

**EVALUATION OF MEASURES AND POLICY MECHANISMS  
TO PROTECT PEATLAND**

**Report for:**

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## **EVALUATION OF MEASURES AND POLICY MECHANISMS TO PROTECT PEATLAND**

### **1 Introduction**

- 1.1 The Scottish Environment Protection Agency (SEPA) commissioned this work from Scotland's Moorland Forum.
- 1.2 The work aims to assist with the development of peatland advice relating to:
  - 1.2.1 Policy within Scotland, the UK and the European Union;
  - 1.2.2 The Scottish Rural Development Plan (SRDP); and
  - 1.2.3 The Common Agricultural Policy (CAP).

### **2 Evaluation Report**

- 2.1 The main part of the Report is in three sections. A draft of the Report was discussed at a workshop held in Dunblane, on 21<sup>st</sup> March 2013, and the Report was then revised to incorporate issues raised during the discussion.
- 2.2 This Report has approached the issues from three directions:
  - 2.2.1 The international and national developments that have led to the development of a draft Peatland Carbon Code in the UK.
  - 2.2.2 The perspectives of landowners & land managers
  - 2.2.3 Current and future cross compliance and RDP measures.

### **3 Workshop Report**

- 3.1 Several issues came out of the discussion held during the workshop and these are recorded below.
- 3.2 Peatland Management Facilitator
  - 3.2.1 The concept of a facilitator was developed to work with groups formed from owners and managers of land and other interest groups. The role could be to raise the awareness of peatland management in the area and increase the body of people with an understanding of the issues.
  - 3.2.2 The facilitator would also be well-placed to investigate the possibility of establishing collaborative schemes across multiple landholdings.
  - 3.2.3 Collaborative projects could be on a large scale, which would require a full-time project officer, or on a smaller scale where part-time support

- would be required, but the facilitator might be able to support several projects in an area.
- 3.2.4 A Project Officer could be shared with other roles, for example in a National / Regional Park or as part of a larger project.
- 3.2.5 The [IUCN Demonstrating Success booklet](#)<sup>6</sup> provides examples of where projects have been established successfully to deliver peatland improvements.
- 3.2.6 The concept could be tested in an area where there was a large amount of peatland to be managed or improved.
- 3.3 There is a tendency to think about peatland management as always involving restoration techniques of grip blocking or re-profiling of drains. It has been stated that 80% of the peatland in Scotland is in need of some improvement, but much of this area would not need large-scale intervention; some changes to management (burning, cutting or grazing) might be sufficient. The aim should be protect the areas of peatland in good condition, improve the areas that would respond to management change and decide which severely degraded areas were suitable for restoration work.
- 3.4 Pilot peatland restoration schemes
- 3.4.1 These have been proposed for two purposes:
- The selected sites would provide an opportunity to collect information about the amount of additional carbon captured as a result of different management change; and
  - To provide demonstration sites for land managers to visit and gain a better practical understanding of what peatland management entailed.
- 3.4.2 The information is required to quantify the carbon benefits in support of the development of the Peatland Carbon Code.
- 3.4.3 These sites should be selected in different parts of the country so that a range of information can be collected.
- 3.5 The importance of long-term monitoring was stressed. Currently, there is no information about the long-term impact of rewetting and grip blocking on moorland vegetation and peat. Monitoring of the effects of different management inputs should be established to inform future management decisions.

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<sup>6</sup> Cris, R., Buckmaster, S., Bain, C. & Bonn, A. (Eds.) (2011) UK Peatland Restoration — Demonstrating Success. IUCN UK National Committee Peatland Programme, Edinburgh.

- 3.6 The [Scottish Soils Framework](#)<sup>7</sup> contains much relevant information and should be referred to in conjunction with the comments included in this Report. Chapter 5, which covers Soils in the Context of Climate Change, is of particular relevance.

## **4 Coordination**

- 4.1 The Moorland Forum exists to build consensus over a range of issues that affect the moorlands and uplands of Scotland. The Forum has cross-sector support and is able to take an overview of current issues.
- 4.2 There are many peatland initiatives in Scotland and coordination is required between them. The range of initiatives includes work being carried out by or on behalf of: Scottish Government, SNH, SEPA, James Hutton Institute, IUCN UK Peatland Programme, Crichton Carbon Centre, 2020 Climate Group, and The Environmental Research Institute (ERI) in Thurso.
- 4.3 In response to demand that came from the Peatland Summit run by the 2020 Climate Group in April 2011, the Forum established a Peatland Working Group. This Group was tasked with a coordination role, but due to the lack of resources the future of this Group is uncertain. It is hoped that the Scottish Government and its agencies will provide funding for this facilitation role possibly as part of the Peatland Plan for Scotland that SNH is developing.

## **5 Summary**

### **5.1 Policy**

- 5.1.1 A large amount of work is taking place internationally and nationally to increase awareness of the role that peatland has in storing carbon.
- 5.1.2 Improving the condition of peatland has multiple benefits for the ecosystem services that peatland provides.
- 5.1.3 Restoration work that changes peatland from emitting carbon to capturing and storing can have a significant impact on climate change.
- 5.1.4 Defra is leading the process to develop a Peatland Carbon Code for the UK that will seek to establish a Regional Carbon Market under UK control.
- 5.1.5 The first phase of the Code will be published in September 2013 and provide a structure for a voluntary market supported by private sector funding.
- 5.1.6 Funding mechanisms need to be established to maintain peatland in good condition in the long term.

