The LAR division is concerned with protecting our landscape for now and future generations whilst also encouraging respect and enjoyment of our beautiful countryside.
http://www.countryside.gov.uk/LAR/index.asp

Countryside Council for Wales

Countryside Council for Wales (CCW) is the government's statutory adviser on sustaining natural beauty, wildlife and the opportunities for outdoor enjoyment throughout Wales and its inshore waters. With English Nature and Scottish Natural Heritage, CCW delivers its statutory responsibilities for Great Britain as a whole, and internationally, through the Joint Nature Conservation Committee.
www.ccw.gov.uk

English Nature

English Nature is the government agency that champions the conservation of wildlife and geology throughout England. It does this by: advising government, other agencies, communities and individuals; regulating activities affecting the special nature conservation sites in England; helping others to manage land for nature conservation and advocating nature conservation for all and biodiversity as a key test of sustainable development. www.english-nature.org.uk

Scottish Natural Heritage

Scottish Natural Heritage (SNH) is a government body established to secure conservation and enhancement of Scotland's unique and valued natural heritage – the wildlife, habitats and landscapes that have evolved in Scotland through long partnership between people and nature. SNH advises on policies and promotes projects that aim to improve the natural heritage and support its sustainable use. Our aim is to help people to enjoy Scotland's natural heritage responsibly, understand it more fully and use it wisely so it can be sustained for future generations.
www.snh.org.uk

The Environment Agency

The Environment Agency (EA) is the leading public organisation for protecting and improving the environment in England and Wales. We achieve this by regulating industry, maintaining flood defences and water resources, and improving wildlife habitats, in addition to our many other activities. We also monitor the environment, and make the information that we collect widely available.
www.environment-agency.gov.uk

Rural Development Service

The Rural Development Service (RDS) is the largest deliverer of England Rural Development Programme (ERDP) grant schemes for land managers and rural businesses and also delivers a range of other rural services. Around 1500 staff work in multi-skilled teams in eight regions in order to provide a face-to-face service for our customers. RDS also provides an effective link to the development of national and regional policy.

We work with rural partners and local people to achieve sustainable development by:
• enhancing the environment
• improving the conservation of wildlife and biodiversity
• strengthening rural economies and communities.
www.defra.gov.uk/rds/default.asp

Joint Nature Conservation Committee

The Joint Nature Conservation Committee (JNCC) is the forum through which the three country conservation agencies – CCW, English Nature and SNH – deliver their statutory responsibilities for Great Britain as a whole, and internationally. These responsibilities contribute to sustaining and enriching biological diversity, enhancing geological features and sustaining natural systems. As well as a source of advice and knowledge for the public, JNCC is the Government's wildlife adviser, providing guidance on the development of policies for, or affecting, nature conservation in the UK or internationally.
www.jncc.gov.uk

Disclaimer

This report was produced by the authors on behalf of the Land Use Policy Group (LUPG). The views expressed within the report are those of the contractors and do not necessarily reflect the views of the agencies within LUPG.

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FOREWORD

Sustainable land management in all Europe's rural areas is vital, both to maintain a high quality environment for Europe's citizens and to deliver EU environmental commitments. A solely market-driven agriculture is likely to fail to deliver and reward the provision of environmental public goods, the costs of which are typically borne by individual farmers, whilst the benefits accrue to society as a whole. Thus a major role of rural policy is to intervene in the way land is used, to encourage positive environmental externalities. This might be through regulation and fiscal measures, incentive-based schemes such as payments for environmental services or advice. Because the role of European Rural Development policy has emerged as a "second pillar" of the Common Agricultural Policy, it has so far been largely focussed on farmers in their agricultural activity; but increasingly the scope of Rural Development policy is extending to forestry, nature conservation, wetlands and wider rural actors.

However, as the need for a common European Union Rural Development policy, distinct from a Common Agriculture Policy, increases in importance, there needs to be agreement on the universal principles by which the policy should operate. This is not to undermine the principles of subsidiarity, by which solutions can be developed at the most appropriate level, but a common policy does require a minimum framework of common operating principles and assumptions.

Some of the issues and principles an EU model for Rural Development intervention need to respect are:

- The Single European Market in agricultural products (the "level playing field")
- The need to maintain compatibility with agreements under the WTO
- The correction of positive and negative externalities in an equitable manner
- The "Polluter Pays" ("Provider gets") Principle
- The need to secure higher environmental standards, both as an asset for the European public and as the basis for sustainable prosperity
- Ensuring that delivery of international commitments is done in a consistent and equitable way throughout the Union
- Avoiding the export of environmental problems to non-EU countries

Intervention under the CAP first pillar is relatively straightforward in principle – though often highly complex in practice. However, it is apparent that a variety of approaches to intervention under the second pillar have developed. This may be an indication of welcome subsidiarity and diversity of response; but it may also be associated with a degree of inefficiency or unfair competition. The LUPG has therefore been looking to see if models for intervention can be developed that could help to structure the use of rural development support across the EU.

This report sets out the findings of research to explore an environmentally effective and equitable model for state intervention in rural land-use within the EU.

LUPG want the model to assist in the definition of baseline standards for agricultural and forestry support (such as good agricultural and environmental condition - GAEC) and to underpin payments under agri-environment schemes across the EU. It should also help inform the review of the EU rural development policy in 2005/2006 and clarify the relationship between GAEC and existing Good Farming Practice under the current Rural Development Regulation. Any conceptual model should help define an EU wide system of agri-environmental regulation, cross compliance, advice, tiered incentives, land purchase and other measures for special sites.

The model lies within a paradigm where environmentally beneficial land use is largely secured as an integral part (or by-product) of agriculture, notably expressed as the European multi-functional model of agriculture. There are other paradigms where environmental outcomes can be envisaged dissociated from agriculture, but they are not considered further in the report. In addition, the model only describes ways in which rural intervention can be structured in relation to land use outcomes. It is not designed to set out a framework for the use of agricultural and rural development intervention to achieve either social or economic ends. It is important that clear parallel models are designed to guide support under these headings; the apparent lack of any such models would seem to be hampering the delivery of fair and effective rural development policy, and this may come to undermine the goal of sustainable rural development and associated environmental benefits this brings.

The Land Use Policy Group

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EXECUTIVE SUMMARY

This report has been commissioned by the Land Use Policy Group of GB Countryside Agencies. The purpose of this study is to "*produce critical analysis of the land use pyramid and its potential use as a conceptual model in helping define an EU wide system of agri-environmental regulation, cross compliance, advice, tiered incentives, land purchase and other measures for special sites*".

This report fulfils this purpose by examining the utility of the land use pyramid and other related models in the light of the history of environmental land use policy in the EU, the current public policy objectives and the drivers of change that will need to be taken into account in the development of future environmental land use policy.

Although the report takes as its starting point the situation that applies in the UK (where the pyramid model was elaborated), evidence has been drawn from elsewhere in the EU, particularly in relation to the experience of different policy measures and current policy objectives.

It is hoped that this report will stimulate constructive debate over the way in which environmental land management policy instruments should be developed and implemented across the EU.

Past development of environmental land use policy

The Common Agricultural Policy has been the most significant form of intervention in the way rural land is managed at an EU level, although the objectives of the CAP have not been environmental nor has it amounted to a land use policy. However, in recent years, multi-functional rural development has emerged as a key driver, challenging that of stability of food supplies and socio-economic support for rural areas.

The EU has adopted an increasingly important role in determining common standards of environmental protection, both to protect important natural and semi-natural habitats and wild species, and to safeguard water quality (in which the 'polluter pays' principle is an important underpinning concept).

From the 1980s onwards, agri-environment agreements, in which land managers receive payments based a profit-foregone formula, have become the dominant model for environmental land use policy in many EU countries. A hierarchy of management requirements and payments is evident in many schemes in which higher payments are offered for higher levels of environmental protection and enhancement.

Public policy support for farm product assurance and regional branding schemes has been increasing as a means of safeguarding consumer choice (and safety in relation to food quality) and, to varying extents across the EU, of supporting

higher standards of environmental management and animal welfare and of maintaining regionally distinctive forms of production.

Systems of advice and technical support have been developed to sit alongside regulations, incentive schemes and market measures. Services providing environmental advice to land managing businesses often do so in the context of economic needs and opportunities.

Factors shaping environmental land management policy

It is clear that the old certainties of the CAP as the driving force behind land management policy over much of the EU's land area are changing. The accession of new countries with different problems and needs, changing consumer expectations, restructuring rural economies, agreements on international trade, and the largely unknown impacts of climate change, will be increasingly important drivers in future.

The concept of *supported* agriculture as the main threat to the environment will be much less relevant in the future. Instead, the withdrawal of agriculture from marginal areas and the ebb and flow of land management reflecting the volatility of international markets will be more significant issues. These will require new solutions to encourage favourable land management practices rather than simply to regulate unfavourable management.

The variability of geographies and climates, land management systems and political objectives across the EU is growing, especially since the accession of the 10 new countries in 2004. A broader consensus over the range of environmental objectives that need to be met in this priority area of common EU policy will be required.

While the EU institutions and most member states will wish to develop a set of more coherent environmental policies in response, there is continuing debate over whether this will take the form of a prescriptive and universally funded Common Environmental Policy or whether there will be greater emphasis on programmes of intervention that are locally tailored according to a more generic set of high level objectives.

The use of models to describe and guide policy development

Conceptual models can be used in relation to policy development in three ways:

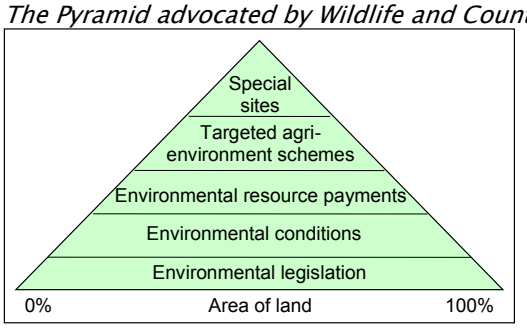
1. To communicate and clarify complex ideas in ways that show the overall direction of policy.
2. As an analytical tool to assess (and reflect back on) the impacts of policy measures in relation to wider policy objectives. This is helpful in terms of the

relationship between measures and the role that different instruments have in delivering whole programmes.

3. As a predictive tool to anticipate future impacts (such as duplication and gaps) of policy measures.

In the UK the Land Use Pyramid was developed during the 1990s by statutory agencies and voluntary environmental bodies to advocate a more integrated hierarchy of policy interventions to deliver improved environmental goods from land, focussing particularly on the role of agri-environment schemes. The model sought to fulfil the first and, to a lesser extent, second purposes, above. It has undergone several iterations, with variations in different national territories, in line with the rounds of CAP reform and rural development programming.

The Pyramid advocated by Wildlife and Countryside Link in September 1998



Other hierarchical models of land use policy have been developed elsewhere in the EU. These include the 'red, blue, green zone' approach to defining land management practices, and the Best Agricultural Practices concept that takes account of the variation in the ability and willingness of land managers in different territories to deliver environmental protection and improvement.

The concept of sustainable development, which increasingly underpins policy development, has given rise to different explanatory diagrams some of which use a triangular model.

The utility of the Land Use Pyramid

The central premise behind the Pyramid is that land use interventions can be seen as delivering a hierarchy of rising public benefit (which links closely but not completely with rising levels of payments to land managers) in which measures are targeted progressively more closely on land of increasing environmental value. The Pyramid helps to show how different policy instruments have distinctive roles in delivering this targeted approach. The model draws attention to the roles of:

- legislation applying basic obligations to all land;

- voluntary measures offering competitively funded measures to land managers at higher levels; and finally
- compulsion through statutory designation or land purchase providing protection of the smallest areas of land of highest environmental quality.

The model is helpful in showing a relationship between layers of intervention. Some of the lower layers are pre-requisites for the layers above (such as the baseline of legislation, cross compliance and the entry levels of agri-environment schemes which all apply to higher levels of agri-environment schemes) whereas some are not (such as statutory designations and market accreditation and assurance schemes).

The model is also helpful in portraying a ladder of controls and incentives, encouraging a progression over time of land managers and their management practices moving up the layers within the pyramid. This gives expression to the expectation that the baseline of legislative obligations will rise over time, in line with the increasing priority placed on environmental protection and on technical improvements that increase the efficiency with which problems can be solved.

While the Pyramid model has served a valuable purpose in the UK by communicating the overall framework in which agri-environment schemes sit, concern has been expressed that the pyramid should not be used as either an analytic or predictive tool, particularly since there is a lack of clear definition over the vertical scale for the pyramid. Different interpretations arise depending on whether the vertical scale represents rising public investment, rising public benefit, a trend from national to local interventions or a temporal progression of increasing engagement with land managers.

More critically, the Land Use Pyramid does not lend itself to portraying the wider canvas of sustainable development in which environmental policy sits. The model does not shed light on the relationship between environmental land use measures and the achievement of wider economic and social goals. For instance, it does not seem good at anticipating whether measures at the top of the pyramid provide more or less economic benefit than those at the bottom. Nor does the model help relate the impact of economic and social land use policies (that are particularly important in many parts of the EU) to environmental objectives.

This key weakness of the model arises because the social and economic policy spheres usually have much less of a spatial dimension than the areas of environmental policy (such as the agri-environment elements of the CAP) that the pyramid was developed to address.

Furthermore, the pyramid appears not to be well equipped to illustrate or help develop regional or more local expressions of policy within a national framework

because to do so would add an unhelpful level of complexity and could be confusing.

The Land Use Pyramid in relation to future policy needs

The main report briefly examines the four main policy drivers of the emerging Rural Development Regulation, namely the future of Pillar 1 of the CAP, the Water Framework Directive and the WTO's Doha Development Agenda.

In relation to the CAP, it is clear that the founding objectives of the Treaty of Rome, particularly with respect to the support for agriculture, seem no longer relevant to the new challenges facing an EU of 25. A new conceptual model is needed that takes account of broader social and economic objectives for future EU intervention in rural land management.

In terms of the ongoing WTO negotiations, the previous Uruguay round developed the concept of red, green and blue boxes in relation to agricultural support, to indicate which forms of support could not be accommodated within a world trade agreement.

This report concludes that the Land Use Pyramid may continue to be helpful as a means of clarifying the role of the Water Framework Directive and parts of the proposed Rural Development Regulation, particularly in the context of other environmental policy measures.

However, it has too narrow a focus on spatial measures and environmental goals to provide the broader unifying model that is needed to clarify the EU's long term policy towards intervention in land management and international trade in agricultural and forestry products.

1. INTRODUCTION

1.1. This report has been commissioned by the Land Use Policy Group of GB Countryside Agencies. The purpose of this study is to "*produce critical analysis of the land use pyramid and its potential use as a conceptual model in helping define an EU wide system of agri-environmental regulation, cross compliance, advice, tiered incentives, land purchase and other measures for special sites*".

1.2. To be of value to policy makers, any conceptual model for rural land use policies must fulfil the following purposes:

a) It must accommodate the different policy measures (such as regulation, incentives and advice schemes) used to influence farming and other land management practices.

b) It must be capable of reflecting different public policy objectives (such as nature conservation, resource protection and cost-effectiveness).

c) If used to influence debate at a European or international scale, it must reflect experience in areas with different policy histories and land management systems.

d) Finally, the model must have useful things to say in relation to the current policy frameworks of 'Pillar I' decoupled agricultural support, 'Pillar II' rural development programmes, the EU Water Framework Directive, as well as wider policy objectives addressing diffuse pollution, market orientated agricultural production and sustainable development.

1.3. This report aims to address these purposes. It starts by tracing the history of environmental land use policy in the EU under different topic headings (Chapter 2). In Chapter 3, the report examines the current factors (both public policy objectives and external drivers of change) across the EU that will need to be taken into account in the development of future environmental land use policy. Chapter 4 describes the use of a range of different conceptual models to describe

and guide land management policy. Chapter 5 examines the effectiveness of one particular model, the 'land use pyramid', to describe the role of, and relationship between, different policy measures. Finally, Chapter 6 applies the model to some current and future policy priorities and reaches conclusions about the efficacy of the land use pyramid model in future policy development.

1.4. Although the report takes as its starting point the structure of legislation and incentives that exist in the UK, evidence has been drawn from elsewhere in the EU, particularly in relation to the experience of different policy measures and current policy objectives. It is hoped that this report will be used to stimulate constructive debate over the way in which environmental land management policy instruments should be developed and implemented across the EU.

2. PAST DEVELOPMENT OF ENVIRONMENTAL LAND USE POLICY

2.1. This Chapter provides a brief and general overview of the background to different strands of agricultural land use and environmental protection policy within the European Union, particularly in relation to the Common Agricultural Policy. The history of land use policy is a complex one, and this short Chapter cannot provide a comprehensive account of the situation in different EU Member States. It draws on experience from across the EU, but does so from a UK perspective and in a relatively cursory fashion, sufficient to introduce themes that are explored in more detail later in this report.

2.2. The Chapter is split into separate sections under the headings of agricultural support, environmental protection, agri-environment agreements, market-related measures and extension advice to secure enhanced environmental standards.

AGRICULTURAL SUPPORT

2.3. Financial support to farmers for agricultural production has been the most important policy intervention in rural areas across the EU for the last 50 years. However, for the most part, the objectives of this policy have not been environmental, nor have they amounted to a land use policy. Instead, the policies, which were a key part of the "European Project", were driven by the twin demands of ensuring an adequate supply of key food commodities (such as cereals and milk) and increasing agricultural productivity to ensure a fair standard of living for farmers. These were the objectives enshrined in the Treaty of Rome in 1957 which continued to underpin the Common Agricultural Policy (CAP) until very recently.

2.4. It was not until the Rural Development Conference in Cork in 1996 that a consensus started to emerge at an EU level amongst many European bodies, if not all governments, towards the future role of the CAP. The 'Cork Declaration' agreed that funds released from reductions in market protection and support should be re-cycled within the CAP to

encourage multi-functional rural development that reflected societal preferences about rural areas. The introduction of Rural Development Programmes following the Agenda 2000 Reforms of the CAP and the decoupling of agricultural support from production achieved through the 'Mid-term Reforms' agreed in June 2003 have started this process, but there remains a lack of clarity about the fundamental objectives of the Common Agricultural Policy. At its heart, the main 'Pillar 1' of the CAP continues to be driven by an objective to support the income of farmers without reference to the way they use the land, although under the new Single Payment Scheme introduced in 2005, farmers must comply with minimum standards of 'cross compliance' management.

ENVIRONMENTAL PROTECTION

2.5. The origins of environmental protection policy can be traced back to the national parks movement of the late 19th century, which found its earliest expression in the United States but led to the 1949 National Parks and Access to the Countryside Act in the UK and to the creation of protected areas throughout the EU during the 20th century. More than 12% of the total land area of Europe is now recognised as protected under the IUCN management categories system[1]. The levels of protection vary significantly as a result of both the systems of governance available to regulate land use in different countries and the threats facing protected areas. For instance, in the UK, protection of National Parks and Areas of Outstanding Natural Beauty is based primarily on land use planning rather than the protection of wilderness areas.

2.6. European Union environmental policy developed during the 1970s, following the 1972 Paris Summit which led to the first Environment Action Plan. The status of environmental policy within the Union increased in the 1992 Maastricht Treaty: and again in the 1999 Amsterdam Treaty.

2.7. The Natura 2000 network of sites designated under the Birds Directive (adopted 1979) and Habitats Directive (adopted 1992) establish the

[1] www.iucn.org/themes/wcpa

legislative framework for protecting and conserving Europe's wildlife and habitats (Special Protection Areas and candidate Special Areas of Conservation now cover over 700,000 ha in the EU 25[2]).

2.8. Since the 1990s an increasing amount of domestic environmental legislation in Member States has been responding to EU directives originating from the increasingly influential Environment Directorate of the Commission. For example the Nitrates Directive (91/676/EEC) gave rise to the Action Programme for Nitrate Vulnerable Zones (England and Wales) Regulations in 1998, and The Environmental Impact Assessment Directive (85/337/EEC) led to the Environmental Impact Assessment Regulations in 1999 in England.

2.9. An important principle underpinning environmental regulation within the EU is that, as far as possible, the external costs of pollution should be borne by the polluter. In general the costs of complying with legislation such as that set out above also lie with producers. However, specific derogations from this principle have been granted, particularly for a limited duration (an example being the Nitrates Directive, above). In practice this 'polluter pays' principle has proved difficult to apply, particularly for non-point source pollution where it is often difficult to demonstrate in law the responsibility of individual businesses.

AGRI-ENVIRONMENT AGREEMENTS

2.10. From the 1980s onwards it became clear that the more focussed environmental objectives that had been developed could not be met by land use designation alone, and indeed often came into conflict with agricultural improvement driven by agricultural policies, market pressures and technological developments. Management agreements based on payments for income-foregone, costs incurred and latterly incentive, increasingly became the basis for protecting designated sites from unwanted land use change. In England and Wales, Sections 28 and 39 of the Wildlife and Countryside Act 1981 became the basis for protecting areas of high nature conservation and landscape value. Pilot approaches towards voluntary agreements with farmers were

[2] EC DG Environment (2004). Natura 2000 Newsletter. Issue 17. January 2004.

developed in the Broads Grazing Marshes Conservation Scheme (the Halvergate Marshes in Norfolk) in 1984 and, in Wales, with Tir Cymen, in 1992.