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<sup>7</sup> <http://www.scotland.gov.uk/Resource/Doc/273170/0081576.pdf>

## **5.2 Land Manager Perspectives**

- 5.2.1 Land managers own and manage most of the peatland in Scotland, but they lack guidance about peatland management.
- 5.2.2 Land managers are seeking to be engaged in the debate about peatland management but at present do not feel that enough resources are being allocated to achieve this.
- 5.2.3 There is a need for better guidance about peatland management to be made available for land managers and their advisors.
- 5.2.4 Some concerns have been raised about the possible impact of peatland management techniques on other land uses. This is not thought to be an insurmountable problem but demonstration of peatland management alongside other forms of management is required to provide land managers with confidence.
- 5.2.5 It has been suggested that the best way to influence landowners and managers about the benefits or the lack of impact of peatland management would be to establish a series of demonstration sites.
- 5.2.6 An idea that came out of the discussion was that there might be scope for a Peatland Facilitator to work in a target area to increase the awareness of peatland management issues and to investigate the possibility of developing collaborative schemes across several landholdings.

## **5.3 Rural Development Plan (RDP) & Cross Compliance**

- 5.3.1 In the current review of RDP schemes there is much uncertainty about what will happen to the split between Pillar I and Pillar II payments. In turn this introduces uncertainty about the future for peatland management work under the RDPs.
- 5.3.2 RDP payments are restricted to reflect income foregone and costs. There is no scope to capture any social value above this. Private sector funding is not restricted in this way.
- 5.3.3 The precise prescriptions and payment rates vary, but the types of peatland-relevant measures available under the RDPs in different parts of the UK are fairly similar.
- 5.3.4 Cross-compliance may be viewed as the “reference level” below which land managers are penalised for poor practice and above which they are rewarded for additional environmental gains.
- 5.3.5 It is suggested that some conscious effort will be required to engage with upland land managers, drawing upon the existing body of technical knowledge but presenting it in a form and a language that encourages dialogue and mutual awareness rather than mutual suspicion.

## 6 Conclusions

- 6.1 Peatland policy is developing but information is required about the carbon benefits of different management techniques to support the development of the Peatland Carbon Code.
- 6.2 A key area for development is to provide better methods to inform and provide incentives for landowners and land managers about the benefits of peatland management. It is suggested that most of the peatland area in Scotland is owned privately and the developing enthusiasm within the land management community for peatland management should be tapped.
- 6.3 The review of the SRDP should be seen as an opportunity for expanding the support provided for peatland management measures, however, it has to be accepted that there will be many conflicting demands for a reducing SRDP budget.
- 6.4 To support land managers in important peatland areas the concept of providing a Peatland Facilitator has been proposed and this concept should be investigated further.
- 6.5 The private sector may have an important role to play in funding peatland management, initially through the voluntary, CSR market and then possibly through a regional carbon market.
- 6.6 There are many peatland initiatives in Scotland and to achieve the best results for peatland, coordination is required between these initiatives.
- 6.7 The SRDP is likely to remain as the principal source of funding for peatland management and restoration. In the current review of SRDP, we recommend that SEPA should seek to obtain funding for the following measures, which will allow land managers to improve the condition of peatland:
  - 6.7.1 Control of livestock (stocking level restrictions, shepherding, exclusion, fencing);
  - 6.7.2 Grip / drain blocking to raise water tables (re-wetting);
  - 6.7.3 Management of vegetation in accordance with a management plan through burning, cutting & scrub removal; and
  - 6.7.4 Funding for capital works should include: fencing for stock control, grip blocking, access control for people & livestock.
- 6.8 General conditions should include: a prohibition on cutting new drains on peatland, and a requirement to adhere to the provisions of the Muirburn Code.

- 6.9 We recommend that SEPA should also support the provision of information and training for landowners, land managers to ensure good uptake and implementation of SRDP measures.
- 6.10 An important issue that is highlighted by the report is the lack of monitoring of the impact of SRDP measures on peatland and we suggest that this should be addressed as part of the SRDP review.
- 6.11 Peatland management is a subject that is developing very quickly and this report has only considered part of the subject. The Moorland Forum would welcome the opportunity to use the cross-sector support available to it to provide further support for SEPA, in the future.

**Simon Thorp**  
Director

15<sup>th</sup> July 2013

## **Section 1 - Policy Context**

Authors:

Clifton Bain – Director, IUCN UK Peatland Programme

Simon Thorp – Director, Scotland’s Moorland Forum

### **International perspectives**

The conservation and enhancement of Peatlands has long been recognised as a priority at an international level under the Ramsar convention, UN Biodiversity Convention and under EU wildlife legislation. More recently, the importance of peatland function in relation to climate change has been highlighted under the UN Climate Change Convention, Kyoto Protocol and their role in regulating water is recognised under the EU Water Framework Directive.