2.11. The period following the MacSharry Reforms of the CAP in 1992 saw management agreements being extended on a more permanent basis through agri-environment schemes, which offered incentives to farmers to manage land to environmental objectives within the Common Agricultural Policy, and often outside pre-existing designated areas. Voluntary management agreements, backed by incentive payments, have now become the dominant model for environmental land use policy in the UK and in many other EU countries.

2.12. A hierarchy of different levels of management agreements is evident. In the agri-environment schemes the different levels of environmental benefit sought are formalised into different tiers or management options, with the delivery of greatest environmental benefit usually attracting the highest incentives[3].

MARKET-RELATED MEASURES

2.13. Public policy intervention in support of market accreditation and assurance schemes has been increasing, as a means of protecting consumers (for example) or to promote distinctive regional or other forms of production (for instance the EU Geographical Indicators[4] and the EU Organic Production regulations EC/2092/91). Farm assurance standards have been seen as a means of raising standards of production above the legal baseline in relation to food safety and (in the UK at least), animal welfare and the environment.

2.14. From the food industry's point of view, growing public concerns about levels of pesticide residues in food during the early 1990s and, in the

[3] However, as noted later in this report, the use of profit foregone as the method for calculating payments to land managers can result in the highest payments being made to extensify management of productive land, which may have lesser environmental benefit than maintaining management of existing high value land.

[4] These are the Protected Denomination of Origin (PDO) and Protected Geographical Indications (PGI).

UK the BSE crisis, led to more resolute moves by multiple retailers to ensure producers met basic standards of food safety, particularly in relation to the use of pesticides and traceability of livestock. Faced with a growing number of competing schemes, the NFU in England and Wales, working with the supermarkets, agreed a set of common standards and inspection regimes for each production sector. In June 2000 these schemes were brought together, in terms of their consumer branding, under the British Farm Standard using the NFU's red tractor logo. In 2003 co-ordination of the schemes was increased further by vesting greater authority in Assured Food Standards, which has been supported by Government, to oversee the development of the schemes.

2.15. There have been similar developments in several other EU countries, principally in Sweden, Denmark, the Netherlands and Germany. Across Europe, a consortium of retailers established the Euro-Retailer Produce Working Group (EUREP) that has established a framework for developing good agricultural practice (termed EUREPGAP) for horticultural produce.

2.16. In several EU countries (such as the UK, Ireland and France), there is growing interest from public policy makers in encouraging regional brands, for reasons that can include assuring distinctive features of environmental management, often linked to the landscape and cultural heritage as well as to biodiversity and natural resources[5].

EXTENSION ADVICE TO SECURE HIGHER ENVIRONMENTAL STANDARDS

2.17. There has been a steady evolution in the environmental advice available to farmers and land managers, both through on-farm visits by advisers and through demonstration sites. In England and Wales, there has been a shift (following privatisation of the statutory Agricultural Development and Advisory Service and reduction of funding in Experimental Husbandry Farms in the 1980s) from direct

[5] Examples in England are the Peak District Environmental Quality Mark, an experimental pilot supported by the Countryside Agency's Eat the View Programme, and the South Downs Lamb project being pursued by the Sussex Downs Conservation Board.

provision of advice and demonstration to farmers by Government to private and voluntary sector advice provision, e.g. the Farming and Wildlife Advisory Group (FWAG). Although FWAG had been in existence since the mid 1980s, it received increasing financial support during the 1990s, first through the Countryside Commission, and then the national agricultural departments. Once again, the role of the EU is evident in the number of advisory schemes and demonstration farm programmes that were established using the Objective 5b structural fund programmes (such as the Bowland and Bodmin Moor Upland Initiatives, Cumbria Farm Link, Balancing Environment and Agriculture in the Marches, and the Peak District Farm and Environment Project).

2.18. The important factor that distinguishes these Objective 5b funded schemes from previous extension advice is that they seek to address integrated environmental and economic (and sometimes social) objectives over the entire farming business. Nevertheless, there are two levels of advice evident in most of these schemes. The first provides an overview of the existing state of the farm in the form of an audit or assessment of existing value as a means of providing generic advice to help the land manager improve their decision making over the whole farm. This is a necessary precursor to the second type of advice which focuses on specific areas of the farm or business, providing detailed advice on how particular problems or opportunities should be addressed.

2.19. The Codes of Good Agricultural Practice (CoGAP) for the Protection of Air, Soil and Water, published and distributed to all farmers from the early 1990s onwards, can be seen as sitting within the advice provided to farmers. Though essentially voluntary in nature, the codes described the practices that all farmers should be expected to follow and can be used as evidence of unsatisfactory practice in the event of legal action being taken against farmers.

Conclusions

2.20. This brief overview of the development of environmental land use policy, which should be viewed against the wider framework of national land use and development planning, has drawn attention to the following points:

- The Common Agricultural Policy has been the most significant form of intervention in the way rural land is managed at an EU level, although the objectives of the CAP have not been environmental nor has it amounted to a land use policy. However, in recent years, multi-functional rural development has emerged as a key driver, challenging that of stability of food supplies and socio-economic support for rural areas.

- The EU has adopted an increasingly important role in determining common standards of environmental protection, both to protect important natural and semi-natural habitats and wild species, and to safeguard water quality (in which the 'polluter pays' principle is an important underpinning concept).

- From the 1980s onwards, agri-environment agreements, in which land managers receive payments based a profit-foregone formula, have become the dominant model for environmental land use policy in many EU countries. A hierarchy of management requirements and payments is evident in many schemes in which higher payments are offered for higher levels of environmental protection and enhancement.

- Public policy support for farm product assurance and regional branding schemes has been increasing as a means of safeguarding consumer choice (and safety in relation to food quality) and, to varying extents across the EU, of supporting higher standards of environmental management and animal welfare and of maintaining regionally distinctive forms of production.

- Systems of advice and technical support have been developed to sit alongside regulations, incentive schemes and market measures. Services providing environmental advice to land managing

businesses often do so in the context of economic needs and opportunities.

3. FACTORS SHAPING ENVIRONMENTAL LAND MANAGEMENT POLICY

3.1. It is increasingly recognised, and expected, of rural areas that they are able to deliver a wide range of benefits. These include both those goods that deliver a direct market return to the producer (most notably agricultural products) and benefits which accrue more widely to society and for which the producer often receives little or no return, such as management of an attractive landscape. Land management policy has become progressively more 'multi-functional' in the last 20 years, with objectives including the production of safe and healthy food, non-food materials and renewable energy, high biodiversity and natural resource quality, maintenance of landscape character and cultural heritage and the provision of opportunities for public recreation and enjoyment.

3.2. To be useful to policy makers and those hoping to influence them, any conceptual model of environmental land management interventions should acknowledge the range of current public policy objectives relating to the management of rural land.

3.3. Across the EU, sustainable development has become the lens through which rural land management policy is developed and delivered. In the rural areas of the UK, moves towards sustainable development are being promoted through an emphasis on Integrated Rural Development and Sustainable Land Management. Within this overall objective, there are important differences between regions and across EU Member States over how sustainable development is defined and over the emphasis placed on its different aspects. These differences reflect the different physical conditions and land cover and different histories of land holding and management.

3.4. This Chapter identifies the different, and sometimes competing, factors that are currently, and will in the future, drive environmental land management policy across the EU. The first part of the Chapter considers the public policy objectives that are driving change, and the second looks at the external factors that will need to be taken into account.

POLICY OBJECTIVES ACROSS THE EU

3.5. Policy objectives for land management have never been uniform across the EU and have become even more diverse since May 2004 with the addition of 10 new Member States, ranging in geographical scale and rural context from the tiny Maltese Islands (12 000 ha UAA[6]) to Poland (18.2 million ha UAA). Two further Member States – Bulgaria and Romania – are due for accession in 2007 bringing additional territory that, for example, covers over 40% of the Danube River Basin, pushes the borders of the EU to the Black Sea coast and includes over 3 million ha of environmentally valuable semi-natural grasslands. Consequently national/regional land management policies across the EU must continue to reflect and address an increasingly broad range of issues.

Agricultural production

3.6. Support for agricultural production is not the force it has been in the EU in previous decades. Structural change in most of the EU's rural economies, the political imperatives of world trade agreements, environmental impacts and budgetary constraints have resulted in a change in focus towards rural development more generally, rather than land management in particular.

3.7. Nevertheless, concerns about food security and declines in *artisanal* production and rural employment continue to be used as reasons to call for support of agricultural production, particularly by national and regional politicians. In many of the new eastern European Member States, particularly Poland, there is a strong desire to increase the competitiveness of agriculture, and support will continue to be focussed on the rationalisation and modernisation of their agricultural sectors, if not simply on maximising production.

3.8. Yet for those countries that have historically received production support under the CAP and have become part of globalised patterns of trade, the move from traditional farming systems towards monocultures has created farming systems which are far less sustainable than the mixed farming systems they have replaced, in terms of maintaining high quality landscapes, biodiversity and natural resources and in terms of supporting local, as opposed to national, economies. Indeed, much of the rural

[6] Utilised Agricultural Area (UAA)

support under Pillar II of the CAP is now focussed on rebuilding those aspects of mixed farming and local enterprise which may be best placed to deliver multiple benefits for the local environment, economy and community.

Forestry management and afforestation

3.9. In large areas of many Member States climatic/topographical conditions dictate that land use is dominated by forestry and in countries such as Finland, Estonia and Latvia timber production is a much more important economic sector than agriculture. There are obviously many forest management issues that influence the environment in these Member States, including insensitive commercial management and excessive felling (often as a result of land restitution and the privatisation of forestry resources in the new Member States). But the overriding policy objective for land management in many regions is afforestation and the renewal of forests and forest infrastructure – the problem being that due to the high costs of afforestation, the historically low price of forest products and the long-term nature of such investment, private owners have little economic incentive for forest renewal. However, this does not necessarily equate to a wish by these Member States for a Europeanisation of forest policy, in the same way as for agricultural policy.

3.10. Of course, the priority given to afforestation is not driven solely by the importance of timber as an economic resource. There are also often important environmental considerations – especially in the mountainous regions of central Europe – not least:

- the economic importance of forests to local people as a source of "fruits" (including mushrooms and wild herbs) for harvesting, processing and marketing;
- the cultural significance of forests as an important place for leisure and recreation;
- the potential for forests to mitigate climate change by acting as a store for atmospheric carbon (carbon sequestration); and
- with changing rainfall patterns, the potential for forests to reduce the risk of flooding.

Nature and environmental protection

3.11. The EU has taken a growing role in environmental policy, evidenced through the network of Natura 2000 sites and the importance of EU natural resource protection directives in establishing national legislation, not least in the Water Framework Directive. In practice, priorities for environmental protection and conservation vary significantly across Member States, dependent on local geography, the levels of threat and history of protection. While different types of environmental protection – natural resources, biodiversity and cultural landscapes – are evident in all countries, their relative roles are different.

3.12. In countries like the UK, Ireland and the Netherlands where 'high nature value areas' are regarded as 'semi-natural' (as well as in areas of southern member states such as the cork oak forests of Portugal and Spain), continued traditional agricultural management of these areas is essential to their protection. In these areas, the Mid-term Reforms of the CAP should reduce the threat posed by (supported) intensive agriculture. Nevertheless, there are growing concerns that agricultural withdrawal from marginal areas may harm environmental interests through the cessation of beneficial management (the social problems of agricultural land abandonment have long been an issue in many southern member states).

3.13. In countries with significant wilderness areas, such as the mountainous forest regions of the central and eastern European Member States, commercial agriculture and forestry are less a part of environmental protection systems. In these areas the relationship with sustainable levels of tourism (covered below) is potentially more important, providing opportunities to increase citizens' understanding of these important areas as a source of local income, but also introducing threats through disturbance and pollution.

3.14. Resource protection issues vary significantly according to geographic and climatic conditions and degrees of development. In the south, competition for scarce water resources, salination of soils as a result of prolonged irrigation in coastal areas and soil erosion on deforested slopes, possibly exacerbated by changing climatic patterns, are the major concerns. In the east, the legacy of pollution of aquifers and soils from unregulated heavy industry is a major issue. In more intensively farmed regions such as the Netherlands, reducing agricultural pollution from

high nitrate and phosphate levels and pesticide residues has been a major policy driver.

3.15. The significant threat posed by climate change is noted later in this Chapter. Rising sea levels in coastal habitats, the gross changes to habitats from changing precipitation, rising temperatures and longer summer seasons, and the migration of species are all issues that will bear directly on the future environmental protection policy.

Tourism

3.16. Tourism has become a major growth sector for many rural areas, and in some regions of Europe has come to play a much more important role in the maintenance of rural livelihoods and landscapes than agriculture. The Austrian Alps are a prime example of this. Here a highly developed tourism economy is at present strongly related to the agricultural sector and helps to support a complex network of small-scale farmers providing accommodation, tourism enterprises and handicrafts. As part of this overall package they also continue traditional agricultural management which provides the essential backcloth to tourism, but which is not economically viable in its own right.

3.17. There are also large areas in the southern Member States where less developed regional economies have become dominated by tourism (e.g. the lengthy coastline and isolated islands of the Mediterranean). Mass tourism has produced a radical transformation of local economies, landscapes and settlements of many peripheral rural areas in southern Europe, often to the exclusion of any other land management issue. Consider, for example, the fate of the region around the previously small Spanish fishing village of Benidorm.

3.18. There is also evidence that, in many regions of the enlarged EU, the growth of leisure and tourism activities is increasingly considered a primary development option for local rural economies. Whilst the lack of infrastructure will continue to hamper the development of rural tourism in many areas of great cultural and natural value, there are already worrying signs of a huge and largely unregulated explosion of tourism developments in other more accessible regions. For example, the Black Sea coast of Bulgaria (due for EU accession in 2007) is currently suffering a large influx of foreign investors engaged in speculative development of coastal wetlands and meadow lands of very high natural value, including

designated Important Bird Areas lying close to existing settlements such as Varna, while local environmental NGOs despair at the lack of governmental intervention.

Box 3.1. Policy objectives in the UK

Land use policy in the UK should be seen against a background of relatively intensive land management and a strong division between rural and urban land use. With virtually no areas of wilderness in the UK, agriculture, and to a lesser extent forestry, is seen as vitally important for maintaining landscape character and semi-natural habitats. At the same time, market- and subsidy-driven agriculture has come to be viewed as a threat to environmental quality. This has led to alternative paradigms in which environmental protection has been pursued separately from agricultural support.

This background has led to the following public policy objectives for environmental land management:

- **Protection of 'critical environmental capital'**. The UK has a strong tradition of focussing effort on site protection as opposed to the 'wider countryside' (reflected in the variety of designations of special sites and areas which predate the Natura 2000 sites (such as Sites of Special Scientific Interest), as well as in the important role of voluntary bodies owning and managing land for public benefit). While this still remains a priority, the following objective is gaining in importance.
- **Integrated landscape-scale delivery of environmental benefits**. The desire to join up biodiversity, landscape, natural resource protection and cultural objectives in programmes that also match with economic and social policies, as part of a sustainable development approach, is increasingly leading to a landscape-scale approach in policy delivery. While on the one hand it is leading to a broadening of the geographical scale at which policies are targeted away from smaller protected sites, at the same time it is leading to more local (either at a regional or sub-regional level) objective setting.
- **Simplifying legal obligations and support structures**. Reducing the burden and complexity of administration (both for statutory agencies and the private sector) is an objective across all sectors of Government, but one that is particularly relevant to land management. This is not the same as reducing the legal obligations on land managers – indeed these are tending to increase, usually in response to EU Directives.
- **Assisting the market to deliver public benefits**. There is a growing objective of increasing the role of the market in stimulating sustainable forms of land management, such as through the provision of value added products produced to high environmental standards and through high quality rural tourism.

EXTERNAL ISSUES AND DRIVERS AFFECTING LAND USE

Agricultural land abandonment

3.19. Insofar as the CAP has historically had a land-use dimension, the implicit requirement to avoid abandonment of agricultural land has probably been by far the strongest. This has been manifested in the Less Favoured Area policy, and also in the operation of the cereals payment systems which have had strict requirements to curtail payments where the full agricultural area is not maintained. The abandonment of agricultural practice in marginal areas is a major issue in many southern and (new) eastern EU Member States. It is likely to become a more widespread issue following the decoupling of agricultural support agreed in 2003, although there are fairly stringent requirements to ensure that the decoupled single farm payment (Single Payment Scheme) is only made on land in "Good Agricultural Condition". Abandonment may be due to poor productivity and low yields, high production costs, poor performance of markets, declining local populations or (specifically in the new Member States) the impact of land privatisation and the associated restitution process.

3.20. The problems associated with land abandonment vary depending upon the specific climatic/topographical characteristics of the region and socio-economic context of land ownership, but include losses in the biodiversity value of abandoned semi-natural habitats (e.g. high nature value grasslands), changes in landscape character (which will be of concern where cultural landscapes are valued), declining agricultural value and the risk of fire. However, there will also be some positive environmental outcomes. The necessary policy response will therefore vary greatly from region to region – both in terms of emphasis and complexity. For example, the root causes and impact of abandoned arable land in relatively fertile lowland areas is very different from the driving forces behind the decline of traditional pastoralism in marginal mountain regions where entire social and cultural systems are in danger of being lost along with the habitats and species associated with high nature value grasslands. Consequently, more complex policy responses are required for supporting traditional pastoralism including innovative approaches to:

- the development of appropriate agri-environment schemes;
- the resolution of conflict with large carnivores (e.g. bears and wolves) in protected areas;
- non-productive investments in the infra-structure necessary to support traditional patterns of transhumance;
- support for the processing and marketing of traditional livestock products; and
- basic social services for isolated mountain communities.

Fragmentation of land holdings

3.21. The fragmentation of land ownership can be a major obstacle to the maintenance and establishment of productive agriculture (as well as the implementation of coherent agri-environment programmes) in some EU Member States. In consequence, land consolidation is often a high priority for land use policy. This problem is accentuated in many of the new Member States due to the impact of post-communist land privatisation and the associated restitution process which, as well as fragmenting land ownership, can also lead to the widespread dispersal of land parcels.

3.22. Conversely, in the UK the fragmentation of holdings and the purchase of small farms by those outside agriculture for amenity purposes is now bringing both losses and gains. These 'hobby farmers' can be more willing to meet environmental objectives but may 'gentrify' the landscape out of keeping with the locality.

Climate change

3.23. It is difficult to over-emphasise the role of climate change as a driver of future land management policy. In coastal regions, particularly those with high concentrations of population in low lying areas such as the Netherlands, improved flood protection and the creation of flooding washlands as a defence against rising sea levels is likely to be a major national priority. Equally, the management of whole river catchments, both to maintain supplies of potable water and to prevent downstream flooding, is likely to rise quickly up the political agenda. The likely impact of changing patterns of precipitation and temperature on environmental protection policy has already been noted, and the same

factors will influence the economic use of land, making some areas in both the north and south effectively un-farmable but possibly creating opportunities with new crops in other areas.

3.24. A current difficulty for policy makers is in predicting the precise impacts of climate change with sufficient clarity to allow a political consensus for action to develop. Then when this consensus is reached, there remains a need to make effective interventions within a meaningful timescale.

Natural disasters

3.25. Probably as a result of climate change (but also caused by human development and resource exploitation), environmental damage from drought, forest fires, floods, landslides etc. is increasingly frequent in some EU Member States. These factors increase the vulnerability of agriculture and traditional forest-based enterprises and must be addressed through locally-specific policy programmes that integrate environmental management with socio-economic support for vulnerable communities.

Increasing demands on natural resources

3.26. As noted above, the competition for limited water supplies is particularly acute in many regions of the southern European Member States (and may become more widespread with climate change). Soil and water resources in the extensive dry-land farming areas of south-east Spain, for example, are under increasingly acute pressure because of the conversion of agricultural land to urban, industrial and leisure uses during the last 50 years, as well as the introduction of intensive irrigated citrus crops on the more fertile alluvial soils. Similar problems exist on the Maltese Islands, but are accentuated greatly by a long tradition amongst local farmers of pumping the majority of their irrigation water from unauthorised and unregulated boreholes. Such unsustainable trends in land use and management practices must be addressed through specific local policy interventions, many of which will go beyond land management to encompass wider resource management (such as the use of 'grey' water in new developments) and issues of social reform (including much more rigorous enforcement of existing environmental regulations). Similarly, in other countries, particularly those with more intensive forms of land use such as the Netherlands, concern about nutrient and pesticide levels in

surface and ground water and soils is leading to specific policy measures to address these issues.

Diversification from heavy industry

3.27. Other rural areas suffering from the previous predominance of extractive or manufacturing industries may be increasingly dominated by a diverse range of alternative rural enterprises, largely or completely unrelated to agriculture. Such areas are particularly characteristic of central and eastern Europe and include the post-industrial landscapes of the Silesian region of Poland, the Lusatian lignite mining district of eastern Germany and the oil-shale mining area of north-east Estonia. High levels of soil contamination render these areas completely unsuitable for food production and previous attempts at rehabilitation have focussed primarily upon land reclamation for afforestation. Interest is now growing in other alternative land uses including bio-energy production and low input agro-forestry systems, which additionally help to meet the strong public priority of creating local employment opportunities.