The UK, as one of the top ten nations in the world for its peatland area, has a key role to play in delivering these international objectives and in demonstrating good practice that can be shared across the 175 countries that support peatland. For many of these agreements the next phase of strategic work is led by targets, which will need to be achieved by 2020. One of the benefits of peatland work is the opportunity to help deliver across a range of international objectives (biodiversity, climate change and water), for the one cost. It is also recognised that managing our peatlands sustainably is cost effective and the sooner action takes place the lower the cost and the less damaging the consequences for the future. Peatland restoration has been described as one of the ‘low hanging fruits’ in our efforts to tackle climate change.

### **UK perspective**

Of the 3.3 million hectares of deep peat soils in the UK it is estimated that less than 20% are in a near natural state. The rest having been impacted largely by drainage, livestock and fire are in a damaged state requiring remedial action. This varies from slight intervention, such as adjusting grazing and burning management, to major drain blocking, plantation tree removal or re-vegetating work on exposed bare peat. The Commission of Inquiry on Peatlands, established by the IUCN UK Peatland Programme, identified the potential for 1 million hectares of peatland to be in good condition or under restoration management by 2020.

Indicative costs for the restoration of peatlands suggests that around £350 million is required by 2020 to achieve the 1 million ha challenge, which would mean an annual expenditure of £50 million over the next seven years. A report on the [public funding for peatlands](#)<sup>8</sup> identified that in the UK around £9 million per year is spent on peatland management, mainly through CAP payments and SSSI agreements.

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<sup>8</sup> Keenleyside, C. and Moxey, A. (2011) Public funding of peatland management and restoration in the UK – a review. Report to IUCN UK Peatland Programme, Edinburgh.

This leaves a significant shortfall, which could be addressed by a combination of increased payment under CAP and the securing of funds from the private sector. Private water companies have indicated a potential spend of up to £3 million per annum on peatland work over the next five years, and work is underway to develop carbon markets and other schemes that will provide Payments for Ecosystem Services to engage the business sector in funding peatlands. Even with these emerging private initiatives there is a strong case for increased funding under CAP.

## **Carbon Markets**

There are two main possible types of carbon market:

- In a compliance market, companies, governments, or other entities buy carbon offsets in order to comply with caps on the total amount of carbon dioxide they are allowed to emit.
- In a voluntary market, individuals, companies, or governments purchase carbon offsets to mitigate their own greenhouse gas emissions from transportation, electricity use, and other sources.

The compliance market is not an option in UK law. The voluntary market is not viable at the carbon price, and the cost of verification by an international body is also prohibitive.

In view of this, the UK is seeking to establish a Regional Carbon Market that will operate under the UK Peatland Carbon Code and be administered by a UK body. This will provide safeguards for investors and arrangements that are appropriate for the UK.

## **Peatland Carbon Code**

A Code is being developed by Defra that will apply to the whole of the UK, and it is being developed from the existing UK Woodland Carbon Code. A two-stage development process is envisaged with the first phase being published in September 2013. This phase will provide a structure for bilateral deals for investments by the private sector in peatland restoration, possibly from Corporate Social Responsibility budgets. The value of the Code will be to provide potential investors with confidence in the proposed arrangements.

The second phase of development of the Code will address the formation of the proposed Regional Carbon Market that will allow trading of carbon to take place with the potential for landowners to receive an income from the additional carbon that is captured and stored in their peatland.

## **Peatland Management for Multiple Benefits**

Peatland management contributes to several of the EU priority areas and therefore provides multiple benefits. CAP payments can help provide a stable payment basis as opposed to the fluctuations and risks associated with single issue markets. CAP also allows sustainable management of peatlands providing the full range of benefits rather than being driven by any single issue at the expense of others.

For example, simply pursuing carbon benefits could lead to short term action aimed at the most degraded peatlands to provide the fastest carbon savings. This would be a flawed strategy in that such action to repair the most damaged sites is the most costly and by diverting resources away from less damaged areas, these in turn degrade further and impose a higher cost later on. A well designed CAP scheme could allow for a focus on securing areas of high biodiversity importance, important water catchments as well as considering carbon benefits with consideration to the least damaged but most readily recoverable along with tackling some of the more degraded areas.

## **Centralised Funding**

In addition, there is a case for centralised funding from Government to augment and enhance both the CAP and private funding. The Scottish Government has allocated funds of £1.7 million over the next 3 years. If this fund was increased to around £5 million, it could deliver both practical restoration in situations where CAP payments were not available and help provide seed-corn funding to support collaborative project initiatives within distinct areas.

Evidence from other collaborative projects has shown that coordination in this way helps build landowner / farmer support provides cost savings through operating at a larger scale and allows for group schemes, which reduce costs of processing CAP payments as well as cost efficiencies through central purchasing and management of equipment, staff etc. The IUCN Peatland Programme published a booklet in 2012: [UK Peatland restoration Demonstrating Success](#)<sup>9</sup>; this features a range of collaborative case studies that demonstrates the value of working together.

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<sup>9</sup> Cris, R., Buckmaster, S., Bain, C. & Bonn, A. (Eds.) (2011) UK Peatland Restoration — Demonstrating Success. IUCN UK National Committee Peatland Programme, Edinburgh.