World trade liberalisation

3.28. In recent years the globalisation of trade in land-based commodities has become a steadily more influential factor in agricultural and forestry practice, encouraged by:

- the rationalisation in supply chains;
- the concentration of processing and retailing into the hands of relatively few globally trading companies; and
- the political agreements in the various rounds of the World Trade Talks.

3.29. Furthermore, in the EU, the political imperative to secure decoupling of farm support under the CAP is likely to give a greater role for market forces in determining the economic use of land. Many commentators are predicting that commodity prices will be more volatile and changes in the most economic forms of land management more frequent under the new decoupled and liberalised regime.

3.30. It is worth noting that while the direction of world trade policy has been one of increasing liberalisation in the last twenty years, a change of heart

by the US government could lead to increasing protection of agricultural production in the EU, although this currently seems unlikely.

Consumer demand

3.31. The previous Chapter noted the increasing role of product assurance schemes in securing higher standards of production, with the development of farm assurance schemes, often led by the food industry but supported tacitly or explicitly by governments. However, across Europe demand from consumers for increased choice and for cheaper products has increased the supply of basic food commodities produced to the baseline legal standards, the year-round production of traditionally seasonal products (such as salad crops), and the importation of products from other climatic zones. Patterns of consumption have also changed, leading to increases in the more intensive production of livestock (particularly poultry) and much greater emphasis on the processing of products for the catering sector and to provide 'convenience foods' and 'ready meals'. These have provided opportunities for the food sector but have been blamed for a reduction in the diversity of agricultural land uses, intensification of production techniques and falling farm incomes.

Variation across the EU

3.32. Variations in the objectives and drivers of land use policy between regions and member states have already been noted. These can be summarised as an important distinction between:

- those core agricultural regions of the EU-25 with favourable agricultural conditions where an agriculturally-dominated land use model is relevant; and
- the marginal/peripheral areas where a more diverse, and usually economically fragile, pattern of sustainable land use based upon pluri-activity is observed.

3.33. Furthermore, in the core agricultural regions the specific objectives associated with agricultural land use vary widely, with some, such the UK, moving towards a pluri-activity model in response to CAP reforms and past falls in agricultural incomes

3.34. There are also striking differences between EU Member States in the patterns of expenditure to-date on the Rural Development Programmes

(and previously SAPARD measures in the new Member States). There is a clear distinction between those Member States for whom the RDR is clearly seen as *a tool to promote environmental land management and greater diversification of the land-based economy* and those for whom it is essentially about *the modernisation of agriculture*.

3.35. Generally, the richer regions of the EU tend to prioritise agri-environment and farm diversification measures, whilst the poorer regions prioritise investment in agricultural development. The most obvious example of this was the predominance of investment in agricultural holdings and in processing and marketing under the pre-accession SAPARD programmes of the new Member States, and the continuation of this trend during their current short (2004-2006) post-accession programming period.

Conclusions

3.36. The following conclusions are evident in relation to the factors that will shape future environmental land management policy in the EU:

- The old certainties of the CAP as the driving force behind land management policy over much of the EU's land area are changing. The accession of new countries with different problems and needs, changing consumer expectations, restructuring rural economies, agreements on international trade, and the largely unknown impacts of climate change, will be increasingly important drivers in future.

- The concept of *supported* agriculture as the main threat to the environment will be much less relevant in the future. Instead, the withdrawal of agriculture from marginal areas and the ebb and flow of land management reflecting the volatility of international markets will be greater issues. These will require new solutions to encourage favourable land management rather than simply to regulate unfavourable management.

- The variation of geographies and climates, land management systems and political objectives across the EU is growing, especially since the accession of the 10 new countries in 2004. A broader consensus over the range of environmental objectives that are to be met in this priority area of common EU policy will be required.

- While the EU institutions and most member states will wish to develop a set of more coherent environmental policies in response, there is

continuing debate over whether this will take the form of a prescriptive and universally funded Common Environmental Policy or whether there will be greater emphasis on programmes of intervention that are locally tailored according to a more generic set of high level objectives.

4. THE USE OF MODELS TO DESCRIBE AND GUIDE POLICY DEVELOPMENT

4.1. Against the background set out in the previous Chapters, this Chapter looks at the conceptual policy frameworks that have arisen to help communicate and give overall shape to the range of policy interventions used in environmental land management.

4.2. The Land Use Pyramid model, which has been used extensively in the UK in relation to the structure of agri-environment measures, is covered in most detail. At the end of the Chapter other policy frameworks that have been used elsewhere in Europe are briefly reviewed.

4.3. At the outset, it is helpful to set out the Land Use Policy Group's expectations of a model to help describe and develop land use policy.

Box 4.1. LUPG requirements for a model of environmental land use policy

The Land Use Policy Group wishes to promote a model for land use policy measures that provides a useful framework for portraying some of the priority issues that the LUPG wishes to see addressed through CAP reform. These include:

- the need for all land management to adhere to legal standards
- internalising the environmental costs associated with land management
- incentivising and rewarding the provision of defined public goods
- securing appropriate management of protected sites and zones
- providing a more integrated ladder of agri-environment schemes, particularly involving a universally available entry level scheme;
- placing the principle of cross compliance into context with respect to (1) the legal obligations of legislation and (2) specific payments for providing environmental benefit through agri-environment schemes

This needs to be done in a way that addresses

- the Single European Market in agricultural products (the 'level playing field')
- compatibility with agreements under the WTO
- positive and negative externalities in an equitable manner
- the delivery of international commitments in a consistent and equitable manner across the EU

THE LAND USE PYRAMID

4.4. The Land Use Pyramid developed as a defined conceptual model during the mid to late 1990s, based on earlier work[7], to inform the debate then taking place over the Agenda 2000 reforms of the Common Agricultural Policy. The model was used in the UK to argue for a more integrated hierarchy of environmental incentives under the CAP, embedded in the legislation and good practice obligations on farmers. Although the pyramidal shape became widely used at this time, its philosophical basis can be traced back over a much longer period. In particular, the relationship between the underpinning statutory obligations on landowners and managers and the optional incentives available to them to provide additional public benefits is evident in the earlier history of environmental land use policy in the UK.

4.5. It should be noted that the pyramid concept was used in relation to area-based elements of the CAP (and particularly agri-environment schemes). It was not intended to illustrate issues related to particular commodity regimes (such as intervention price support).

4.6. The first public manifestation of the pyramid model in the UK appears to have been in January 1998, with the then Countryside Commission outlining its proposals to reshape the CAP using the model of a five sided pyramid, with each side representing a different aspect of the environment[8]:

- Landscape and local character
- Biodiversity
- Archaeological heritage
- Environmental resources of soil and water
- Public access to the countryside for spiritual refreshment

4.7. The Countryside Commission described the layers of the pyramid thus: "*At the bottom of our pyramid sits strong regulatory minimum standards. Compliance with this baseline would be required for any land manager to receive support payments. … Built onto this strong*

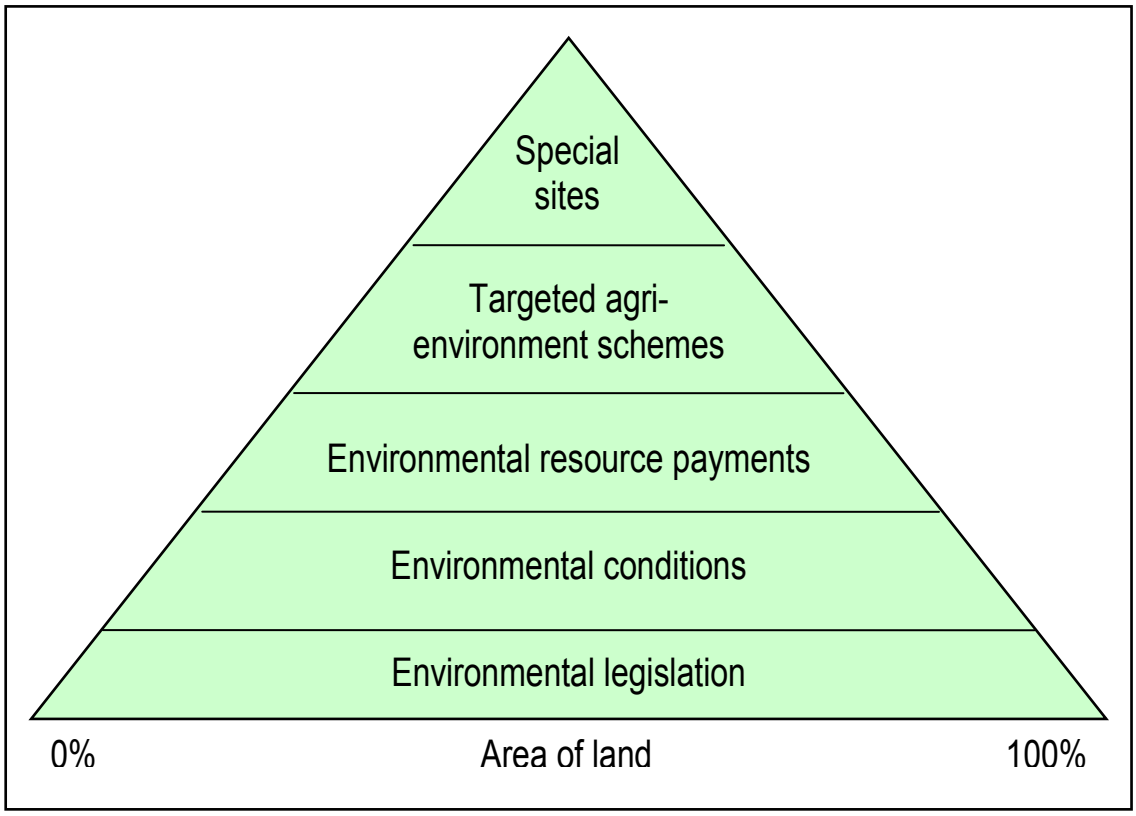
[7] See for instance Erz W, 1978. *Probleme der Integration des Naturschutzgesetzes in Landnutzungsprogramme. (The problem of integration of nature conservation into land management programmes).* TUB, Zeitschrift der Technischen, Universitat Berlin, quoted in http://heja.szif.hu/ENV/ENV-010208-A/env010208a.pdf.

[8] Countryside Commission, 1998. Press release no: 98/05

footing is a further layer of foundations, a basic tier which would give farmers a payment for maintaining the basic fabric of the countryside. In the centre of the pyramid sits the higher, more targeted tier of support available to those parts of rural Europe which need additional resources, such as areas of special value or degraded landscapes. At the apex sits the highest tier of support which directs funds to the most fragile and precious parts of Europe's rural landscapes".

4.8. In September 1998 Wildlife and Countryside Link organised a seminar entitled "*Building the Pyramid: A strategic approach to Farming and the Environment*". Four papers were presented at the event and debate took place that helped to refine the pyramid, as shown in **Figure 4.1**.

Figure 4.1. The Pyramid advocated by Wildlife and Countryside Link in September 1998



4.9. During 1998 LUPG considered letting a contract "*to assist the Countryside Agencies in developing their proposals for a pyramid of rural support*". However, concern was expressed (particularly by SNH) that the proposed title of the study attached too much importance to the pyramid structure. While the concept was useful for making a few simple points, went the argument, there was a danger of giving it an authority or objectivity that it did not deserve, and that ends up constraining rather than illuminating thinking. Consequently, LUPG let a contract "*to facilitate development of thinking on an integrated model for rural support*". The caveats voiced at this time are still highly relevant and have been borne in mind during this work.

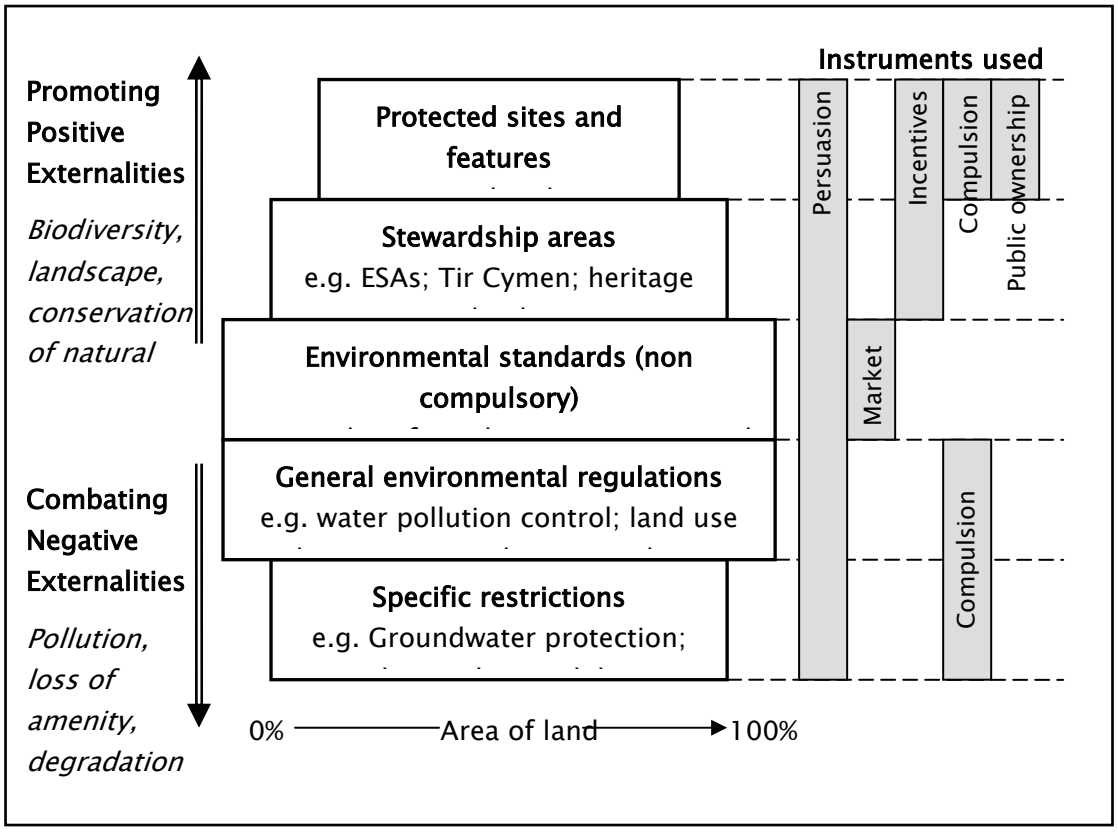
4.10. The resulting report by the Centre for Rural Economy (CRE)[9] distinguished between a wide range of different policy instruments (categorised as persuasion, market mechanisms, incentives, compulsion and public ownership) and analysed how these instruments

[9] LUPG, 1999. *Integrating the Environment into CAP Reform*. Report for the Countryside Commission, Countryside Council for Wales, English Nature and Scottish Natural Heritage by the Centre for Rural Economy, University of Newcastle upon Tyne.

varied along a scale of external influences on land management, from measures designed to overcome negative externalities, such as pollution, to measures designed to encourage positive externalities such as the appropriate management of statutory designations.

4.11. **Figure 4.2** is taken from the CRE report. Like the pyramid model, it shows the hierarchical relationship between different policy measures and gives an indication of the relative area of land covered by each. The range of measures covered is larger than in previous models. Whereas earlier models had focussed on agri-environment schemes and regulations, this model included a new level of "non-compulsory environmental standards". The lowest tier of "specific restrictions" covers a smaller area of land than the tiers above, giving the model a diamond rather than triangular shape.

Figure 4.2. Model developed by CRE (1999) for LUPG

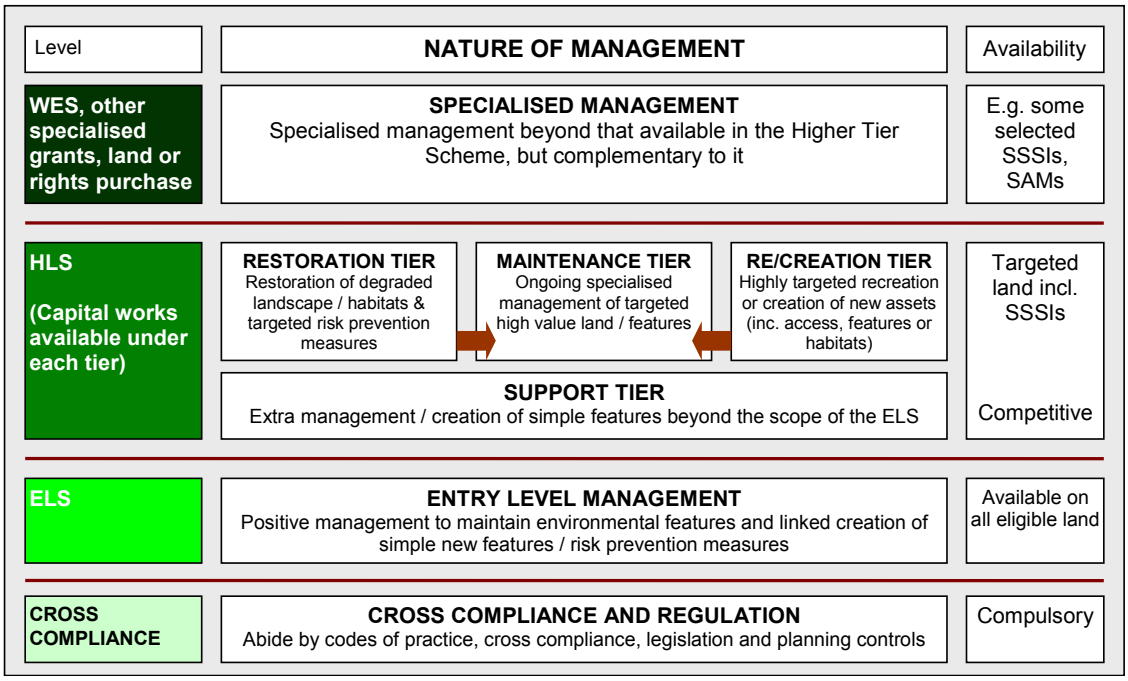


While it lacks the visual simplicity of the pyramid model, it shows that hierarchical and area-related trends exist across a wider range of policy measures and suggests a stepped rather than a smooth-sided ladder of measures.

4.12. The Mid-term Review of the CAP in 2003 provided a new impetus for the development of the pyramid model. The potential for increased funding of rural development programmes through higher levels of modulation from the direct aid payments to farmers re-activated debate on the hierarchy of measures available through cross compliance and agri-environment schemes.

4.13. Prior to this in 2001, in England, Sir Don Curry's Commission on the Future of Farming and Food had recommended the introduction of a new universally available entry level agri-environment scheme which built on earlier recommendations from Wildlife Link and environmental NGOs. This recommendation was quickly accepted by Defra in the form of the pilot Entry Level Scheme that was tested in four areas of England during 2004, becoming the base layer of the new Environmental Stewardship Scheme introduced in March 2005. Defra's structure for the Environmental Stewardship Scheme is shown in **Figure 4.3**. Although this is not pyramidal in shape, it is essentially the same diagrammatic representation of a hierarchy of incentives, with the proposed Entry Level and Higher Level Schemes sitting above cross compliance and regulation and below specialised grants and other measures. The column on the right hand side of the diagram shows the intended availability of each measure, from universal and compulsory regulation, through a universally available but voluntary Entry Level Scheme and a universally available, but competitively funded Higher Level Scheme, to the top tiers which would only be available to targeted (usually designated) areas of highest environmental quality.

Figure 4.3. Diagrammatic representation of Defra's Environmental Stewardship Scheme for England

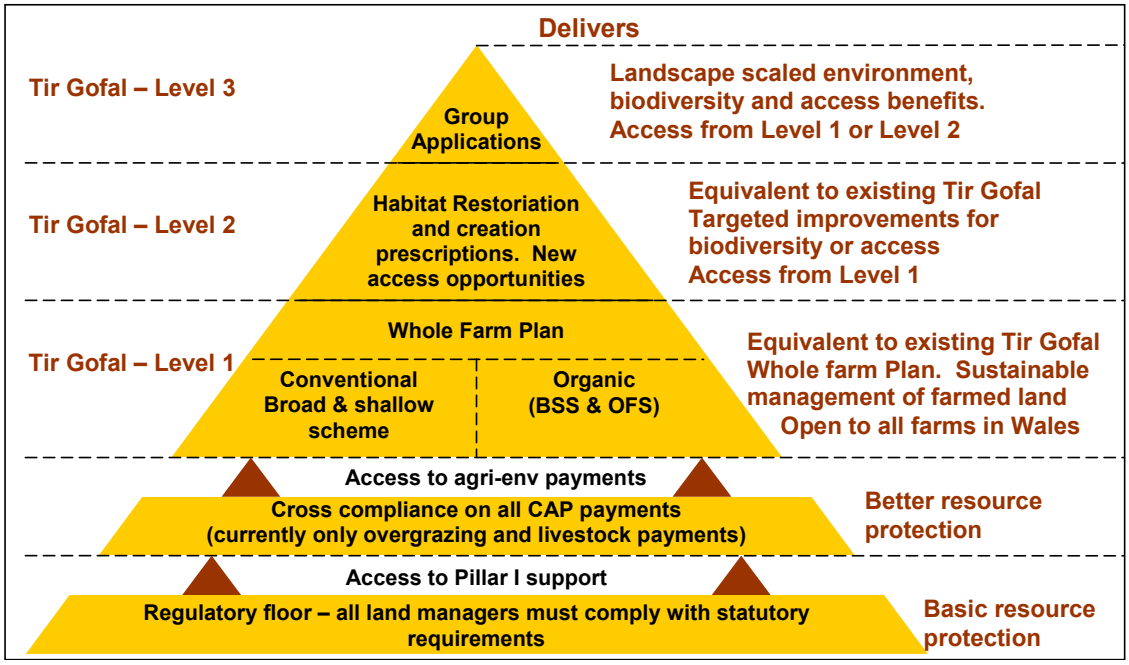


From Defra's consultation papers, released December 2002

4.14. In April 2002 the Agricultural Group of Wales' Wildlife & Countryside Link (WWCL) presented a paper to the Assembly Government's Minister for Agriculture and Rural Affairs. The paper argued that the scope of the existing agri-environment schemes in Wales should be strengthened and enlarged, making them more accessible to farmers by adopting a comprehensive tiered structure.