## **Peatland Management in the Long Term**

Payments for peatland management must recognise the need for ongoing support to maintain peatland in good condition. Simply paying the short-term costs of restoration will leave land managers concerned at the lack of perceived value of the healthy peatland. If land managers are to put the measures in place to maintain peatlands in good condition in the long-term there needs to be long term benefit to justify the work. The level of support given to land managers should reflect the value attached to the delivery of the public benefits for biodiversity, water and carbon.

## SECTION 2 - SCOTTISH LAND MANAGERS' PERSPECTIVE

Authors:

Adam Smith, Gemma Davis – Game & Wildlife Conservation Trust

Tim Baynes, Andrew Midgley – Scottish Land & Estates

Upland land managers in Scotland seek a number of business and recreational outcomes. Here we consider the understanding and perception of Scotland's moor owners of the management and restoration of peat for water quality, flood alleviation and carbon storage purposes, and how this is affected by evidence.

In GWCT's experience, based on research funding and advisory requests, the majority of land managers and owners with upland peat soil resources are not currently pursuing restoration projects to explicitly deliver the three ecosystem services mentioned above.

This is likely to be due to managers:

- Not being aware of, or persuaded that, their management activity relates to water quality issues or down stream flooding;
- Not being persuaded that modifying their management activity is needed to mitigate or reduce these effects or that their actions would make a difference; or
- Not being persuaded that modifying their management activity can be done with little or no impact on their existing management aims and subsequently sources of revenue or ability to use their land.

Areas of concern that exemplify these issues emerged at a peatland restoration seminar held in the Cairngorms National Park in September 2012:

- Is forestry (in the right place) a better approach to increasing Scotland's carbon storage?
- While it is accepted that English peat is more degraded, with greater flood and water quality problems, there is little or no evidence that this is the case for the majority of Scottish moors.
- Will the required re-wetting of peatland significantly change management on which rural communities currently depend, notably reducing grazing, which in turn will result in less sheep and subsequently less shepherds?
- The previous experience of SRDP funding by land managers is likely to reduce the attraction of seeking funding opportunities; common criticisms are that payments are too low or that the systems are overly bureaucratic.

## Perceived Barriers

Rural estates face a number of barriers to becoming more involved in peatland restoration. A key factor is the evidence base: science and literature on peat restoration, often provide conflicting evidence as to causes, effects and benefits, and land managers find this information difficult to digest.

There is also a lack of informed advice available to landowners about peat and its importance and relevance in Scotland, including peat restoration and the relationship with sporting and farming management. This limited engagement with landowners, particularly outwith the National Parks, results in peat being perceived as a low priority, and associated with direct, marginal and opportunity costs rather than benefits.

A lack of advice for moorland managers from their industry bodies to assess their role within future policy agendas, such as carbon storage, is perhaps a further factor preventing more owners actively pursuing peatland management. The climate change driven nature of the peatland agenda has resulted in a particularly top down approach, which restricts opportunity for land managers to contribute to the overall objectives. A better approach would be to establish 'win-win' opportunities, whereby restoration can be shown to co-exist with other cultural and economic objectives.

The timescale, which is required for projects to show measureable returns, appears to be long, certainly beyond current funding through Scottish Rural Development Programme. Suggestions of carbon trading and Payment for Ecosystem Services could provide a long-term gain, whereby landowners would receive payments over a longer period of time. This would tie landowners into longer agreements and not give the land managers the opportunity to adapt to the market and seek alternative revenues.

Finally, having economic drivers as a reason to manage peat for carbon and water downplays the fact that for many upland landowners, financial alternatives to their chosen management goal (should these goals be in conflict with peatland management) are not a reasonable trade-off. By way of example, since 2007, the current funding through SRDP includes:

- Management/restoration of lowland raised bog (57 applications approved, £936,594)
- Buffer areas for fens and lowland raised bog (31 approved applications, £752,158)
- Wildlife management of upland and peatland sites (32 approved applications, £806,295)
- Moorland Grazing on Uplands and Peatlands (102 approved applications, £1,753,020)

On an upland land management basis, the income per application is modest compared to the income from five, 100-brace driven grouse days. GWCT research suggests this is around £90,000, which is enough to pay the costs of two gamekeepers.

## **Possible Research Opportunities**

Research in Scotland could be carried out to identify:

- Whether current sporting and grazing management is compatible with peatland management for water and carbon;
- Whether current sporting and grazing management is best practice as regards key goals and whether management could be modified at no cost;
- Whether current mitigation is effective in delivering carbon and/or water goals and over what timescales; and
- How and where current mitigation would impact on contemporary sporting and grazing management.

Natural England published the reports from the initial phase of their Upland Evidence Review (UER)<sup>10</sup> at the end May 2013, and this provides some additional information although, as little of the evidence is from Scotland, the interpretation of the findings needs to be considered carefully.

Landowners are concerned about the perceived de-intensification (reduced muirburn, grazing and increased wetting) of moorland management that might be required to meet the Scottish Government's current objectives for improving water quality, flood risk management and carbon storage on peatland areas. Some of these concerns could be addressed with research that considers the evidence of need and ability to integrate with contemporary land management objectives.