4.15. Like previous structures, basic regulatory obligations underlie the incentives available through the CAP. In this model, the next tier relates to cross compliance specifically linked to Pillar I of the CAP, with the tiers above this involving progressively higher incentives, on an area basis, through the Tir Gofal scheme. It was suggested that the scope of the Tir Gofal Scheme should be enlarged, with a new 'entry level' tier below, and a new higher level tier above, the existing Tir Gofal agreements. Significantly, the new entry level tier would be open to all farmers and would involve a whole farm plan approach, while the highest tier would involve group applications from neighbouring farmers to address integrated land management and deliver environmental, biodiversity and access benefits at a landscape scale. This structure was illustrated in the form of the pyramid, as shown at **Figure 4.4**.

Figure 4.4. Pyramid model used by Wales Wildlife and Countryside Link in 2002.



4.16. The Welsh Assembly Government's proposals for a new approach to agri-environment incentives in Wales, and specifically including an entry level tier within Tir Gofal, were released in a consultation document in August 2003. Again a pyramid model, very similar to that shown in **Figure 4.4**, was used to illustrate the tiered approach to incentives of rising public benefit.

4.17. In Scotland the Land Management Contracts (LMCs) being developed to deliver public support to individual farmers are based on a three-tiered structure. The bottom tier of an annual base payment (currently the Single Payment Scheme) is made to all producers in return for farming in accordance with Good Farming Practice (cross compliance), reflecting the multi-functional contribution of agriculture across a range of public goods such as high quality food, employment and environmental stewardship. The middle tier (known as the LMC Menu Scheme) is also universally available to all farmers, providing a range of different payments in return for actions by the farmer that will lead to economic, social and environmental benefits. This tier is being introduced in 2005. The final tier (Tier 3) is designed to reward more specific benefits through one-off capital and annual payments and,

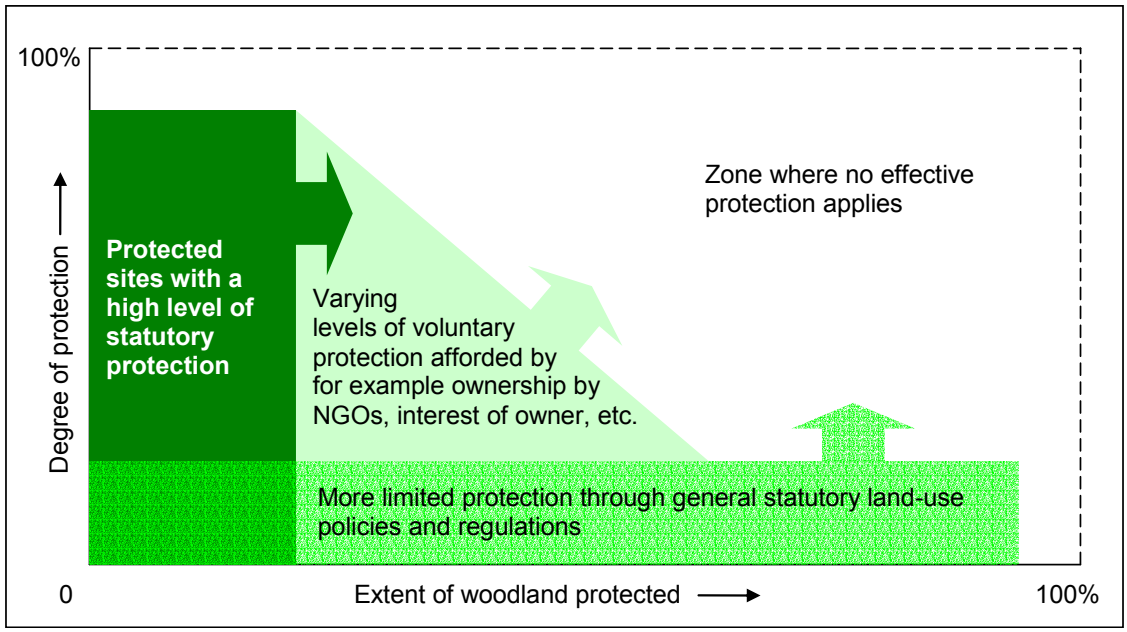
while available to all farmers, would be discretionary and competitive. This tier is currently under development and will be introduced in 2007.

4.18. The pyramid model was also used to illustrate a manual to guide the development of agri-environment programmes in Central and Eastern Europe produced for the European Commission (IEEP et al, 2002). The model was used to emphasise that agri-environment schemes should be seen as one of a range of measures available to influence agricultural and environmental policy, and that agri-environment schemes needed to be supported within this wider agricultural policy framework.

4.19. It should be noted that while the Land Use Pyramid has been used primarily in relation to the development of agri-environment schemes within the CAP, it was not intended to inform the wider debates on reforming the CAP in relation to issues such as the decoupling of subsidies from production, the modulation and degressivity of payments, the use of national envelopes or the rationale for basing future payments on historic entitlements or regionally averaged payments.

4.20. Variants of the pyramid model can be found, including the use of more mathematically-based models to illustrate policy structures. **Figure 4.5** is taken from a paper entitled *Woodland conservation in privately owned cultural landscapes: the English experience* (Kirby, 2003). This explores the relationship between the 'protected sites' approach to woodland conservation, the use of statutory land use policies, and the promotion of voluntary conservation. This model shows how these three instruments vary according to the level and area under protection, but does not place them in a hierarchy. The model applies equally well to other forms of land management other than woodland, although in the agricultural sphere the number of measures that apply in the different zones would be greater.

Figure 4.5 Schematic view of woodland protection in England



Adapted from Kirby (2003)

Summary of the Land Use Pyramid's origins and principles

4.21. Thus, in summary, the pyramid model arose in the UK in the mid 1990s as a means of conceptualising the objectives of the statutory countryside agencies and voluntary conservation bodies for a more integrated and complete set of agri-environment measures in the Agenda 2000 Reforms of the CAP. It has been used again in the most recent CAP Mid-term Review by government departments and agencies, as well as voluntary environmental bodies, to illustrate the structure of cross compliance and tiers of agri-environment schemes.

4.22. The pyramid reflects the well-established principle of hierarchies of environmental measures, seen in the statutory designations, incentive schemes, farm assurance schemes and advisory programmes. Common to all manifestations of the model is the horizontal scale, in which the width of each layer reflects the area covered by the measure. However, the vertical scale has been less clearly specified and has tended to vary subtly according to the issues being illustrated. In general, the pyramid reflects the rising levels of environmental (sometimes, more loosely, public) benefit achieved by the measures, usually linked to the declining area of land targeted. There is also a general relationship between rising levels of environmental benefit and

increased concentrations of public funding. Further dimensions of the vertical axis are distinguished later in this report.

CONCEPTUAL MODELS OPERATING ELSEWHERE IN THE EU-25

4.23. Evidence of hierarchical models, similar to the UK's Land Use Pyramid, can be found elsewhere in the EU. These have been used to clarify the hierarchy of undertakings expected of land managers.

4.24. For example, during development of the concept of Good Agricultural Practice in recent years, a specific terminology developed regarding the maintenance of satisfactory environmental standards in agriculture which reflected a set of important conceptual distinctions - particularly the difference between what farmers are required to do as a social obligation without payment and those activities which go beyond basic obligations and might therefore justify some payment.

4.25. It emerged that, ***conceptually***, there are three main levels of environmental performance in agriculture that are communicated using different environmental standards (some of which are now integrated into EU legislation)[10]:

1. The first level refers to compliance with national (and EU) environmental legislation (e.g. input controls, national landscape and nature protection laws or the Nitrates Directive). This is commonly referred to as the 'Red Line', the obligatory minimum, which **must** be respected by farmers and can be legally enforced.

2. The second level, good agricultural practice, refers to the minimum standards that farmers **should** respect. This is commonly referred to as the 'Blue Zone' and includes respect for environmental law (the 'Red Line') plus other factors such as following advice from extension services and taking into account scientific and technical progress. Inevitably there are likely to be significant variations from place to place in the way in which the 'Blue Zone" is interpreted and defined, given the major variations between localities, regions and individual countries. Cross compliance

[10] Petersen, J-E (2000). Good Farming Practice and Agri-environment Baselines. **In**: *Preparing for the Implementation of Agri-environment Schemes in Central and Eastern Europe*, Proceedings of an Expert Seminar held in Bratislava (8/9 December, 2000), 48-51. Avalon/Institute for European Environmental Policy, London.

measures, such as the Good Agricultural and Environmental Conditions (Common Rules Regulation No. 1782/2003) attached to the Single Payment Scheme, may also be considered to be in the 'Blue Zone'.

3. The third level refers to the production of environmental goods and services (commonly in response to financial incentives) above the baseline of the 'Blue Zone'. This is often referred to as the 'Green Zone' and is typified by the availability of EU co-financed agri-environmental payments in all EU Member States, but may also extend to the uptake of market premiums (e.g. environmental assurance schemes) in return for the provision of public benefits. Entry conditions to the financial incentives available in the 'Green Zone' vary, but for agri-environment schemes funded under Rural Development Regulation No. 1257/1999 are currently based upon compliance with:
    - the so-called 'verifiable standards of Good Farming Practice' (for which no payment is made); and
    - the additional undertakings required by the specific agri-environment scheme in operation (for which area-based compensatory payments are made within the contractual framework of a management agreement).

4.26. There is clearly some convergence between the Land Use Pyramid model and the conceptual 'red-blue-green' model outlined above. Similar convergence of thinking can also be seen, for example, in the concept of Best Agricultural Practice (BAP) that is being promoted by the International Commission for Protection of the Danube River (ICPDR) as a policy framework. This concept has been developed to help address agricultural pollution in the hugely diverse agronomic, environmental, social and economic circumstances of the 13 countries[11] with territories in the catchment area of the Danube River Basin.

4.27. The ICPDR's concept of Best Agricultural Practice (BAP) is founded upon recognition of a hierarchy of pollution control activities that extend from a simple understanding and willingness by farmers to comply

[11] Germany, Austria, Czech Republic, Slovakia, Hungary, Slovenia, Croatia, Bosnia-Herzegovina, Serbia and Montenegro, Romania, Bulgaria, Moldova and Ukraine

with relevant national legislation up to more sophisticated options that require greater management skills and better use of technology and are likely to impose greater costs on the farmer.

4.28. Not all elements of this hierarchy are relevant in all countries of the Danube River Basin. For example, many rural communities in Romania face impoverished social and economic circumstances, and even basic action such as ensuring that manure is collected and returned to the land rather than discarded in the village rubbish dump with other household waste can be difficult to encourage when local farmers cannot afford the cost of transporting manure to their fields. On the other hand, farmers in Austria or Germany can clearly be expected to adopt the appropriate technologies and management techniques to minimise the risk of pollution from manure, fertiliser or pesticide use.

4.29. BAP is therefore defined by the ICPDR as: *"…the highest level of pollution control practice that any farmer can reasonably be expected to adopt when working within their own national, regional and/or local context in the Danube River Basin*". As such, it can be applied as a uniform concept across the whole of the Danube catchment area, but the level of environmental management/performance that can be expected from farmers in different regions/countries will vary significantly according to:

a. the agronomic, environmental and socio-economic context in which they are operating; and

b. the availability of appropriate policy instruments, knowledge and other technical resources for encouraging farmers to 'move up' the hierarchy and adopt more demanding pollution control practices.

SCHEMATIC REPRESENTATIONS OF SUSTAINABLE DEVELOPMENT AND APPRAISAL

4.30. A variety of models have been developed to illustrate the process of sustainability appraisal which seeks to measure the extent to which economies and communities are delivering sustainable development. All these models seek to show how the three capital resources of the environment (or ecology), economy and community (or social and cultural capital) interrelate, particularly drawing attention to the area

where all resources must be taken into account in public policy decision making.

4.31. The most common diagrammatic representation of these relationships is the three overlapping circles. One interesting version of this concept has been developed, amongst others working in the field, by Telos, the Brabant Centre for Sustainability Issues at Tilburg University in the Netherlands[12]. This work uses a triangular model to show how well particular economies, communities or policy programmes are meeting a range of sustainability indicators[13].

4.32. The model, which is shown in **Figure 4.6**, uses a triangle cut by three lines that run from each apex to the centre of the triangle. Each of these lines represents an axis of one of the three sustainability 'capitals'. The degree to which sustainable outcomes are being reached for each of the three capitals is quantified by assigning numerical values to a series of indicators which are grouped into different 'stocks'. The model can thus be broken down into three capitals – the environment, economy and community – each of which is divided into between five and seven stocks, with each of these stocks being further divided into eight quantifiable indicators. The performance of the economy or community being assessed can then be portrayed visually in the model through an inner triangle which results when the aggregate scores of all the indicators are plotted on the relevant axis.

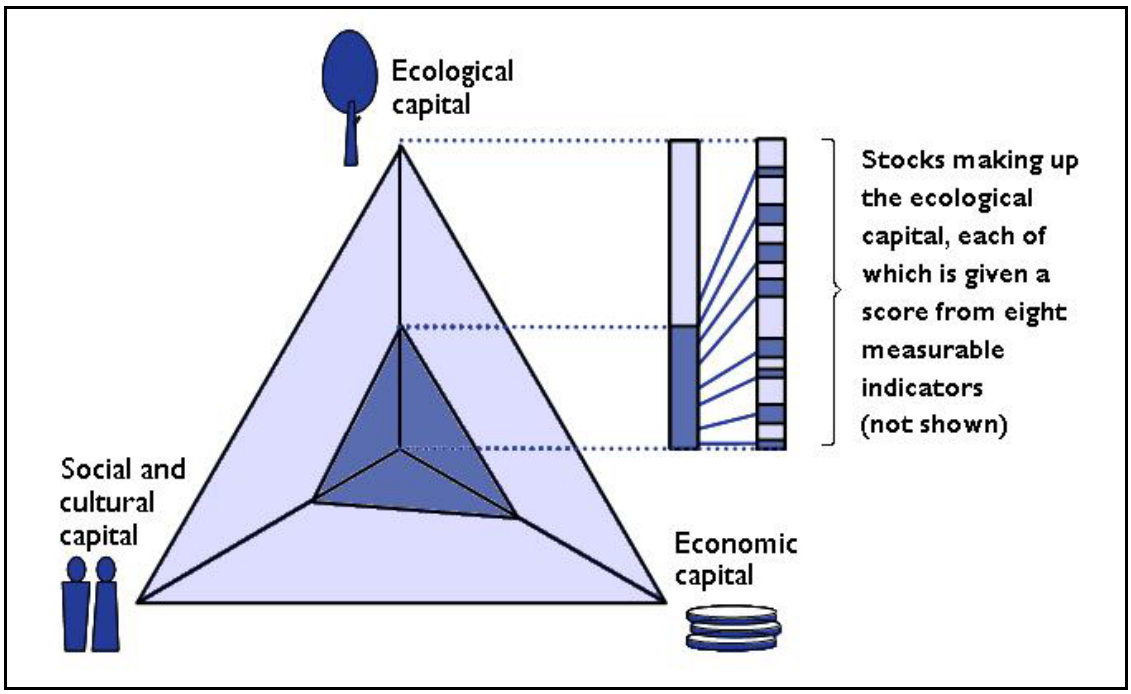
4.33. It would be wrong to draw too many similarities between the Land Use Pyramid and Telos' sustainability assessment triangle. Not only are they designed for quite different purposes (the former to advocate a policy framework and the latter to summarise policy outcomes), but the way in which the axes of measurement are arranged is dissimilar. The Land Use Pyramid measures from bottom to top, whereas the Telos triangle measures from the centre outwards.

[12] See for instance: Knippenberg , L et al (2004). *Developing tools for the assessment of sustainable development in the province of Brabant, the Netherlands*. Telos, Tilburg University.

[13] Telos is using the model to illustrate the indicators of sustainable development it has created for the Brabant region.

4.34. However, the Telos diagram points to a significant shortcoming in the Land Use Pyramid, which is its inability to portray social and economic objectives alongside those for the environment. Equally, the comparison shows that the Telos model is unable to differentiate easily between the different policy programmes and measures through which overall goals are delivered.

Figure 4.6. The triangular portrayal of sustainability assessment developed by Telos



Conclusions

4.35. This Chapter has reviewed a variety of models of environmental land use policy. The following conclusions can be drawn:

- In the UK the Land Use Pyramid was developed during the 1990s by statutory agencies and voluntary environmental bodies to advocate a more integrated hierarchy of policy interventions to deliver improved environmental goods from land, focussing particularly on the role of agri-environment schemes. The model has undergone several iterations, with variations in different national territories, in line with the rounds of CAP reform and rural development programming.

- Other hierarchical models of land use policy have been developed elsewhere in the EU. These include the 'red, blue, green zone' approach to defining land management practices, and the Best

Agricultural Practices concept that takes account of the variation in the ability and willingness of land managers in different territories to deliver environmental protection and improvement.

- The concept of sustainable development, which increasingly underpins policy development, has given rise to different explanatory diagrams. One of these, developed in the Netherlands, uses a triangular model which has certain superficial similarities to the Land Use Pyramid. Critically it seeks to integrate an assessment of environmental progress with that of the economy and communities but is less able to distinguish different policy measures.

5. EXPLORING THE UTILITY OF THE PYRAMID MODEL

5.1. Following on from the description of the pyramid and other models, this Chapter provides a critique of the pyramid model, in terms of its effectiveness at depicting current and future policies. The Chapter concentrates on the Land Use Pyramid model since it has been most widely used, at least in the UK, in the last 10 years to advocate an integrated and hierarchical approach to environmental land use interventions, particularly to agri-environment schemes. These will continue to be a major issue across the EU during the review of Rural Development Programmes and beyond.

5.2. The Chapter recognises that if the pyramid is to continue to provide a useful model to illustrate policy structures in the context of the developing CAP, there must be clarity in the way it is perceived, particularly in terms of the distinction between the different horizontal layers and in what defines the vertical scale or rising hierarchy of layers. It is also important that the pyramid is able to take account of new policy paradigms – particularly in relation to the policy instruments that will play an increasingly important role in a CAP directed at rural development rather than support for agricultural production.

5.3. The Chapter is split into two sections:

- The first half looks at the way the pyramid classifies policy interventions into different layers.
- The second half examines how the pyramid seeks to rank these layers one above the other in a vertical hierarchy.

THE LAYERS OF POLICY INSTRUMENTS AND MEASURES

5.4. There is an important distinction between policy *instruments* (which are the mechanisms through which policy is delivered such as regulation, grants and subsidies and advice) and *measures* (which are the programmes of activity implemented on the ground including agri-environment schemes, particular legislation, and types of land designation). Whereas instruments are essentially policy neutral, measures are directed at achieving particular policy objectives and are usually guided by an overall strategy.

5.5. The following section looks at four layers of policy instrument and considers the measures that have been used to implement them. These layers are:

- The baseline of regulation
- Best practice and cross compliance
- Grants and subsidies
- Special sites

The baseline of regulation

5.6. Legislation sets the minimum acceptable standards that all farmers and land managers are expected to follow. The last ten years have seen a significant increase in the environmental legislation affecting farming and rural land management. With further legislation anticipated or enacted to extend waste management controls to agriculture and horticulture (implementing the EU Waste Framework Directive and EU Landfill Directives), control ammonia emissions to the atmosphere (implementing the EU Emissions Ceiling Directive) and the addressing of diffuse pollution and low water flows in rivers (the EU Water Framework Directive) it is clear that the regulatory baseline will continue to extend. This gradual extension of standards through legislation has an effect on all the policy instruments that lie above this baseline, implying that the boundaries within the pyramid are dynamic and will change over time. This trend must be set against a desire by industry, accepted by Government, to reduce the burden of regulation.

5.7. Nevertheless, the upper boundary of legislation is constrained by a number of issues. Firstly, there are accepted societal norms on the extent to which property rights can be compulsorily curtailed. Financial compensation has had a role (though not in the planning system) in softening the impact of legislation that limits landowners' use of their land, particularly on designated sites where the constraints have been greatest.

5.8. Secondly, the nature of legislation as an essentially negative tool to curb undesirable activity sets further constraints on how far it can deliver more complex public benefits. Legislation is better at enforcing 'don'ts' than encouraging 'do's' and this limits the extent to which it

can achieve more complex environmental benefits, particularly in relation to active management of landscapes and habitats.

5.9. While it is difficult to distinguish any horizontal layers *within* the legal baseline, it is apparent that the floor is not particularly level. In other words, legislation affects the different spheres of environmental policy to different degrees.

5.10. Protection of natural resources, particularly water from pollution, is currently the most heavily represented policy domain[14] and is likely to account for the majority of new legislation in the next 10 years. It follows that this regulatory burden tends to fall hardest on the land use sectors that have most intensive use of resources such as the pig, poultry and horticultural sectors.

5.11. Conversely, protection of biodiversity, the historic environment and landscapes is subject to less legislation, often with a narrow focus on safeguarding the most highly valued designated sites (considered further below). However, the EIA regulations (which seek to prevent uncultivated land or semi-natural areas being brought into intensive agricultural use), the Natura 2000 Directives (affording protection of priority habitats and bird species) and development control regulations (which seek, among other objectives, to prevent degradation of landscapes - although agriculture continues to benefit from a more relaxed regime than general development) all provide a regulatory baseline.

5.12. It is also significant that legislation tends to apply in a common format at a national level and provides only limited scope to take account of sub-national (regional or more local) needs and characteristics, such as may be apparent at the level of individual catchments or landscapes. While, in principle, legislation applies universally to all land (and therefore spans the full width of the base of the pyramid), these limiting factors have meant that this layer within the pyramid is far

[14] Key legislation to protect natural resources in the UK are the Water Resources Act 1991 (E&W); Control of Pollution Act 1974 (S); Groundwater Regulations 1998; Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations 1991; The Action Programme for Nitrate Vulnerable Zones Regulations (England and Wales) 1998; Food and Environment Protection Act (Pt III) 1985; Control of Pesticide Regulations 1986; and Plant Protection Products Regulations 1995

from flat. Different land managing activities are subject to different degrees of legislative control, with the economic burden of legislation falling hardest on the activities, and economic sectors, with most intensive use of land and highest risks of pollution. The intensive pig, poultry and horticultural sectors in the EU have often complained that they are subject to higher levels of legislative control compared to producers from elsewhere, but receive significantly less support, both in terms of market protection and direct financial aid, than the less intensive sectors such as broad-acre cropping and grass-based livestock production.

5.13. Nevertheless, the pyramid model is helpful in portraying the importance of compulsory legislation as the base upon which other instruments are based. It can also illustrate how the baseline tends to rise as practices that were previously voluntary become subject to regulation. However, the pyramid cannot easily show the differing levels of legislative obligations between, for instance, different land use sectors or environmental topics.

Expectations of best practice and use of cross compliance

5.14. Most European governments have developed and promoted voluntary norms of 'good agricultural practice', whether this be aimed at maximising production, optimising economic performance or constraining environmental impacts. The promulgation of these standards of good practice has been a key justification for the state funding of extension advice to farmers and land managers. In the UK, the Codes of Good Agricultural Practice published by MAFF since the mid 1980s[15] have been given a semi-statutory basis, particularly the Water codes and Pesticide codes which are linked to legislation[16].

5.15. The introduction of cross compliance to all Pillar I CAP support has been a goal of the GB countryside agencies since the MacSharry CAP

[15] The Codes of Practice for the Protection of Water, Air and Soil, the Code of Practice for the Safe Use of Pesticides on Farms and Holdings (shortly to be replaced by the Code of Practice for the Safe Use of Plant Protection Products) and the Code of Practice for Agricultural Use of Sewage Sludge.

[16] The Code of Practice for the Protection of Water is a statutory code under Section 116 of the Water Act 1989. The Code of Practice for the Safe Use of Pesticides on Farms and Holdings is a statutory code under both Part 111of the Food and Environment Protection Act 1985 (FEPA) and the Health and Safety at Work etc. Act 1974.

reforms in the early 1990s. Modest cross compliance conditions were introduced in 1993 in the rules of set-aside and in livestock subsidy schemes in England and Wales.

The European Commission proposals for the Agenda 2000 reforms of the CAP introduced a distinction between two levels of measures that would integrate the environment into agricultural policy. These levels were the 'reference level' of obligatory cross compliance conditions applied to support payments that would maintain basic standards of environmental care and the 'target level' of voluntary agri-environmental schemes that would acknowledge costs incurred by farmers and land managers asked to provide an environmental service beyond the reference level.[17] These two different levels applied to Pillar 1 and Pillar II of the CAP respectively.

5.16. In the event, the Agenda 2000 reforms delivered relatively little in the way of cross compliance to the majority of the CAP (giving Member States the option of introducing 'the environmental measures they consider to be appropriate'[18]). However, the reforms heralded the introduction of the Rural Development Programmes and required that farmers receiving funds under their agri-environment and LFA measures should abide by standards of Good Farming Practice (GFP) across their whole farm[19].

5.17. The CAP reforms agreed in 2003 finally introduced a level of cross compliance to all Pillar 1 subsidies (the Single Payment Scheme or SPS) in the form of Statutory Management Requirements (SMRs) and Good Agricultural and Environmental Conditions (GAEC) with effect from 2005. It is significant that while the Directives specified in the SMR cover a range of environmental topics including protection of biodiversity and groundwater, the emphasis in the GAEC is towards protection of soils. There is a strong link between the new cross compliance rules and legislation since they either directly (as in the case of the SMRs) or indirectly (parts of the GAEC) require compliance with legislation. The threat of losing part of the SPS reinforces the requirements of these pieces of legislation and may prove a more

[17] European Commission DGVI Working Document VI/7655/98. Evaluation of agri-environment programmes.

[18] Article 3 of EC 1259/99.

[19] Article 19 of EC 1750/1999.

effective means of enforcing them than through the conventional means of prosecution by the statutory agency.

5.18. The SMRs and GAEC bear both similarities and differences to the topics covered by GFP in the UK, which will continue to apply to recipients of agri-environment schemes and LFA support to 2007, during the current Rural Development Programmes.

5.19. The Mid-term Review said little about the relationship between 'reference level' (Pillar I) cross compliance of the SMR and GAEC and 'target level' (Pillar II) cross compliance of GFP. The European Commission's proposals for the new Rural Development Regulation published in July 2004 suggest that it should be the SMR and GAEC that will apply to farmers receiving agri-environment measures, with additional standards of fertiliser and pesticides use identified at Programme level – there will be no continuation of a separate set of GFP[20].

5.20. Although representing different policy instruments, codes of good practice and cross compliance occupy the same layer in the pyramid. As noted above, both Good Agricultural Practice and elements of cross compliance have important links to legislation, and the non-legislative verifiable standards in cross compliance (parts of GFP and GAEC) are often based on existing Codes of Good Agricultural Practice.

5.21. Like legislation, best practice is intended to be universal, applying to all land and, potentially (depending on their activities), all landowners. However, cross compliance can not be considered truly universal in that, although it is linked to the receipt of Pillar 1 CAP support, it only applies to some supports under the CAP Pillar II; and it applies only to agricultural land. Therefore it does not reach non-farming landowners, and it does not impact on the management of woodland – even if this is receiving CAP supports.

5.22. Best practice can be seen as an extension of legislation, but differentiated from it by the greater emphasis on qualitative guidance and encouragement, emphasising the 'do's' as much as the 'don'ts' of environmental land management. In the UK, the Codes of Good

[20] Article 37 of Proposal for a Council Regulation on support for rural development by the European Agricultural Fund for Rural Development. COM(2004)490 final

Agricultural Practice were developed to reinforce the objectives of legislation and broadly reflect the emphasis on resource protection (there is no Code covering habitat management).

5.23. In policy terms, best practice and cross compliance occupy the transition between compulsory control and incentivized encouragement. In this sense, they are neither deemed suitable for legal enforcement (either because such enforcement would not be the most effective means of ensuring compliance or because the enforcement would be outside the accepted norm of compulsion). Nor do they justify public compensation since cross compliance relates largely to legal standards. Therefore the polluter pays principle applies and, where this is not the case, the additional costs incurred by the land manager or the value of additional public benefits are less than the cost of administering compensation.

5.24. In summary, the gradual extension of cross compliance conditions to cover all CAP payments introduces a quasi-regulatory layer of protection above the legislative baseline. However, it is significant that, while legislation applies universal controls across the territory that it operates in, the same is not true for cross compliance. Just as GFP only applies to farmers in receipt of agri-environment scheme payments or LFA support, so the SMR and GAEC only apply to farmers in receipt of the Single Payment Scheme and in respect only of their agricultural land. Thus, in terms of the pyramid model, it is not necessarily the case that cross compliance forms a solid base upon which the higher layers can sit.

Environmental enhancement through grants and subsidies

5.25. Grants and subsidies are used in a wide variety of ways. They are the basis for the direct payments introduced into the CAP commodity support regimes since the early 1990s, justified as compensation for reductions in the support of market prices and are evident in the wide variety of capital grants, usually matching private sector contributions, to fund the purchase of particular items. Of most relevance to the land use pyramid are management agreements providing annual revenue support payments, forming the basis for agri-environment schemes. Subsidies to support market prices, such as through the intervention price support that has underpinned most CAP commodity regimes,

though with diminishing importance since the MacSharry CAP reforms, can be thought of as a distinctly separate instrument.

5.26. **Commodity support payments**: With the introduction of the Single Payment Scheme in 2005, the direct support payments historically available to farmers through the Pillar I of the CAP (for instance the Arable Area Payments Scheme and various livestock headage schemes) have largely ceased. These never had direct environmental objectives, although some of the schemes such as the Extensification Premium Scheme (rewarding lower stocking densities of beef cattle and sheep through a premium on beef and suckler cow premium payments) and the Suckler Cow Premium Scheme have often been justified on the basis of providing some environmental benefits.

5.27. **Capital grants** have an equally long history in land use policy, being used since the 1950s to encourage agricultural improvement (the negative environmental impacts of these grants suggesting the existence of a mirror image Land Use Pyramid of measures causing increasing environmental damage). For the first time, the Farm and Conservation Grant Scheme introduced grants in England and Wales for more positive environmental work in the 1980s and heralded the end of grants for agricultural improvement.

5.28. Most recently, a range of capital grants have been available through the Rural Development Programmes both as part of agri-environment schemes and as separate development grants[21]. In England these development grants are concentrated through the Rural Enterprise and Processing and Marketing Grant Schemes, while in Wales they are made available through a wider variety of more specifically focussed schemes. Other capital grants not initially included in Rural Development Programmes, such as those available for farm waste management facilities in England and the Marketing Development Scheme in Scotland, have received approval under the EC state aids provisions.

[21] The grants are available as investments in agricultural holdings (including diversification within agriculture) under Articles 4-7 of the Rural Development Regulation 1257/99, marketing and processing of agricultural products (Articles 25-28), forestry development (Article 30) and a variety of other investments (Article 33).

5.29. Capital grants do not fit neatly into particular layers in the Land Use Pyramid. Exceptions to this might be the capital grants available through agri-environment scheme conservation plans (considered below), and grants available from bodies such as National Park Authorities.

5.30. **Management agreements** involving annual payments that compensate the land manager or owner for profits foregone have come to dominate agri-environment policy. Two groups of agreement are evident:

- Firstly, there are agreements on statutorily designated sites or in relation to statutory controls where the owner or occupier receives compensation for not undertaking proscribed operations. These agreements are usually produced on a bespoke basis, taking account of the objectives for the site. Examples in England and Wales include agreements reached under Sections 38 and 39 of the Wildlife and Countryside Act 1981 (in SSSIs and National Parks respectively).

- Secondly, agreements where entry is voluntary, and where the management prescriptions and compensation payments are standardised, provide a menu of different options for the land manager to choose from. Where these options are arranged in tiers (in which access to higher tiers requires entry in lower tiers), as in Environmentally Sensitive Area Scheme in England, the highest tiers are the most demanding and therefore are usually supported by the highest payment levels. This covers all the agri-environment agreements and some of those operating under CAP national envelopes (such as the Sheep Wildlife Enhancement Scheme in England).

5.31. The first group of management agreements are being largely overtaken throughout the UK by the second. This is partly because payments directed through the Rural Development Programmes receive match funding through the CAP and also because the older 'compulsory' and individually calculated profit-foregone management agreements under the Wildlife and Countryside Act are increasingly considered to be less cost-effective at achieving environmental enhancement, compared to agri-environment management agreements.

5.32. While agri-environment schemes are built primarily around annual payments, usually calculated on the basis of standard assessments of income foregone as a result of following the management prescriptions, **capital payments** towards additional costs incurred are also available. These tend to be available in the higher tiers, where greater positive action is usually required to achieve environmental enhancement.

5.33. The position of agri-environment schemes in the pyramid model is relatively well articulated – indeed the desire for a new 'entry level' tier was one of the reasons for the model being conceived. Government proposals in England, Wales and Scotland all acknowledge the need for a ladder of schemes of rising public benefit.

5.34. The relationship between the hierarchy of schemes and the scale of environmental objectives being delivered and type of environmental benefit is well-established in the UK, and also in the wider EU context (see **Box 5.1**). Whereas the entry level schemes tend to address generic national standards that apply equally to large swathes of each farm, the higher level schemes tend to apply progressively to more specific environmental objectives (often reflecting national targets and objective for individual habitats, species, cultural features and landscape types), with different management prescriptions applying to relatively small areas of land.

5.35. It is evident that natural resource protection has been relatively absent from the current agri-environment schemes but is now being introduced to the entry and middle level schemes. In Scotland, the options available under the Land Management Contract Menu Scheme demonstrate that this scheme is also being used to recognise and reward wider multifunctional benefits, including animal health and quality assurance which have not been previously costed as public goods in such schemes. It remains to be seen whether the revised higher tier schemes in each of the UK territories will continue to focus primarily on biodiversity and landscape benefits or whether they too will be given a wider range of enhanced sustainability objectives.

Box 5.1. Overview of Agri-environment Measures in the EU in the 2000-2006 Rural Development programming period[22]

European Community expenditure on agri-environment measures (EAGGF Guarantee section) has increased rapidly during the last 10 years to a total of over 2,000 million EUR in 2003 (and the total spending on agri-environment measures is significantly higher than this after Member States have added their own co-financing and, in some cases, additional state-aid for specific measures).

There has been a considerable increase in the area of land covered by agri-environment agreements in all Member States except Germany and Italy during the last few years. The total area now covered by agri-environment management agreements in the 'old' EU-15 is about 25% of the utilizable agricultural area (UAA), although this disguises large variation between Member States ranging from 100% in Luxembourg to less than 5% in the Netherlands and Greece.

The average share of rural development expenditure (EAGGF Guarantee section) allocated to agri-environment support payments in 2000-2003 was 50% across the EU-15 Member States, but there was considerable variation from one Member State to another ranging from over 80% in Sweden to less than 20% in Spain, the Netherlands and Greece. There are many reasons for the uneven levels of expenditure and uptake (see Chapter 3 for the some of the specific environmental and agricultural circumstances across the EU).

The most common types of agri-environment measure in the EU-15, by the area under management agreement, involve the reduction of inputs (including integrated farming) (26%) and biodiversity/landscape enhancement (15%). However, 40% of the area under agri-environmental measures falls into the non-specific category of "other", including horizontal measures covering wider environmental issues such as crop rotation measures; undersowing, cover crops and buffer strips for the reduction of nutrient loss and/or soil erosion; maintenance of existing extensive farming systems; upkeep of woodland, and; public access.

The Commission distinguishes between schemes that are 'broad brush' and those that are 'deep and narrow'. 'Broad brush' schemes, such as those operating in Finland and Austria, include a large number of farmers, cover a wide area, make relatively modest demands on farmers' practices, and pay correspondingly little for the environmental service provided. 'Deep and narrow' schemes, such as the highly targeted schemes operating in the Netherlands, tend to be targeted on site-specific environmental issues, include fewer farmers, make more substantial demands on the farmers, and pay correspondingly more for the

[22] *Agri-environment Measures: Overview on General Principles, Types of Measures and Application*. European Commission Directorate General for Agriculture and Rural Development, Unit G-4 - Evaluation of Measures applied to Agriculture Studies. Brussels. March 2005.

environmental service provided. Some schemes such as those now developed in the UK include both types of measure e.g. by having a low level of requirement for entry to the scheme, but including additional, more demanding measures for farmers who are able and willing to offer more (or higher level) environmental services.

It is interesting to note that the high levels of expenditure and uptake in Finland and Austria on 'broad and shallow' schemes relate to the specific circumstances of their accession in 1995. Upon accession both countries (together with Sweden) had to confront a significant reduction in agricultural prices and there was considerable concern about the future viability of their agricultural sectors – none of which were strongly competitive in EU terms. One form of assistance that was offered to all three countries was a substantial allocation of EU support for agri-environment measures – a total of 1.53 billion EUR for the period 1995-1997. This was a large sum compared to other Member States and both Austria and Finland immediately adopted relatively "broad and shallow" agri-environment schemes which were available to the majority of farmers to assist their transition into the CAP. Consequently very high levels of uptake resulted.

5.36. Finally, in this section on agri-environment payments, the basis on which the annual payments in management agreements are calculated is worthy of comment. Environmental land management agreements have been available in the UK to secure environmental benefits since the 1950s and became more widely used in the 1970s as a response to the threat of moorland reclamation within National Parks, when payments were made to compensate landowners for the loss of agricultural income. This income foregone formula was subsequently enshrined in the Wildlife and Countryside Act 1981 (to prevent damaging operations on SSSIs), formed the basis for the ESA payments introduced in the 1980s and is the major element in the European formula governing the maximum level of agri-environment payments (e.g. Article 24 of regulation 1257/1999).

5.37. The income foregone method of calculating payments has significant disadvantages. In particular, it can be difficult to justify the public expenditure if the public benefits delivered are not seen to be commensurate with the payments; it does not foster a positive relationship with the agreement holder; and it implies that payment levels should fall during periods of falling farm incomes when the environmental benefits associated with agricultural practice may be most vulnerable. For these reasons, there is a trend for new schemes that have been outside the EU RDR (such as English Nature's Wildlife

Enhancement Scheme) to calculate payments on the basis of the environmental outputs delivered rather than simply on the agricultural income foregone. This change of emphasis from agricultural inputs to environmental outputs (and ultimately to outcomes) is an important one which is becoming increasingly evident in the new generation of agri-environment schemes emerging in other EU Member States (see **Box 5.2** for example) and has significant implications for the way the hierarchy of schemes develops in future.

Box 5.2. Supporting species-rich grassland in Baden-Württemberg, Germany[23]

This is an example of the new generation of agri-environment schemes emerging from experiences in the EU-15 that are 'results-led'.

The scheme offers a payment of €50/ha for any grassland that contains at least four plant species out of a catalogue of 28 target species. While the output of this scheme is tightly defined and monitored, the prescriptions are more flexible so that farmers can adapt the management so that it suits their farm. Botanical monitoring not only ensures that the money is being spent on benefiting biodiversity, but also provides an assessment of the conservation value of grassland in Baden-Württemberg.

Previous research has shown that the conservation of species-rich grassland has additional benefits for threatened bird species. For example, the whinchat shows preference for species-rich grassland, and it is likely that other meadow birds will benefit such as red-backed shrike, skylark, corn bunting.

This scheme currently covers 70,000 ha. Wider uptake is limited by the relatively low payment, particularly on species-poor grassland where greater intervention would be required by the farmer (in terms of income foregone) in order to reach the biodiversity targets. Nonetheless, it provides a useful example of an emerging approach to agri-environment programming.

5.38. In summary, therefore, management agreements delivered in the form of agri-environment schemes through the Rural Development Regulations have become the primary means of delivering environmental objectives outside protected areas, particularly in relation to biodiversity and landscape.

[23] *Agri-environment Schemes and Biodiversity: Lessons Learnt and Examples from Across Europe*. Royal Society for the Protection of Birds/Birdlife International. Sandy, April 2005 (draft report in circulation)

5.39. The prevalence of the income foregone formula as the basis for calculating annual payments has meant that it has been easy for the pyramid's vertical axis to be seen to denote rising levels of public payment per unit area. However, the likely future change towards payments being calculated on the basis of environmental outputs begs the question of how these outputs should be ranked. While it is relatively easy to create an order of priority or benefit within environmental spheres – for instance placing enhanced conservation of internationally rare habitats such as hay meadows above the recreation of relatively common habitats such as field margins – it is less clear how the public benefit from conserving a historic parkland landscape can be compared with the improvement of poor river water quality.

Special measures on special sites

5.40. Arguably, land designation is not a policy instrument, but a policy measure. However, it is considered here because it operates as a distinct thread of public policy. Indeed, a variety of policy instruments operate within designated areas to fulfil these areas' statutory purposes.

5.41. The designation of land is secured through legislation. Sensitivity towards the property rights of landowners means that governments often prefer to secure positive environmental management, above the legal baseline, through guidance and incentives rather than through compulsion. However, designation can be used for the highest value sites – generally those considered of national and international importance: for example the National Parks and Access to the Countryside Act 1949 established the principle in the UK that property rights should be constrained through statutory designations to safeguard their environmental value.

5.42. The policy instruments available to statutory bodies to constrain or direct activity by the landowner or manager vary between the different designations. In the protected landscapes (National Parks and, in England and Wales, Areas of Outstanding Natural Beauty), controls are exercised through the planning system where generally tighter and more restrictive planning conditions apply. On nature conservation and historic environment sites (SSSIs, SAMs, SACs and SPAs), the requirement to notify the relevant statutory agency before undertaking

potential damaging operations is designed to prevent damage to the notified interest of the site.