## **Future development**

Engendering acceptance of the need for management change may be more easily achieved using a targeted approach to significant existing problems. A strategic plan of engagement with certain moorland owners and the provision of advice to support targeted activity, which is sufficiently funded, would ensure that funding and support were aimed at areas that would benefit from restoration.

The potential negative impact of peatland management measures on other land uses, should not be overstated. Blocking grips can be advantageous for farmers and owners of grouse moors to reduce erosion and remove deep gullies that can lead to deaths of livestock and birds. It is likely that many owners of grouse moors would be happy to block ditches and to have wet boggy areas, as birds would benefit from the larger insect populations.

Facilitation of neighbouring land managers to form groups by river catchment would allow for the co-ordination of management activities, and deliver identifiable benefits to an area that could be used as a demonstration to monitor the effectiveness of the management.

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<sup>10</sup> <http://www.naturalengland.org.uk/ourwork/uplands/default.aspx>

Land managers are already showing interest in the potential of peatland management to improve the condition of their land but this interest needs to be cultivated. The potential gains are high and investment of resources to encourage land managers to carry out sympathetic management of their peatlands would have significant benefits.

If some pioneer schemes could be established in different parts of the country, and if the work carried out could be shown to be successful and cost effective, other land managers would follow this example and extend the benefits achieved.

### **Summary**

There are a number of issues raised in this section, many of which highlight the uncertainty perceived by landowners and land managers about the future policy direction of peatland management and the impact this will have on the management of the Scottish uplands.

It is important that these concerns are addressed to ensure mutual cooperation and engagement in the Scottish Government's aspiration to deliver multiple ecosystem services, of which carbon storage and water management are only two.

### **Section 3: A brief overview of peatlands under RDP measures & cross-compliance across the UK**

Author: Dr Andrew Moxey, Pareto Consulting

#### **RDP measures**

Pillar II expenditure under the CAP is currently distributed across three “Axes”, with the bulk of expenditure over the UK falling within Axis 2 for the agri-environment. Although some measures outwith agri-environment schemes could conceivably be of relevance to the maintenance and enhancement of upland peat areas (for example, some Axis I training activities), attention is confined here to agri-environment schemes of more obvious direct relevance and measures in each constituent part of the UK are reviewed briefly below. Although the Axes structure is likely to be abolished for the CAP post-2013, the types of future measure supported within agri-environment schemes are likely to be similar.

Whereas Pillar I expenditure is funded entirely by the EU, Pillar II expenditure (including agri-environment schemes) is co-financed, meaning that EU funds are matched to some degree by domestic funding. This has implications for the relative attractiveness of Pillar I and Pillar II schemes to domestic budget-holders and at least partially explains current interest in “greening” of Pillar I.

Payment rates under agri-environment schemes are limited by the EU to reflect income foregone and costs (including a modest incentive element to cover administrative / transaction / hassle costs) incurred through adoption of prescribed management practices rather than the social value of benefits achieved by such management practices.

This is an important distinction (see the last paragraph of Section 1) since it effectively precludes the use of agri-environment schemes as a form of ‘payments for ecosystem services’ (PES) and instead forces reliance on voluntary, private arrangements to capture any social value beyond income foregone and costs incurred. Such an approach is currently being pursued through development of the Peatland Carbon Code<sup>11</sup> by Defra; a draft version was published in May 2013. This is analogous to the Woodland Carbon Code and will seek to attract private funding for peatland management under a Corporate Social Responsibility / Ethical Investment banner, based on the social value of benefits derived from peatlands rather than the cost of providing such benefits.<sup>12</sup>

The EU limits on payment rate calculations are based on a relatively strict interpretation of World Trade Organisation (WTO) rules regarding the use of agri-environment policy

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<sup>11</sup> <http://www.iucn-uk-peatlandprogramme.org/peatland-gateway/uk/peatland-code>

<sup>12</sup> [Defra PES Pilot Flyer](#) and [Defra PES Pilot Research project](#)

measures. Specifically, although the pre-amble to the Agreement on Agriculture (AoA)<sup>13</sup> acknowledges the legitimacy of agri-environmental policy objectives, the possibility of payments being used as “back door” production support means that payment rates are limited to income forgone and costs incurred.

Although it might reasonably be argued that any potential increase in commodity production from upland peatlands undergoing restoration would at worst be only minimally trade distorting, such arguments would need to be rehearsed on an International stage and are beyond Scotland’s influence. WTO rules were a primary driver behind the introduction of decoupled Pillar I payments and continued adherence to WTO rules remains a key constraint on EU and thus domestic policy choices.

## **England**

Natural England runs (on behalf of Defra) a two-tier model of agri-environmental schemes - the Entry Level (ELS) and the Higher Level Scheme (HLS) – with enrolment typically lasting for five or ten years. Eligibility for the whole-farm ELS is based on accruing points for meeting various (fairly undemanding) criteria beyond simply maintaining land in good agricultural and environmental condition. Some criteria are compulsory, such as preparation of a Farm Environment Record, whilst others are optional, such as management of hedgerows or ditches. Over 60% of farmland in England is enrolled under the ELS or its Organic (OELS) and Upland (UELS) variants.