5.43. With the decoupling of agricultural support from production in the CAP, it is likely that agricultural threats to designated sites will shift from those of intensification to lack of management. The availability of livestock to graze grassland SSSIs is already a greater issue than agricultural improvement in many parts of the UK. While it will be important that statutory controls remain in place, it is likely that grant aid, advice and improved access to premium environmental markets for products will become increasingly important means for securing positive environmental management on designated sites.

5.44. In terms of the policy instruments used, it is the statutory land use controls that have distinguished special sites from the 'wider countryside'. However, the changing threat, from agricultural intensification to disengagement, will mean that the instruments used across all areas (management agreements, advice and market-related assurance schemes) may become particularly relevant to designated sites in order to secure their higher priority objectives.

Other layers in the pyramid

5.45. The previous sections have described the principle layers of policy instruments that are portrayed in the Land Use Pyramid. This section briefly considers the relevance of the pyramid to other instruments and measures.

5.46. **Land acquisition and land banks**: The purchasing and leasing of land as a means of securing environmental objectives can be split into three groups: compulsory purchase by Government or its agencies; open-market acquisition by public-interest bodies; and acquisition on a temporary basis to facilitate desirable land transfers between private (or public) owners.

5.47. Powers to compulsorily purchase land are only used when all other avenues to secure positive environmental management have been exhausted and is usually only justified (on financial as well as philosophical grounds) on sites of national or international importance. Public bodies are often unwilling to take on practical management responsibilities (due to lack of management expertise or the exposure

to market risk) and management is often leased back to private businesses.

5.48. The second category of open-market purchase or long leaseholds is the preferred method of securing desirable management by government conservation agencies and by most public interest environmental bodies such as the National Trust, Wildlife Trust and Woodland Trust. National Park Authorities and many Local Authorities are also environmental purchasers of land. Land purchase is used by these bodies for a number of purposes, including site safeguard, to enable experimental management techniques, to join a collection of other owned reserves, or as a financial investment. In many cases a key over-riding objective is to make such sites available for public enjoyment. These purposes do not obviously fall into a single level within the pyramid, although in terms of achieving environmental objectives, organisations would probably place land acquisition near the apex.

5.49. Land acquisition by open-market purchase has been extensively used in the Netherlands for the creation of nature reserve areas from agricultural land as part of the National Ecological Network. A total of 150,000 ha have been purchased by the government agency, Dienst Landelijk Gebied (DLG), over the last 20 years and managed for nature conservation and recreation. Potential sites for purchase are designated by provincial government on the basis of a Provincial Development Plan that takes into account a) existing nature reserves and b) the actual or potential biodiversity/landscape value of adjacent farmland.

5.50. Land banks, or land swaps, have not been widely used in the UK but are more common in other EU countries. For instance, they are used in France to create more manageable holdings from fragmented units and in the Netherlands as an alternative to compulsory purchase to enable land to be zoned for flood protection. It is likely that this approach many need to grow in the future to provide for flood and coastal protection arising through climate change. There is no obvious correlation between this instrument and a level in the pyramid, though the public investment in terms of time and capital is likely to mean it is used closer to the top of the pyramid where public benefits are greatest.

5.51. **Farm assurance and market premiums**: As already outlined, the 1980s and 1990s saw the development of farm assurance schemes that, at different levels, seek to provide guarantees about the environmental practices used on accredited holdings. Because such assurance schemes can operate at varying levels of enhancement above the baseline, it is difficult to see them occupying a distinct layer.

5.52. However, assurance schemes are often seen as helping to deliver other measures at different levels. For instance, in the UK, the baseline industry assurance schemes (most of them under the auspices of Assured Food Standards and its 'red tractor' logo) have been seen by policy makers as a way of encouraging the adoption of Codes of Good Agricultural Practice and cross compliance by providing commercial advantages to producers joining the schemes.

5.53. Similarly, the regional geographical indicators (PGI and PDO), which often operate at a higher level in terms of production requirements if not environmental practice, have been linked to the designation of cultural landscapes and areas of natural beauty in many EU countries.

DEFINING THE VERTICAL SCALE

5.54. The factors governing the shape of the pyramid, particularly the horizontal and vertical scales, determine the way in which the model can be used. There is widespread agreement between those who have used the pyramid in the last ten years that the horizontal scale represents the area of land involved. However, there is less agreement about what constitutes the vertical scale. The vertical scale is obviously important since it determines the order in which the layers of policy measures are placed.

5.55. The model that was developed to promote tiers of agri-environment payments (see Figure 4.1) was implicitly based upon a vertical scale of rising levels of payment per unit area. On the other hand, the model developed by CRE in 1999 (Figure 4.2) shows a vertical scale of rising positive, and declining negative, externalities, which can be equated with rising public benefit. This is similar to the vertical scale of 'degree of protection' in Kirby's schematic view of woodland protection (Figure 4.5). This section considers these and other ways of defining the vertical scale of the pyramid.

Rising payments – or rising benefits?

5.56. As explained above, the pyramid has been used to show both increasing levels of payment to (or obligations on) participants (usually land managers) and increasing public benefit arising from these payments. This link needs to be explored. There was strong agreement at the seminar of stakeholders held during this study that an important policy message that could be illustrated by the pyramid is that rising levels of payment to land managers, whether calculated on the basis of income foregone or not, must be linked to increasing public benefit.

5.57. The pyramid also shows that there is a trade off between relatively cheap (in terms of public expenditure) benefits delivered over a large area and significantly greater benefits targeted at smaller areas. Some environmental issues need to be addressed in a universal fashion across catchments or landscapes (such as protection of natural resources) whereas others require more intensive attention at a smaller scale (such as addressing the needs of particular species). The appropriate balance to strike between intervening at the base layer or at higher, narrower layers of the pyramid is likely to depend on the specific issue being considered (e.g. diffuse pollution, archaeological sites, Biodiversity Action Plan species) rather than having a general best solution across all issues.

5.58. However, there are important circumstances where the link between the level of payments and benefits breaks down. Management agreements, whether under agri-environment schemes or compensation agreement (such as those in the UK for Sites of Special Scientific Interest under Section 28 of the 1981 Wildlife and Countryside Act) have normally been paid on the basis of the income foregone by the landowner or manager which need not be related to the public benefit provided. For instance the income foregone from creating a new grass margin around an arable field is likely to be greater than not ploughing an unimproved meadow - but just because the activity is more expensive does not necessarily mean it delivers greater public benefit.

5.59. Secondly, there are activities that recognise high levels of public benefit but are relatively inexpensive in terms of public expenditure. Examples include the protection of sites through designation where no

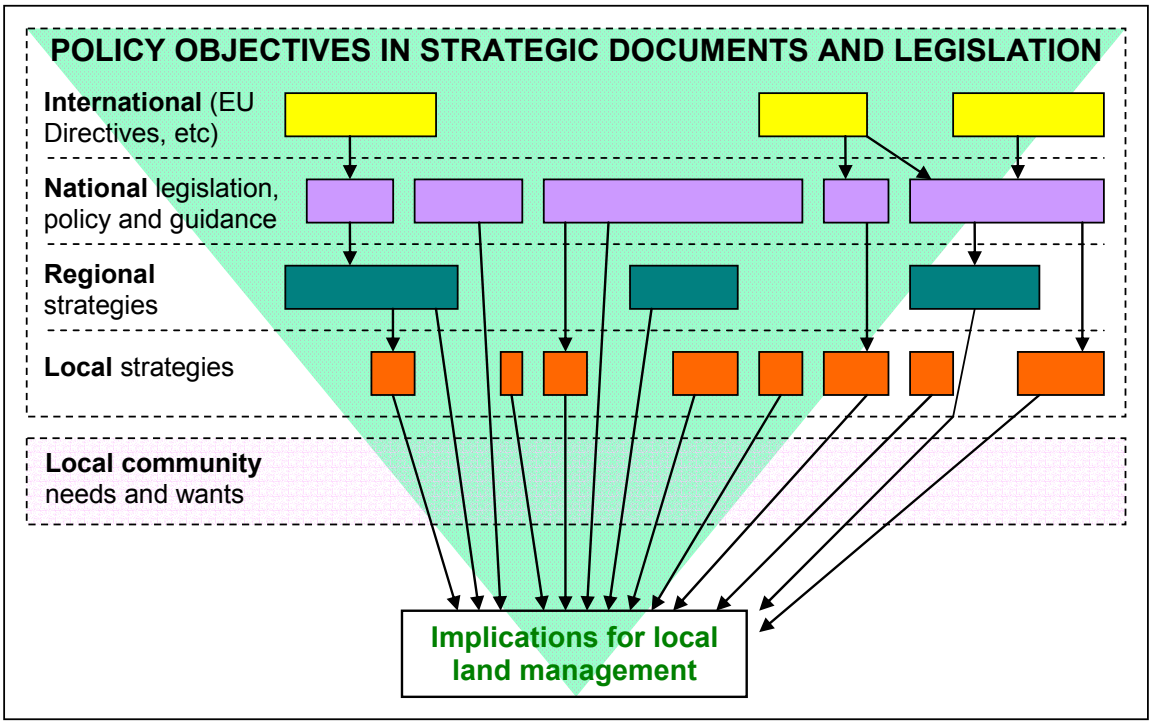
management agreement payments are involved and the use of market-based environmental assurance schemes to reward high levels of environmental management.

Scale at which measures are delivered

5.60. The triangular shape of the pyramid illustrates a diminishing area of land involved rising up through the layers of measures. However, there is also a general progression, moving up the pyramid, from policies that operate over a large scale (for instance legislation operating at an EU or national scale) to initiatives that have area specific management objectives (such as agri-environment schemes or river basin plans) to measures at the top of the pyramid which may be highly specific to a single site (such as the statutory designation of an ancient monument or habitat). There is a similar pyramid representing area-based strategies that are focussed to a point in terms of the decisions taken by individual land managers and the delivery of policies at the level of individual units of land. This pyramid starts with EU directives and strategic action plans, moving up through national legislation, strategies and the rural development programmes, to regional and local strategies (such as area-based biodiversity action plans) and finally to site based management plans (such as, in England, site management statements used on SSSIs and the new Farm Environment Plans through which the higher level of the Environmental Stewardship scheme is being delivered).

5.61. Work for the Countryside Agency in 2004 on the development of 'local land management frameworks' (LUC, 2004) shows how policy priorities trickle from international to local scales , but that new priorities are often added at national, regional and level levels, particular in relation to the detailed delivery of more generic internationally established objectives. The views of some stakeholders, such as local communities, tend to be heard at the smaller scales. **Figure 5.1**. shows how these hierarchies of strategies relate to each other and apply influence on individual land managers.

Figure 5.1. The inverted pyramid of strategies bearing on local land management decisions



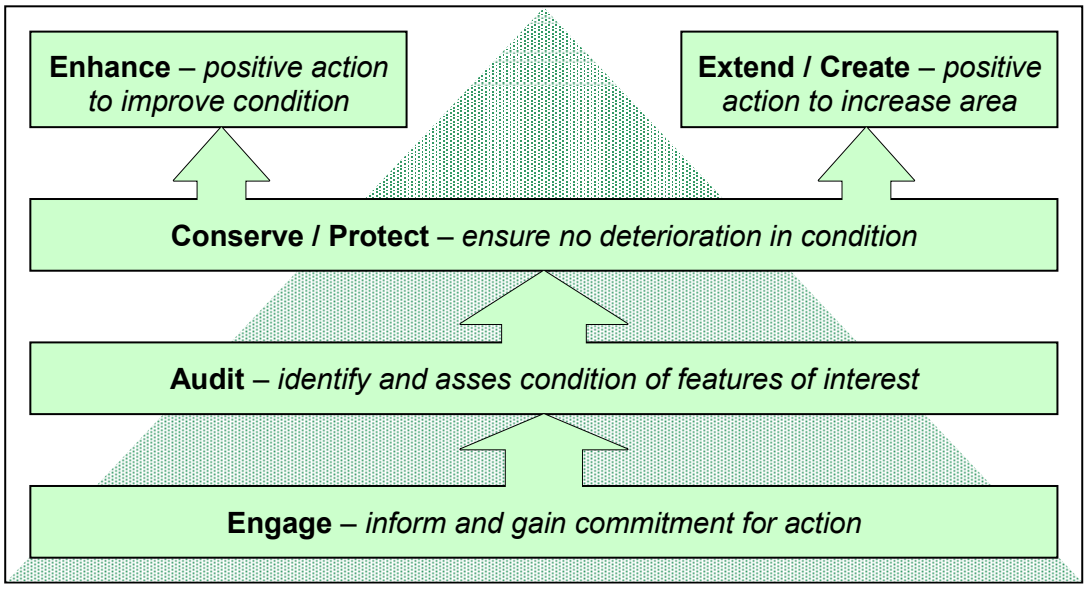
A progression of processes

5.62. The rising level of public benefit provided by successively higher tiers in the pyramid requires increasing levels of engagement and commitment by landowners and managers and this is reflected in the processes used in many individual measures (such as agri-environment schemes). Such measures usually involve a progression from informing and engaging with the target land managers, through an audit of the features of interest on each holding or business, to a commitment to ensuring no deterioration in these features and finally to the enhancement, extension or creation of these and other features. These stages are shown in **Figure 5.2**.

5.63. This progression of processes is evident within many of the layers (for instance, all can be distinguished within England's Environmentally Sensitive Area schemes and their tiers of payment). It is arguable whether this progression is relevant across the pyramid as a whole (i.e. lower layers being more concerned with informing and auditing and higher layers with conservation and enhancement). The fact that, like the base level of the pyramid, the pinnacle of the pyramid tends to

involve the statutory protection, rather than the voluntary enhancement and creation, of sites and areas suggests that this does not hold true at all levels. Nevertheless, a pyramid shape is shown in the background to Figure 5.2 to indicate the generally escalating levels of processes (matching the rising public benefit noted earlier).

Figure 5.2. Stages in the engagement of land managers in environmental schemes



Temporal progression

5.64. Rising through the pyramid can equally be seen as marking a progression over time, with individual land managers, or indeed whole communities, adopting progressively higher standards of management as expectations on them rise. The desire to provide a ladder of opportunity that is accessible to all land managers has been one of the motivations behind the development of entry level agri-environment schemes. There is thus an expectation that land managers who become subject to cross compliance conditions or industry standard farm assurance schemes will be more willing and able, subsequently, to apply to join schemes that require higher levels of commitment to achieving public benefit.

5.65. Progression up the ladder becomes progressively more restricted with increasingly targeted and competitively funded schemes reducing the areas covered. This narrowing of the availability of measures at the higher levels of public benefit might be justified on the basis of value for money, but leads to the situation where it is limitations on resources rather than on the demand or need to rise up the pyramid that limits the output of schemes.

Characteristics of farmers and farming

5.66. There is potentially a wider issue relating to the character of farming that can be seen through the prism of the pyramid model. It has been widely debated[24] but is difficult to pin down, that it is the farmers with smaller holdings who often retain the more important environmental features on their land (such as semi-improved grassland or heritage sites). This retention may result from lack of funds to undertake agricultural improvements rather than any clear environmental commitment, but may also reflect a priority given to 'lifestyle', rather than purely financial, objectives in running the business. It has been argued that the same lack of resources, coupled perhaps with a lower level of engagement with strategic public objectives, has meant that

[24] See for instance: Reed M, Lobley M, Winter M and Chandler J. 2002. *Family Farmers on the Edge:*
Adaptability and Change in Farm Households Report for the Countryside Agency and Pretty J and Ward H, (2001). *Social capital and the environment*. In: World Development, Volume 29 (No 2), 209-227

smaller and more 'traditional' farmers may have a poorer record of compliance with basic legislation relating to resource protection than larger, more capitalised businesses.

5.67. Thus, it is reasonable to speculate that such 'traditional' farmers may be performing a very important role at the top of the pyramid while lacking the resources and engagement to meet the more basic requirements at the baseline. It is these farmers who have generally been poorly served by past agri-environment schemes because, as argued by Wildlife Link in England, there has been relatively little reward (based on the income foregone principle) for retaining and managing existing prime sites, compared to greater incentives for restoring and recreating new sites.

5.68. This contrasts with larger and better resourced farms that have systems for dealing with the increasing administrative burden placed on farmers, where each step in the ladder up the pyramid will be carefully considered against financial and business plan objectives. Diagrammatically therefore, there is potentially an inverse pyramid which describes the enormously valuable contribution of smaller farmers to the landscape on the one hand, and the pyramid as defined in this report (Figure 4.1) which describes the environmental performance of mainstream commercial farmers on the other hand. For fans of the BBC radio 'soap' The Archers, these may be characterised as the Grundy versus the Aldridge models.

INTEGRATION BETWEEN MEASURES

5.69. The desire to create a ladder of opportunity implies that there is integration between each layer, with access to higher layers only being open to land managers who have 'passed through' the layers below. This is evident to a large extent in the relationship between the baseline of legislation, the new requirements for cross compliance and the rising tiers of the new generation of agri-environment schemes. For instance, entry to the Higher Level of Environmental Stewardship (ES) in England is only open to applicants already in the Entry Level of ES who are in turn expected to be complying with the cross compliance requirements of the Single Payment Scheme.

5.70. There are also less explicit links between measures which the pyramid model can highlight. For instance, there are strong ties between the

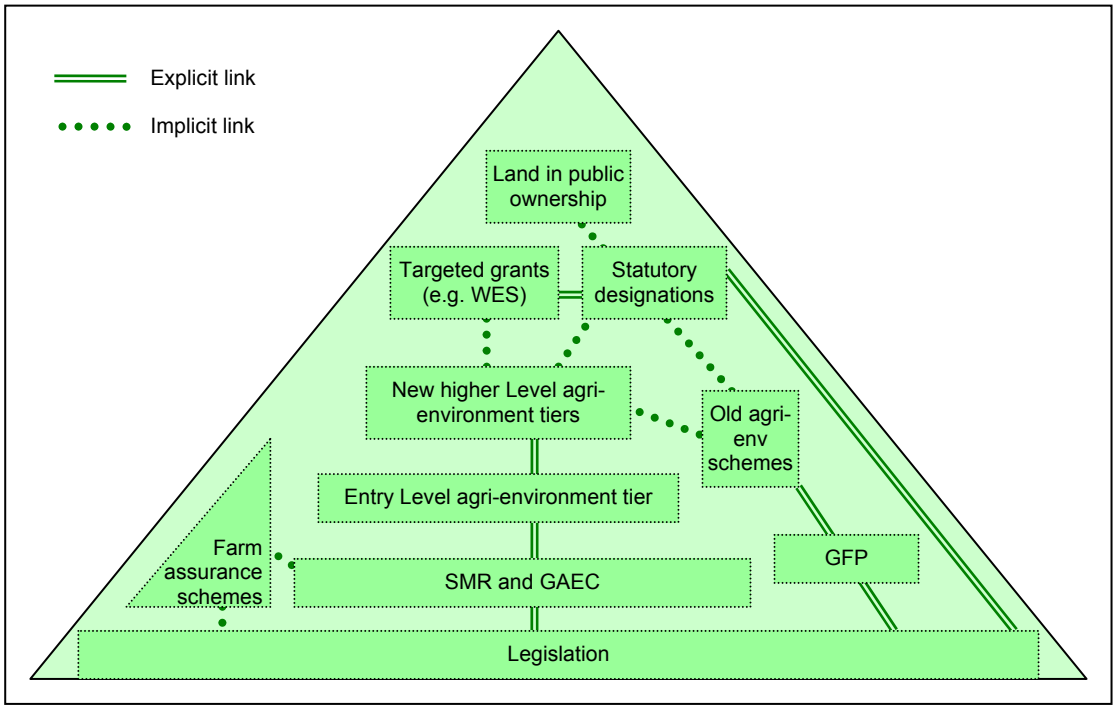
environmental standards in farm assurance schemes and equivalent requirements in both legislation and cross compliance. It is also often the case that land that is in public ownership on account of its environmental interest is often subject to a statutory designation which is itself a manifestation of legislation.

5.71. However, there are instances where there is a notable lack of clear integration between layers of the pyramid and where this lack of connection frustrates policy delivery. For instance, the relationship between the standards of Good Farming Practice that apply to existing agri-environment schemes and the Good Agricultural and Environmental Conditions that apply to the Single Payment Scheme is unclear, despite both of these measures being types of cross compliance. Similarly, the link between farm assurance schemes and agri-environment schemes is generally weak, even where the objectives they are pursuing are similar, such as in some of the more enhanced assurance schemes (for instance the LEAF Marque or Peak District Environmental Quality Mark). The links between the top tier of 'special site' grant schemes (such as the Wildlife Enhancement Scheme in England) and the mainstream agri-environment schemes has become clearer (perhaps because of the requirement that the former be placed within a state aids framework) but it could be argued that the two are not truly integrated.

5.72. The Land Use Pyramid can be used to 'map' these links, highlighting where integration is strong and where it should be improved. **Figure 5.3** provides an example of this. If the objective of providing a ladder of opportunity is to be realised, the diagram should show strong vertical links between measures and potentially an evenly spaced progression of measures up the pyramid. The development of the entry level tier in agri-environment schemes has been a major 'missing link' in many countries until recently, but Figure 5.3 suggests that there are other opportunities to tie in the farm assurance schemes that are slowly providing environmental benefits to the other measures and to improve the links between the old and new generation of agri-environment schemes. Figure 5.3 does not include the policy instruments of advice, demonstration, training and taxation all of which have a role to play in delivering environmental benefits to land

management and which have links to the measures shown in the Figure.

Figure 5.3. Schematic representation of integration between measures



CROSS CUTTING THEMES AND ISSUES

5.73. In contrast to the criteria described above, there are issues that do not represent layers of the pyramid. Instead, they can be considered to run vertically up its structure. These can be summarised as follows:

Different domains of environmental policy

5.74. The natural environment is often split into the different domains of landscape, biodiversity, cultural heritage and natural resources. Each of these domains may be represented throughout the pyramid, at least conceptually if not always in current practice. For example, there is a hierarchy of measures that can be taken to increase the protection of natural resources, in the same way as for the landscape or biodiversity and, with each of these hierarchies, there tends to be a trend from relatively modest actions over a large proportion of the land area, to more intensive interventions on smaller targeted areas.

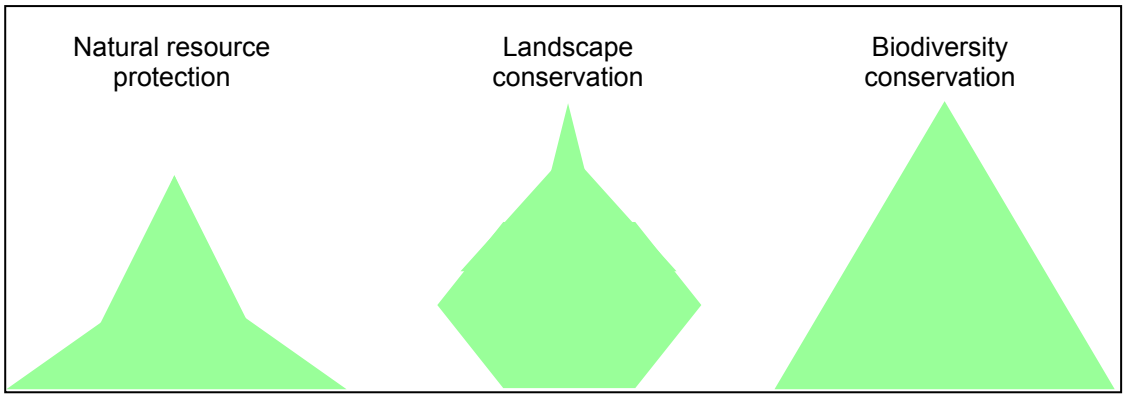
5.75. However, it would appear that activity in each of the domains is currently concentrated at different points in this hierarchy, or at different levels in the pyramid. Natural resource protection is more

evident in the lower layers – for instance much of the legislation affecting land managers is concerned with protecting water quality. Conversely, the concept of landscape enhancement (in the upper layers of the pyramid) is perhaps less well developed than action to enhance biodiversity.

5.76. The emphasis on resource protection in regulation can be partly explained by the fact that regulation, by definition, is more able to prevent undesirable activity (protection) than to encourage better activity (conservation and enhancement). The prevention of natural resource pollution is necessary to safeguard human health and safety and therefore perhaps more appropriate to obligatory controls than the conservation of biodiversity, landscapes and the historic environment – which are generally more concerned with the quality of life. Nevertheless, there has been concern that there should be greater obligatory protection of biodiversity from agricultural land use change in particular, rather than relying, outside the statutorily protected sites, on the 'softer' and generally voluntary means that account for other delivery mechanisms at higher levels in the hierarchy. Statutory protection of features such as hedges and the Environmental Impact Regulations for unimproved grassland illustrates this tendency.

5.77. **Figure 5.4** uses the pyramid model to suggest diagrammatically how measures to address the different environmental domains are present at different levels of the pyramid, with the horizontal axis representing the areas covered and the vertical axis representing delivery of rising benefit.

Figure 5.4. Relative emphasis of measures to address natural resources, landscape and biodiversity in the pyramid



Policy objectives outside the environmental sphere

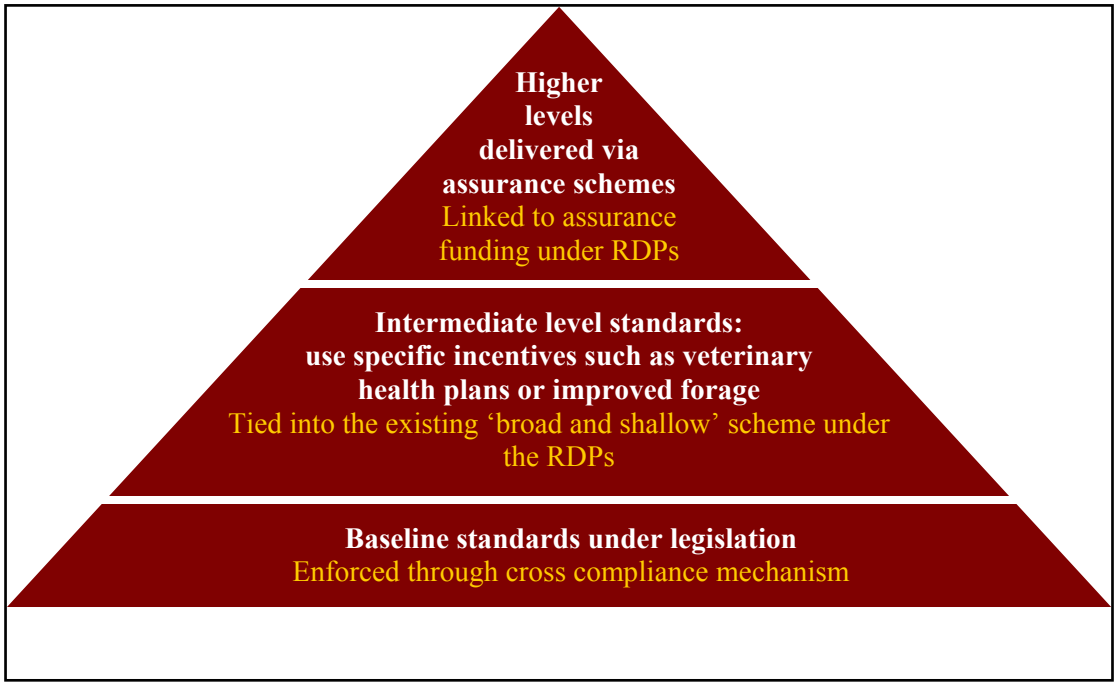
5.78. While the pyramid has most commonly been applied to the environment, it is interesting to explore whether the model can apply conceptually to other policy areas such as economic development, social inclusion or animal welfare even if, as explained below, a different horizontal scale needs to be applied. For example, in the UK the RSPCA has used a pyramid concept to illustrate its approach to delivering animal welfare standards through different CAP schemes. **Figure 5.5** shows the diagram included in their publication *Into the Fold: Creating Incentives for Animal Welfare under the Rural Development Programmes* (RSPCA, 2004).

5.79. While the baseline tier and middle tier represent essentially the same layers of policy intervention as in the equivalent Land Use Pyramids, it is significant that the model shows the highest level of animal welfare benefits being provided by the market through farm assurance schemes (albeit those schemes supported by the Rural Development Programmes). It is also notable that the model envisages cross compliance and the broad and shallow (Entry Level of the ES) scheme covering animal welfare issues.

5.80. The applicability of the pyramid model to animal welfare expenditure at an EU level depends critically on the view taken about how animal welfare should be secured, the optimal level and distribution of animal welfare, and the establishment of a clear EU baseline of animal welfare standards. Whereas it is accepted that environmental benefits can be delivered at a different level in different situations (as illustrated in the

pyramid model) it is unclear whether this logic could be extended to intervention to secure differential levels of animal welfare.

Figure 5.5 Scenario of delivering animal welfare benefits through different CAP schemes



Taken from RSPCA, 2004 which draws from research undertaken by AGRA CEAS Consulting Ltd

Integrated Rural Development

5.81. The broadening and, to a large extent, convergence of rural development agendas in different regions of the EU to cover economic, social and environmental concerns has already been referred to in Chapter 3. If the Land Use Pyramid model is to contribute to this new broader perspective, it will need to provide an adequate model for:

- Clarifying the hierarchy of actions and undertakings expected of the full range of actors in rural development, including consumers, local communities and public bodies
- Taking account of all relevant policy areas (e.g. economic and social, as well as environmental)
- Demonstrating the effective integration of policy instruments to deliver sustainable rural development encompassing economic, social and environmental parameters.

5.82. As noted in Chapter 3 (paragraph 3.5 *et sequ.*) in many EU countries, socio-economic objectives are equally or more important than

environmental objectives in determining land management policy, particularly in relation to rural development programmes. This is particularly evident in France where the establishment of alternative and socially-acceptable forms of farm support as the basis of stronger links between agriculture, the wider rural economy and the cultural fabric of French society has become the key objective of national rural development policy (see Box 5.3). The European Commission's four axis approach to the new Rural Development Programmes (which is described in the next Chapter) includes a mix of land and business related measures under each axis, suggesting that the future of the second Pillar of the CAP is likely to rely on a more complex mix of environmental, social and economic measures than has been the case before.

5.83. However, two factors suggest that the pyramid model may not be well suited to illustrating this broader approach to rural development.

1. Unlike environmental policy measures, it is more difficult to see economic and social policies measured in relation to the area of land (or 'quantity' of policy) covered (this forming the basis of the pyramid's structure). Instead, economic policy measures tend to be categorised in terms of the enterprise sectors (e.g. producers, processors and service providers) or sizes of business (e.g. micro and SMEs) they address. Social issues are often addressed through the social unit (e.g. the family or village) on a demographic basis (e.g. young people) or economic activity (e.g. the long term unemployed). The way that economic and social issues are conceived is therefore fundamentally different from the way environmental issues that relate to land management are conceived.

2. Economic and social issues are also addressed through different kinds of measure. In particular, fiscal measures (such as taxes and loans), which play little part in environmental land use policy, are a major instrument of economic and social policy. Conversely, instruments such as management agreements, cross compliance and statutory designations are rarely used. While this different policy mix does not prevent comparisons between environmental, economic and social policy, it suggests that a conceptual model such as the pyramid would be less instructive.

5.84. If, as is suggested here, the pyramid is insufficient as a model to guide the social and economic dimensions of rural development policy, it is nevertheless essential that alternative models are created that help to develop and illustrate a robust rationale for these interventions. This is a challenge well beyond the scope of this report.

Box 5.3. France: Innovation in Rural Development Policy

France is arguably the most rural of the western EU Member States. Although the majority (77%) of the French population is urban-based, this is a relatively new phenomenon and the product of fundamental rural depopulation over the last 50 years. Depopulation remains a very real concern for most rural areas and the maintenance of people and economic activity in the countryside is the over-riding objective sitting at the heart of French rural development policy. In contrast to most other Member States including the UK, France continues to embrace farming as both the key economic activity in rural areas *and* the main vehicle for bringing greater social and economic benefits to rural areas, especially those threatened with further declines in population and employment.

The principal vehicle for achievement of national rural development objectives are the *Contrats Territoriaux d'Exploitation* (farm territorial contracts or **CTEs**) introduced by the 1999 *Plan de Développement Rural National* (PDRN) as a means of promoting and funding the re-orientation of French agriculture towards multi-functionality and the three inter-linked objectives of agricultural production, environmental protection and rural economic sustainability.

The CTEs are voluntary whole-farm development contracts which combine two dimensions:

- an environmental dimension involving agri-environment and resource management measures;
- a socio-economic dimension involving investment and farm diversification measures and/or support for young farmers and early retirement with the aim of promoting local employment and the generation of additional income opportunities.

Participating farmers have to include elements from both dimensions in their contractual agreements in order to be eligible for public funding.

A key characteristic of the CTEs is that they are designed and drawn-up locally by groups of stakeholders including representatives of the farming community, environmental interests, local businesses and local/regional government according to prevailing agricultural, environmental and socio-economic conditions. As such, CTEs have emerged as a highly innovative

attempt to transpose a bottom-up approach to agricultural multi-functionality into mainstream rural development policy – an approach which could play a major role in the long-term development and implementation of future EU rural development policy and which has certainly attracted the interest of other Member States.

Whilst few people doubt the long-term value of the CTE approach (it is vigorously supported by French environmental groups), the immediate value of the CTEs as a practical and efficacious alternative to conventional agri-environment thinking remains limited by, amongst other things, the complexity and high cost of their administration. Consequently CTEs have suffered a long and difficult start-up with a low level of uptake to-date. The issue currently facing CTEs is whether they will be embraced as a radical and far-reaching response to the potential of CAP reform – or whether they will be abandoned.

Regional variation

5.85. Geographical variation in the way policies are delivered is an important issue, both for national policies that may have differential regional impacts and for deliberately targeted policies that aim to meet local needs and objectives. For example, it is widely acknowledged that there will be differential impacts of the recent CAP reforms on lowland and upland landscapes, and on remote and peri-urban areas.

5.86. There is also a trend towards regional subsidiarity in the way that rural development programmes are adopted, enabling the regional setting of objectives and means of implementation.

5.87. There is thus merit in a conceptual model, such as the Land Use Pyramid, being able to illustrate such regional impacts within an overall national or EU-wide framework. While separate pyramid models can be developed for different regional programmes, this study could find no examples of the model being used to illustrate the way these programmes combine at a national or trans-national scale. This is likely to be because doing so (such as by adding a third dimension i.e. turning the model from a triangle to a true three dimensional pyramid) would make it visually confusing. Using the model to illustrate regional variations would therefore be stretching the potential of the model a step too far.

Individual versus collective activities

5.88. Improving the economic collaboration between small rural businesses, and increasing the social connections between land managers and other sectors of society, have become policy goals in the UK, reflecting similar goals in many other EU Member States. Although not usually the primary purpose of such collaborative action, there may be environmental benefits to it. For instance, improved environmental management between land managers at a landscape or catchment scale is more likely to address issues such as diffuse pollution or landscape deterioration than action that is piecemeal and dispersed. Demonstration events designed to change the practice of land managers are often more effective (both in terms of gaining their commitment and in terms of cost) when they are done on a collective basis. Examples such as the Environment Agency's Landcare Project in the Wiltshire/Dorset Avon catchment, the experience of the farmers participating in the Pontbren project in Powys, Wales and the Farming and Wildlife Advisory Group's various parish projects show this collective approach to environmental interventions in practice.

5.89. It is significant that the Welsh Assembly Government's consultation on an extended agri-environment scheme in Wales[25], used a pyramid model that placed activities by groups of farmers at its apex, with this level delivering "*landscape scale environment, biodiversity and access benefits*" (Figure 4.4). It is tempting to suggest that the pyramid might be used to show how environmental activity ranges from the primarily individual at the base to the primarily collective at the apex. However, there would appear to be no evidence that this reflects either a real trend in the way that schemes operate, nor in the public objectives for environmental land management. For instance, baseline statutory controls may involve a degree of collective activity (such as that involved in establishing tradable pollution credits or licenses) and there may be good reasons why high level habitat or species management needs to be targeted to the needs of individual sites where collective action is unlikely to be appropriate.

[25] Welsh Assembly Government (2003). Consultation on a New Approach. An Entry Level Agri-environment Scheme for Wales.

5.90. This suggests that, although there is no reason why collective and individual activities should not be included within the pyramid structure, it is unlikely that the model can be easily used to demonstrate a single trend in the interactions between groups of land managers on the one hand and the delivery of environmental benefits on the other.

Conclusions

This Chapter has used the framework provided by the Land Use Pyramid to shed light on the efficacy of, and relationship between, the different instruments used to implement environmental land use policy. It has also highlighted weaknesses in the pyramid model in relation to the requirements that the Land Use Policy Group has for a conceptual model to guide policy development (described at the beginning of Chapter 4).

- The main strength of the pyramid is the way it portrays the different layers of policy instruments, and the measures used to deliver them, in relation to environmental land management.
- The bottom layers of the pyramid consists of the legal obligations on land managers. In reality, this baseline is not flat, but varies both in height and thickness for the different environmental policy domains (e.g. natural resource protection and landscape conservation) and for the different land use sectors as they are exposed to these domains.
- The model can be used to show how the progressive introduction of new regulation raises the baseline of expectation on land managers, impacting on the layers above.
- The instruments of best practice and cross compliance occupy the transition layer between the baseline of compulsion and higher layers of incentivised undertakings. However, it is not the case that cross compliance, in particular, occupies a solid layer in the pyramid since land managers who choose not, or are ineligible, to receive the Single Payment are exempt from its requirements. This has implications for policy in areas where cross compliance is seen as a key instrument for delivery (such as for soils).

- The next layer in the pyramid covers the use of grants and subsidies to 'purchase' environmental conservation and enhancement beyond the remit of the polluter pays principle and regulatory control. It includes income foregone management agreements (the agri-environment schemes) and capital grants. Although the decoupled Single Payment is a subsidy, its lack of environmental objectives (with the exception of cross compliance) means that it has no obvious place in the pyramid model. This can be regarded either as a flaw in the model or as a strength of the model in exposing a weakness in the CAP.

- The pinnacle of the pyramid represents the designation, and in some cases, public purchase of land of highest environmental quality. Variation in the willingness of governments to constrain or remove landowners' property rights in these ways alters the dimensions of this top layer.

- While the horizontal scale of the pyramid is clear (corresponding to the proportion of total land area on which instruments and measures in each layer apply), there is less certainty about the vertical scale. The pyramid has different manifestations, depending on whether the vertical scale is defined as:
    - Rising public investment;
    - Rising public benefit (which is linked to, but not the same as the above);
    - Shrinking geographical scale at which activities take place (from national at the base to local at the pinnacle);
    - Increasing engagement and substantive activity (moving from assessment, through a commitment to maintain, to action to enhance or create); and
    - Involving a temporal progression, with individual landowners starting at the bottom and moving up through the layers over time

- The pyramid model provides an interesting lens through which to look at different types (scales and intensities) of farming and their impact on the environment. Traditional mixed farmers with strong 'lifestyle' objectives to their businesses can be seen as having a vital role in maintaining high value habitats and landscapes, but perhaps

tend to have a poorer record in complying with the regulatory requirements at the base of the pyramid. The opposite may be true of the larger more specialist and more intensive farming businesses.

- The pyramid model provides a useful way of examining the functional relationship between different layers of policy instruments and measures, exposing weaknesses in policy where there is a lack of integration (as was the case before the introduction of the Entry Level of Environmental Stewardship in England and is currently the case in relation to Good Farming Practice and the Good Agricultural and Environmental Conditions).
- However, the pyramid itself has a fundamental weakness in not being able to address the relationship between environmental land management measures and those in other policy domains such as economic development, social inclusion and public health. The inability of the pyramid to reflect the broader rural development agenda, in which many policy measures can not easily be portrayed in terms of their spatial coverage suggests that the future of the model in this area of policy development is limited.
- It is also difficult to use the pyramid model to show regional variations in policy which are becoming increasingly important as ways of targeting activity to deliver regionally distinctive public benefits and to connect with local communities.

6. APPLYING MODELS TO CURRENT AND FUTURE POLICY PRIORITIES

6.1. In the UK, the Land Use Pyramid has proved an effective way of conceptualising the strategic development of environmental land use policy, particularly in relation to agri-environment schemes. This chapter examines whether the pyramid model could provide a guiding model more widely for EU environmental land use and rural development policy to allow more effective, integrated and more easily communicated policy-making.

6.2. In particular, it looks at four areas of policy:

- The Rural Development Programmes 2007-2013
- The Future of Pillar 1 of the CAP
- The world trade negotiations
- Implementation of the Water Framework Directive

RURAL DEVELOPMENT PROGRAMMES 2007-2013

6.3. The fundamental reforms of Pillar 1 of the CAP agreed in 2003 and implemented from 2005 will place a new emphasis on the proposed European Agricultural Fund for Rural Development (EAFRD). This will form the basis of the Pillar 2 programmes from 2007.

The European Commission's proposals for the regulations that will govern the Rural Development Programmes (RDP) from 2007 to 2013 are based around a framework of three thematic axes. These will be funded from a new rural development fund (the European Agricultural Fund for Rural Development) that consolidates existing streams from the European Agricultural Guarantee and Guidance Fund (EAGGF) and other structural funds. The three thematic axes that form the skeleton of the proposed rural development regulation are:

- *Axis 1: Increasing the competitiveness of the agricultural sector through support for restructuring*

- *Axis 2: Enhancing the environment and countryside through support for land management*
- *Axis 3: Enhancing the quality of life in rural areas and promoting diversification of economic activities through measures targeting the farm sector and other rural actors*

6.4. The Commission has also endorsed the principle of 'mainstreaming' the LEADER approach (see **Box 6.1**) by applying it more widely in rural development programming under a proposed fourth, functional axis: *Implementing local development strategies of local action groups building around the three thematic axes under the LEADER programme.* This has the potential to deliver sustainable rural development in a more integrated way, but still requires clear vision and creativity on the part of policy-makers to make use of this opportunity.

6.5. While at first sight it would appear that environmental land management policy is succinctly contained within Axis 2, this is not the case. For instance, the provision of best practice advice to farmers and land managers and the promotion of farm assurance schemes are both contained within Axis 1 while measures to protect natural heritage are contained in Axis 3. **Table 6.1** categorises all the measures in each of the Axes into those that relate to environmental land management and those that do not.