Introduced in 2010, the UELS is a successor to the Hill Farming Allowance scheme and is restricted to farms in the Severely Disadvantaged Area (SDA) of the previous Less Favoured Area (LFA).<sup>14</sup> Although the UELS lacks any peatland-specific optional criteria, it does contain some relevant compulsory requirements.<sup>15</sup> In particular, on deep peat the scheme contains general prohibitions both for installing new drainage and maintaining existing drainage. Avoidance of under and over-grazing is also required, as is adherence to Defra’s Heather and Grass Burning Code. The UELS payment rate is £23/ha/yr on moorland parcels bigger than 15ha, or £62/ha/yr elsewhere.

The HLS is both a more competitive and a more targeted scheme than the ELS. ELS (or OELS or UELS) enrolment is a pre-requisite for HLS participation, but individual applications are judged on a case-by-case basis against specific criteria and not all applications are approved. (The application process has recently moved to a three-tier system that fast-tracks simple applications whilst treating complex applications differently to standard / typical applications.). Although applications from any location will be considered,

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<sup>13</sup> Dating from the final (Uruguay) round of the General Agreement on Tariffs and Trade (GATT) that was the pre-cursor to the WTO. [http://www.wto.org/english/tratop\\_e/agric\\_e/agboxes\\_e.htm](http://www.wto.org/english/tratop_e/agric_e/agboxes_e.htm)

<sup>14</sup> Farms unable to enrol in the UELS due to existing enrolment in an ESA or CSS scheme may continue to receive support via the Uplands Transitional Payment until they can switch to the UELS.

<sup>15</sup> [Option directory for ELS & Uplands ELS](#) (p42/3)

Natural England has identified 110 target areas<sup>16</sup> within which applications are prioritised.<sup>17</sup> Each area has a list of priority themes, which include maintenance and restoration of upland peat in several locations. Permitted “stacking” or “co-location” combinations of ELS and HLS options on the same parcel of land are identified.

Although lowland fens and bogs are identified explicitly, HLS options relevant to upland peatlands are described in terms of moorland management. In particular, options are available for maintenance or restoration of moorland through controlled stocking activities (£40/ha/yr) with additional supplements for re-wetting (£10/ha/yr), livestock exclusion (£10/ha/yr) and additional shepherding to protect vulnerable sites (£5/ha/yr). In addition to these recurrent, annual payments, one-off capital payments are also available for items such as fencing (£2.50/m) and grip blocking (£4.30/block or 100% on difficult sites).<sup>18</sup>

Partly in response to evolution of the CAP (including the 2008 Health Check) and partly in response to domestic reviews of the effectiveness of past agri-environment schemes,<sup>19</sup> both the ELS and the HLS have been subject to some revisions under Making Environmental Stewardship More Effective (MESME) initiative<sup>20</sup> and further adjustments may be possible once an Uplands Delivery Review Programme has reported<sup>21</sup>. Continued spatial targeting and prioritisation is anticipated, together with a focus on climate change and water objectives alongside the more traditional habitat and biodiversity aims.

## **Northern Ireland**

Two agri-environment schemes currently run under the Northern Ireland Rural Development Programme, the Northern Ireland Countryside Management Scheme (NICMS) and the Organic Farming Scheme (OFS) – enrolment of a given parcel of land in both schemes may be possible. Some older, legacy schemes are also still in place – notably ESAs. The target is to maintain 50 percent of agricultural land under environmental enhancement agreement by 2013. Explanatory guidance notes make explicit reference to the 2008 CAP Health Check, the Water Framework Directive and climate change pressures as drivers for promoting agri-environment schemes.<sup>22</sup>

NICMS started in 2008 and aims to improve biodiversity, water quality and soil quality plus enhance the landscape and help reduce the impact of climate change. It is open to all farmers and landowners with a Business Identification Number and at least three hectares of land. Enrolment is voluntary but has to be on a whole-farm basis. Applications are competitive and

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<sup>16</sup> These seem to be separate from, but inevitably overlap with, Priority Catchments under the Catchment Sensitive Farming initiative to combat diffuse pollution in England which also funds capital items (and collaborative applications) under the RDP – although generally for intensive lowland farming systems rather than extensive upland systems.

<sup>17</sup> <http://www.naturalengland.org.uk/ourwork/farming/funding/es/hls/targeting/default.aspx>

<sup>18</sup> <http://publications.naturalengland.org.uk/publication/2798159?category=45001> (section 3, p42/3)

<sup>19</sup> <http://www.naturalengland.org.uk/ourwork/farming/funding/aesiereport.aspx>

<sup>20</sup> <http://www.naturalengland.org.uk/ourwork/farming/funding/es/mesme.aspx>

<sup>21</sup> <http://www.naturalengland.org.uk/ourwork/uplands/default.aspx>

<sup>22</sup> [http://www.dardni.gov.uk/nicms\\_information\\_booklet.pdf](http://www.dardni.gov.uk/nicms_information_booklet.pdf)(p3)

the scheme is heavily over-subscribed, with prioritisation guided by a set of published criteria.<sup>23</sup> These criteria essentially rank applications according to whether they are for land within various environmental designations (e.g. Special Area of Conservation, Ramsar, GeoPark) and/or selected habitats (e.g. Ancient Woodland) and/or enrolled in a current scheme (e.g. ESA).

Payments under NICMS are a mix of habitat-specific payments for optional management choices and whole-farm payments for observing compulsory requirements. The latter include cross-compliance but also General Environmental Requirements, such as production and implementation of farm nutrient and waste management plans plus participation in environmental training. In addition, farm boundaries, habitats and historical features must be managed appropriately (including limits on the use of agri-chemicals, drainage and stocking levels). A Minimum Entry Environmental Benefit (MEEB) must be sought through enhancement to at least one habitat found on the farm.<sup>24</sup>

Moorland and lowland raised bog habitats are mentioned explicitly, with an option for heather moorland management encompassing blanket bog. The management option includes prohibition of applying chemicals or slurry, cultivation and of any new drainage (although existing drains can be maintained) plus limits on the timing and intensity of grazing (although some grazing is required). Burning can only occur with government approval, and then only between set dates. Payment rates are tapered, with higher rates available on the first hectares. For example, for moorland, £65/ha/yr on the first 50ha, £35/ha/yr on the next 50ha and £15/ha/yr thereafter.<sup>25</sup> Structures to raise water levels (e.g. grip blocks) are funded at 60% of capital costs. Other options include scrub clearance (£305/ha) and heather regeneration through burning or flailing (£60 -£110/ha).

## **Scotland**

Agri-environment schemes in Scotland operate under the umbrella Rural Development Contracts (RDCs) component of the SRDP. RDCs span the Pillar II Axes structure, but (alongside the continued LFA Support Scheme) are dominated by agri-environment expenditure.

RDCs themselves are split into two elements, the non-competitive Land Managers Options (LMOs) and the competitive Rural Priorities (RPs). The latter involves a relatively complicated application process and a degree of (at least nominally) local prioritisation through consideration by Regional Proposal Assessment Committees (RPACs). By contrast, enrolment in an LMO is through self-selection with each land manager guaranteed modest funding (on a £ per ha basis, with per ha rates tapering over larger areas).

Despite the non-competitiveness of LMOs, uptake has been relatively modest with many land managers failing to use their full funding entitlement. This may be attributable the

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<sup>23</sup> <http://www.dardni.gov.uk/prioritisation-of-applications-to-nicms-in-2010.pdf>

<sup>24</sup> [http://www.dardni.gov.uk/nicms\\_information\\_booklet.pdf](http://www.dardni.gov.uk/nicms_information_booklet.pdf) (p17/18, p53)

<sup>25</sup> <http://www.dardni.gov.uk/nicms-rates-of-payment.pdf>

unattractiveness of options available and/or the relatively small levels of funding involved.<sup>26</sup> Despite the more cumbersome application process, RPs are heavily over-subscribed. Budgetary pressure for 2014 and beyond is anticipated to increase, probably leading to an increased emphasis on spatial targeting and prioritisation of measures.

A number of RP measures relate to upland peatland<sup>27</sup>, most notably “moorland grazings on uplands and peatlands” (£2/ha) and “wildlife management on upland and peatland sites” (£0.7/ha). Both require creation and maintenance of a moorland management plan that identifies and addresses peatland pressures. For example, by adhering to the muirburn code, avoiding erosion and blocking drainage. A more general “management of moorland grazing” (£1.30/ha) is also available under both RPs and LMOs (no other measures under LMOs are particularly relevant to upland peatlands), as is a “moorland stock disposal” (£19.63/ha) option to reduce grazing pressure. “Muirburn and heather swiping” to create a mosaic of different age heather blocks is also available (£67/ha burnt).

Capital funding is available for a range of items. For example, grip blocking (£0.26/m of grip), peat dams (£60 - £280/dam), stock bridge for bog management (£170 - £620/bridge), eradication of scrub/woody vegetation (£600-£1250/ha), heather restoration (£250/ha).

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<sup>26</sup> <http://www.scotland.gov.uk/Publications/2009/01/08100107/10>

<sup>27</sup> <http://www.scotland.gov.uk/Topics/farmingrural/SRDP/RuralPriorities/Options> and <http://www.scotland.gov.uk/Topics/farmingrural/SRDP/RuralPriorities/RPACPaymentRate/Axis2Rates>

## Wales

As of January 2012, the National Assembly for Wales replaced its suite of existing agri-environmental schemes (Tir Cynnal, Tir Gofal, Tir Mynydd and the Organic Farming Scheme) with a single new one, Glastir. The change was prompted by the 2008 CAP Health Check and a domestic review exercise suggesting that existing schemes were not adequate for meeting stated environmental objectives.<sup>28</sup> Glastir is more explicitly focused on outcomes and monitoring activities have been increased significantly.