Table 6.1. Analysis of measures contained in the EAFRD proposal

Axis	Groups of measures	Measures relevant to environmental land management	Other measures
Axis 1: Competitiveness of agriculture and forestry sectors	Improving human potential	• Vocational training • Use of advisory services • Setting up farm management, relief and advisory services • Energy crops	• Setting up of young farmers • Early retirement

Axis	Groups of measures	Measures relevant to environmental land management	Other measures
	Restructuring physical potential	• Forestry investment	• Farm modernisation • Processing and marketing of primary products – Adding value • Improving infrastructure • Natural disaster aid
	Improving quality of production	• Adapting to new legislation • Participation in food quality schemes	• Supporting promotional activities of producer groups
	Transitional measures for new states		• Support of semi-subsistence restructuring • Setting up producer groups
Axis 2: Land management	Sustainable use of agricultural land	• LFA support • NATURA 2000 payments • Agri-environment schemes • Support for non-productive payments	• Animal welfare payments
	Sustainable use of forestry	• Afforestation of agricultural land • Afforestation of non-agricultural land • NATURA 2000 payments • Forest-environment payments • Support for non-productive payments	• First establishment of agroforestry systems on agricultural land • Natural disaster aid (e.g. fire)
Axis 3: Diversification of the rural economy; rural quality of life	Diversification of the rural economy	• Protection of natural heritage	• Diversification into non-agricultural activities • Creation of micro-businesses • Tourism activities
	Quality of life in rural areas	• Village renovation and development – conservation of rural heritage	• Services for the economy and rural population

Note: the categorisation of measures between environmental land management and other measures is undertaken by this study.

6.6. A significant addition to Axis 2, compared to the existing RDP regulations[26] is the inclusion of measures to protect and enhance the statutorily designated Natura 2000 sites. While these are likely to remain secondary in relation to the budget allocated to agri-environment schemes, it suggests that the Commission's "Three Axis" model is potentially more inclusive of the range of environmental policies operating in the EU than was previously the case.

6.7. As noted, the European Commission's proposals also suggest that the cross compliance standards (Statutory Management Requirements and Good Agricultural and Environmental Conditions) introduced to the Single Payment Scheme in 2005 should apply to agri-environment schemes in the future, with the addition of new standards on fertiliser and pesticide use that will be determined within the individual programmes. In Member States like the UK, where the existing standards of Good Farming Practice are more wide ranging and exacting, in relation to some aspects of biodiversity and landscape conservation, than the SMR and GAEC, this could result in a diminution of the obligations placed on farmers entering agreements, potentially allowing activities that are currently prevented on holdings in agri-environment agreements.

6.8. The EAFRD does not separate environmental land management measures into a discrete part of the rural development programmes. While the bulk of these measures (the agri-environment schemes) are contained within Axis 2, significant elements of policy are also delivered through Axis 1 (such as the provision of advice and support of industry accreditation schemes) and Axis 3 (protection of cultural heritage). This suggests there is no neat match between the visualisation of environmental land use policy through the Land Use Pyramid and the Commission's proposed structure for the EAFRD and Rural Development Programmes. This is partly due to the fact that, as outlined in Chapters 3 and 5, rural development priorities across the

[26] EC 1257/1999 and 1750/1999.

EU are a good deal wider than the environmental land management objectives addressed by the land use pyramid.

6.9. The Land Use Pyramid and the Commission's four axes (three thematic and one functional) are designed for different purposes. The pyramid model seeks to demonstrate a conceptual framework for policy, both in terms of temporal progression (and integration of different environmental land use interventions) as well as a rising hierarchy of public benefit. The European Commission's structure, on the other hand, is more concerned with providing administrative and budgetary clarity. It can therefore be argued that there remains a need for a conceptual framework to communicate the long term aims and direction of EU rural development policy.

6.10. While the pyramid model could help develop such a strategic vision with respect to the land use component of the EAFRD, the narrower scope of the pyramid model means that, as currently conceived, it would probably not be sophisticated enough to incorporate the wider socio-economic objectives and different policy traditions which exist elsewhere in the EU 25. In particular, it seems poorly equipped to portray the cross-cutting, 'bottom-up' and integrating approach of the Commission's proposed Leader axis (see **Box 6.1**. overleaf).

Box 6.1. Potential of the LEADER Axis to Deliver Sustainable and Integrated Rural Development[27]

For over 15 years, the LEADER I, LEADER II and LEADER+ programmes have sought to deliver 'bottom-up' local rural development programmes in discrete areas of EU Member States. The Commission's proposal to 'mainstream' the LEADER approach from 2007 (paragraph 6.4) provides an opportunity for greater stakeholder involvement, community engagement, partnership, co-operation and innovation in rural development programming as a way of delivering action at a local level based upon local objectives determined by local stakeholders.

In particular, the EAFRD proposals to create a cross-cutting LEADER axis provide scope for using local development strategies to deliver, enhance and effectively integrate the objectives of the other three EAFRD axes. For example, there is the potential to link together agri-environment support (Axis 2) with farm diversification activities (Axis 3) and support for marketing and processing (Axis 1) to promote the development and branding of local food and tourism products in well-defined localities and in accordance with objectives determined at a local level.

The LEADER approach also has a valuable role to play in supporting innovation and stimulating new partnerships at a local level – although it is flexible enough to fit to and build upon existing partnerships, initiatives and democratic mechanisms. The potential outcomes of a full and effective mainstreaming of the LEADER approach has some resonance with the French CTEs (see **Box 5.3**).

THE FUTURE OF PILLAR 1 OF THE CAP

6.11. The Mid-term Reforms of the CAP that were agreed in Luxembourg in July 2003 were significantly more radical than many had envisaged. The reforms were driven as much (perhaps more) by practical concerns about the financial and global unsustainability of the previous commodity-based support regimes in an expanding EU as by any long term vision of the future of agricultural support (despite some governments seeking such a vision). The settlement was thus more

[27] *European Agricultural Fund for Rural Development (EAFRD): The potential of the LEADER Axis to deliver sustainable rural development and environmental priorities*. Land Use Policy Group Working Paper (final draft March 2005).

about finding an accommodation between practical and political constraints than about satisfying any long term policy goals. As a result, it can be said that the CAP (or at least its main Pillar – the Guarantee section of the EAGGF), has now outgrown its original objectives as stated in the Treaty of Rome (of food security and social support in rural areas), without new objectives being agreed.

6.12. In the UK, the justification for the new Single Payment Scheme (SPS), in terms of the public benefit the payments provide, is often quoted as being compliance with the basic standards of the Statutory Management Requirements and for Good Agricultural and Environmental Condition. However, elsewhere the SPS is justified on the basis of the continuing expectation by farmers for a level of agricultural support during a time of changing market conditions (essentially a continuation of the social objective established in the Treaty of Rome). Others query the very notion of support for compliance with baseline requirements.

6.13. Whether the SPS can be represented directly in the pyramid is clearly a crucial issue. It would seem to be linked most closely to the layer of cross compliance standards through which basic environmental safeguards are intended to be provided. However, insofar as cross compliance is largely linked to legislative standards, this would seem to be a *prima facie* breach of the polluter pays principle on which the pyramid is premised, nor is it linked to identified public goods. The SPS does not therefore appear to relate to a layer within the pyramid model.

6.14. There would appear to be something of a vacuum, or at least a confusing lack of consensus, over the future direction (or indeed existence) of the main Pillar of the CAP beyond the current life of the Luxembourg reforms. Before considering how a conceptual model of environmental land management policy could help fill this vacuum, it is helpful to consider the options that appear to be available for the future of Pillar 1 support.

1. **The status quo**. Continuation of current decoupled payments and the low levels of cross compliance might be justified on the basis

that financial support to farmers and land managers is an effective way of maintaining desirable social and economic structures in rural areas. However, the diminishing role of agriculture in rural economies and communities across the EU suggests that this justification, if it was ever valid, is weakening and may come under increasing challenge from other trading blocks in the World Trade Organisation because of the distorting impact that the CAP has, and continues to have, on trade. Expenditure on agricultural support will also be potentially vulnerable to poaching by other higher profile demands on EU expenditure (such as, perhaps, to mitigate the impact of severe climatic events). Socio-economic considerations may nevertheless continue to be a powerful motivation for preserving the status quo in countries such as France and some new Member States such as Poland.

2. **The deepening of cross compliance**. A significant increase in the cross compliance conditions applied to farmers and land managers could allow Pillar 1 payments to be justified on the basis of raising basic standards of land management practice above those currently required by legislation. This would amount to a substantial change in the way the decoupled support is conceived from a legal entitlement (the current situation) to payment conditional on specific benefits being delivered (essentially a re-coupling of the support). It would significantly narrow the gap between the role of Pillars 1 and II, although Pillar II measures are likely to continue to be differentiated by being allocated on a competitive basis and by being subject to regional targeting. Even if Pillar 1 payments were subject to deeper cross compliance measures, expenditure would continue to be vulnerable to poaching for other purposes.

3. **Transfer from Pillars 1 to II**. The progressive movement of funds from Pillar 1 to Pillar II programmes would provide a more overt and secure justification of support for rural areas. Public payments, many if not all of which would be competitively funded, would be clearly linked to the delivery of public benefits. In this way, the Common Agricultural Policy would be turned into an EU Rural Development Policy in the way envisaged at the Cork Conference

(paragraph 2.4). Given the variety of rural policy drivers at the level of individual Member States (Chapter 3), it is likely that this Rural Development Policy would be less 'common' than the current CAP and would allow the Member States to pursue their own objectives through the Rural Development Programmes. This is certainly the approach proposed by the European Commission in the proposed new Rural Development Regulation. This level of subsidiarity, involving such a large amount of potentially trade distorting public expenditure, would need to be tightly constrained by a new set of state aid rules and would be subject to close scrutiny by other trading blocks.

4. **A shrinking CAP**. In the face of growing priorities in other policy areas (whether they be mitigating the impacts of climate change, EU security, overseas aid or economic development), it is possible that the overall size of the EU's agricultural budget will shrink dramatically. This is becoming politically more acceptable in many EU countries as a result of the reduction in the economic and social importance of agriculture. Protection of high nature value areas and fragile rural economies (such as in remote and mountainous areas) could continue through Rural Development Programmes and legislation could be used to protect consumer safety and choice and to defend regional foods and land management practices from competition. The environmental impact of such a policy of withdrawal from agricultural policy would vary between those areas where current land use is considered benign and is dependent on public support (such as in marginal areas) and those areas where current land use is either environmentally neutral or is considered damaging.

6.15. All these options would benefit from being summarised and illustrated by a schematic model. However, it is debateable whether the pyramid model has a significant role to play. This is because, as outlined in the previous section, while the pyramid model refers specifically to environmental land use, policy objectives for agricultural and rural development policy extend well beyond this. Secondly, if there is to be a significant increase in subsidiarity, or 're-nationalisation', of rural

development policy (as in option 2 above) it may be that EU-wide policy objectives will be of an altogether more practical kind (for instance covering levels of state aid, minimum levels of monitoring and enforcement) and conceptual models like the pyramid will be more appropriate at national or regional level. What does seem clear is that the Single Farm Payment does not fit within the pyramid model. The lack of a clear alternative conceptual model for the SFP suggests it lacks a long term *raison d'etre*.

6.16. Nevertheless, for the UK and other nations who have similar traditions and priorities towards environmental land management, the pyramid model will continue to be a useful lens through which to project future CAP structures, providing a means of conceptualising how this future would impact on other programmes and measures (such as the breadth and depth of environmental legislation and the protection of areas of high nature conservation value).

WORLD TRADE NEGOTIATIONS

6.17. Previous rounds of world trade talks, such as the Uruguay round which ran from 1986 to 1994, have focussed on establishing principles of trade in goods, services and intellectual property. The impetus provided by the Uruguay round was largely responsible for the reductions in EU agricultural trade barriers in the 1994 MacSharry Reforms of the CAP. The current round of talks, known as the Doha Development Agenda (DDA) began in 2001 and includes negotiations on agriculture, the environment, and special and differential treatment for developing countries.

6.18. While these talks have formally recognised the role of the environment as an issue for the first time, the declaration produced at Cancun in 2003 ensured that international agreements on the environment (so called 'Multilateral Environment Agreements' such as the Kyoto Protocol on reducing greenhouse gases and the Convention on the International Trade in Endangered Species (CITES)) have been subordinated to the higher goal of unfettered access to markets. Many environmental organisations such as Friends of the Earth fear

that the DDA could lead to unhelpful restrictions on the use of environmental product labels and certification.

6.19. It is difficult to portray these issues in relation to land use in the pyramid model. The Uruguay round developed the concept of red, green and blue boxes in relation to agricultural support, to indicate which forms of support could not be accommodated within a world trade agreement, which could and which would be conditional. It is likely that such a model, which has no obvious spatial dimensions, will continue to prove more useful than a land use model such as the pyramid.

WATER FRAMEWORK DIRECTIVE

6.20. The EU Water Framework Directive (2000/60/EC) requires member states to establish a single system for monitoring and reporting on water quality through the adoption of River Basin Plans. Given the wide range of current practices across the EU, the timescale is necessarily a long one. Initial River Basin Management Plans must be drawn up for each River Basin District by 2009. By 2012, member states must establish a programme of measures to ensure the water quality objectives laid out in the Directive will be met. Reporting on progress against these objectives will take place in 2015 and further rounds of reporting on water quality data and revisions of the measures will take place at six year intervals thereafter.

6.21. The River Basin Management Plans and the measures to address poor water quality are at the heart of the Directive. The Directive states a number of 'basic measures' which must be used to meet the water quality objectives (essentially drawing together existing statutory powers) and permits member states to use a range of 'supplementary measures' to support these.

6.22. Both the timescale and measures in the WFD appear to operate independently of the current and planned reforms of the CAP (which are much more short term) although both will be influential in determining the environmental standards of land management in the future.

6.23. The environmental objective of the Directive, the spatial dimension of the River Basin Plans and the use of a range of different policy instruments in the basic and supplementary measures suggest that the Land Use Pyramid may provide a useful analytical model for implementation of the WFD. Furthermore, the pyramid could also provide a way of portraying the relationships between the WFD and other areas of policy such as the agri-environment schemes that are likely to be used as 'supplementary measures' within many River Basin Management Plans.

6.24. Where the pyramid may prove particularly useful is in comparing the measures that should be adopted generically across the whole River Basin District (for instance best practice advice to reduce diffuse pollution) with those that need to be targeted at more limited areas where greater resources will be needed to implement them (for instance the creation of washlands to ameliorate river flows or buffer strips to reduce soil erosion or pollution).

THE FUTURE ROLE OF THE LAND USE PYRAMID

6.25. This final section of the report draws overall conclusions, based on the evidence and arguments presented in earlier Chapters. It addresses the general role that conceptual models can plan in relation to policy development before examining the use to which the Land Use Pyramid might be put in the future.

The role of conceptual models in environmental land management policy

6.26. This paper has demonstrated that conceptual models can be used in relation to policy development in three ways:

1. To communicate and clarify complex ideas in ways that show the overall direction of policy.

2. As an analytical tool to assess (and reflect back on) the impacts of policy measures in relation to wider policy objectives. This is helpful in terms of the relationship between measures and the role that different instruments have in delivering whole programmes.

3. As a predictive tool to anticipate future impacts (such as duplication and gaps) of policy measures. In this case, the model requires a sound evidence base, as well as a means of 'ground truthing' any predictions it makes.

The efficacy of the Land Use Pyramid

6.27. It is in the first of these roles that the Land Use Pyramid has been used, particularly in relation to the development of agri-environment schemes. Concern has been expressed that the Pyramid should not be used as either an analytic or predictive tool since this would stretch the model further than it was designed to be used. The lack of clear definition over the vertical scale for the Pyramid reinforces this caution.

6.28. The central premise behind the Pyramid is that land use interventions can be seen as delivering a hierarchy of rising public benefit (which links closely but not completely with rising levels of payments to land managers) in which measures are targeted progressively more closely on land of increasing environmental value. The Pyramid helps to show how different policy instruments have distinctive roles in delivering this targeted approach. For instance the model draws attention to the roles of:

- legislation applying basic obligations to all land;
- voluntary measures offering competitively funded measures to land managers at higher levels; and finally
- compulsion through statutory designation or land purchase providing protection of the smallest areas of land of highest environmental quality.

6.29. The model is helpful in showing a relationship between layers of intervention. Some of the lower layers are pre-requisites for the layers above (such as the baseline of legislation, cross compliance and the entry levels of agri-environment schemes which all apply to higher levels of agri-environment schemes) whereas some are not (such as statutory designations and market accreditation and assurance schemes).

6.30. The model is also helpful in portraying a ladder of controls and incentives, encouraging a progression over time of land managers and their management practices moving up the layers within the pyramid. This gives expression to the expectation that the baseline of legislative obligations will rise over time, in line with the increasing priority placed on environmental protection and on technical improvements that increase the efficiency with which problems can be solved.

6.31. However, critically, the Land Use Pyramid does not lend itself to portraying the wider canvas of sustainable development in which environmental policy sits. The model does not shed light on the relationship between environmental land use measures and the achievement of wider economic and social goals. For instance, it does not seem good at anticipating whether measures at the top of the pyramid provide more or less economic benefit than those at the bottom. Nor does the model help relate the impact of economic and social land use policies (that are particularly important in many parts of the EU) to environmental objectives.

6.32. This key weakness of the model arises because the social and economic policy spheres usually have much less of a spatial dimension than the areas of environmental policy (such as the agri-environment elements of the CAP) that the Pyramid was developed to address.

6.33. Similarly, while the Pyramid has been used to illustrate approaches to animal welfare policy, it seems less well equipped to reflect the nuances of hierarchies of interventions in this policy domain. Furthermore, concern has been expressed that using the same model for what are essentially two separate areas of policy development (i.e. environmental land management and animal welfare) could confuse rather than clarify.

6.34. Furthermore, the Pyramid appears not to be well equipped to illustrate or help develop national programmes that consist of separate regional or more local expressions of policy because to do so would add an unhelpful level of complexity and could be confusing.

The Land Use Pyramid in relation to future policy needs

6.35. This paper has briefly examined the development and conceptual basis of EU environmental land management policy, and particularly the relationship to the emerging Rural Development Regulation, the future of Pillar 1 of the CAP, the Water Framework Directive and the WTO's Doha Development Agenda. The founding objectives of the Treaty of Rome, particularly with respect to the support for agriculture, seem no longer relevant to these new challenges leaving a lack of a clear EU-wide conceptual framework for intervention or for drawing these four important forces for change together.

6.36. There is thus a real need for a conceptual model that will help develop and illustrate this overall framework. This report concludes that the Land Use Pyramid may continue to be helpful as a means of clarifying the role of the Water Framework Directive and parts of the proposed Rural Development Regulation, particularly in the context of other environmental policy measures. However, it has too narrow a focus on spatial measures and environmental goals to provide the broader unifying model that is needed to clarify the EU's long term policy towards intervention in land management and international trade in agricultural and forestry products.

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GLOSSARY

AONB ..... Area of Outstanding Natural Beauty

BSE ..... Bovine Spongiform Encephalopathy

CAP ..... Common Agricultural Policy

CCW ..... Countryside Council for Wales

CSS..... Countryside Stewardship Scheme

DCMS ..... Department of Culture, Media and Sport

Defra..... Department for the Environment, Food and Rural Affairs

EA ..... Environment Agency

EAFRD ..... European Agricultural Fund for Rural Development

EAGGF ..... European Agricultural Guarantee and Guidance Fund

EC ..... European Commission

EN ..... English Nature

ERDF ..... European Fund for Regional Development

ERDP ..... England Rural Development Plan

ES..... Environmental Stewardship Scheme

ESA..... Environmentally Sensitive Area

ESF ..... European Social Fund

EU ..... European Union

FC .....Forestry Commission

FMD .....Food and Mouth Disease

GAEC .....Good Agricultural and Environmental Conditions

GFP .....Good Farming Practice

LEADER .....EU programme to stimulate innovative approaches to rural development

LEAF.....Linking Environment and Farming

LFA .....Less Favoured Area

MAFF.....Ministry of Agriculture Fisheries and Food

MTR .....Mid-term Reform (of the CAP)

Natura 2000 sites …Sites designated under the EU Birds (Special Protection Areas) and Habitats Directives (Special Areas of Conservation)

NFU.....National Farmers' Union

PDO .....Protected Denomination of Origin (EU geographical indicator)

PGI .....Protected Geographical Indication (as above)

RDP.....Rural Development Programme

RDS.....Rural Development Service

RSPB.....Royal Society for the Protection of Birds

RSPCA ..... Royal Society for the Prevention of Cruelty to Animals

SAC ..... Special Area of Conservation

SAM..... Scheduled Ancient Monument

SAPARD ..... EU agricultural and rural development programme in the eastern accession countries

SEPA..... Scottish Environmental Protection Agency

SMR..... Statutory Management Requirements

SNH..... Scottish Nature Heritage

SP..... Single Payment Scheme

SPA ..... Special Protection Area

SSSI ..... Sites of Special Scientific Interest

vCJD ..... variant Creutzfeld Jacobs Disease

WAG..... Welsh Assembly Government

WES..... Wildlife Enhancement Scheme