Glastir has five component elements; an entry-level element (AWE), an advanced element, a Common Land element, ACRES (The Agricultural Carbon Reduction and Efficiency Scheme) and a stand-alone Woodland Creation element. Enrolment in the entry-level element is a pre-requisite for the advanced and ACRES elements, and requires applicants to accrue a minimum level of points by choosing management options from either a national or a regional list – the latter carries a 10% greater points weighting. Flat-rate payments of £28/ha (£34/ha in uplands) can be supplemented by adherence to a “whole farm code” including (e.g.) prohibitions on land improvement and a requirement to keep an “activity diary”.<sup>29</sup> The flat-rate payments are intended to cover capital as well as management costs of entry-level activities.

Additional payments, including capital items, are available for adoption of advanced management options under the advanced element of Glastir. Applicants are invited to apply for options, with the options available depending on an applicant’s location and options varying on a regional basis. Points awarded for particular options are adjusted to take account of farm size, but particular emphasis is being placed on carbon (storage/emissions) and water (quality and flood risk) objectives in the first two years of the new scheme.<sup>30</sup> Regional priorities may overlap to some extent, and farms outwith priority regions may still gain sufficient points for funding. Opportunities for collaborative action between farmers are encouraged, for example in relation to catchment management or habitat connectivity.

Upland peat management is not listed explicitly (lowland fens and bogs are) within the range of advanced management options. However, relevant discrete activities are listed. For example, re-wetting (£25.38/ha), grip blocking (£124 per grip), scrub clearance (£227/ha - £603/ha) and heather management (£68.50/ha to £265/ha).<sup>31</sup> Capital grants available under the ACRES element are primarily targeted at (e.g.) slurry storage and energy efficiency rather than peatland restoration.

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<sup>28</sup> <http://www.assemblywales.org/11-012.pdf>

<http://wales.gov.uk/docs/drah/publications/110322glastirindenendentreviewen.pdf>

<sup>29</sup> <http://wales.gov.uk/docs/drah/publications/121227glastirententry2014technicalguidanceen.pdf>

<sup>30</sup> <http://wales.gov.uk/docs/drah/publications/120313glastirtemapen.pdf>

<sup>31</sup> <http://wales.gov.uk/docs/drah/publications/121207glastiradvanced-paymentrates-capwksen.pdf>  
<http://wales.gov.uk/docs/drah/publications/121207glastiradvanced-paymentrates-manoptsen.pdf>

## **A brief overview of cross-compliance across the UK**

Cross-compliance is a set of basic standards to which land managers must adhere if they are to receive direct payments under Pillar I and also some payments under Pillar II of the CAP.<sup>32</sup> Failure to meet cross-compliance requirements exposes claimants to the risk of financial penalties in the form of loss of part or all of their payments. The degree of loss depends on the severity of a breach plus actually being subject to an inspection that detects the breach of requirements. Different (minimum) rates of inspection apply to different aspects of cross-compliance, with greater emphasis (i.e. 5% vs. 1% sample) placed upon livestock identification - which may at least partially explain why this aspect dominates reported breaches.

Cross-compliance standards are guided by an EU framework that seeks a degree of commonality across Member States through 18 Statutory Management Requirements (SMRs – essentially pre-existing legal obligations) plus a set of best management practices described as Good Agricultural and Environmental Condition (GAEC).

As Table 1 shows, although the numbering and headline descriptors of SMRs vary slightly, the SMRs are (unsurprisingly) essentially identical across the UK. None are specific to peatlands, although protection of birds and habitats will have some relevance in upland areas.

By contrast, as Table 2 shows, the number and headline descriptors of GAEC elements do vary significantly across the UK. For example, Scotland has 20 GAEC elements whilst Northern Ireland has only seven. However, whilst the emphasis on particular issues may vary, the total coverage achieved across all GAEC elements is relatively similar. That is, cursory inspection of the detailed guidance for each GAEC element reveals a high degree of commonality when all elements are taken together.

For example, whilst England and Wales both have elements relating specifically to Environmental Impact Assessments (5 & I) and to Sites of Special Scientific Interest (6 & K), Scotland and Northern Ireland encompass these particular concerns within other, broader elements (12, 13 & 14; 6). Similarly, whilst (unlike England and Wales; 1 & A) Scotland lacks a requirement to maintain a written assessment and plan of action relating to soil conditions, it does have more explicit GAEC elements (1, 2, 3, 4 & 9) prescribing required soil management and covering similar issues to those covered in England and Wales.<sup>33</sup> A more detailed and leisurely comparison might reveal differences in coverage, as might

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<sup>32</sup> [http://ec.europa.eu/agriculture/envir/cross-compliance/index\\_en.htm](http://ec.europa.eu/agriculture/envir/cross-compliance/index_en.htm)

<sup>33</sup> As an aside, the majority of soil cross-compliance failures in England appear to relate to the absence or inadequacy of a written record rather than failing to address soil problems per se. <http://rpa.defra.gov.uk/rpa/index.nsf/UIMenu/9B27CED347D543A58025721B003EC086?Opendocument>

Separately, an assessment of the Soil Protection Review in England is overdue for publication: <http://www.defra.gov.uk/food-farm/land-manage/soil/>

consideration of the vigour with which individual elements are inspected – but such possibilities are beyond the scope of this short review.

With the exception of muirburn/heather burning codes, no GAEC elements anywhere in the UK are specifically relevant to peatlands. However, the vulnerability of peatland soils to erosion is noted, as are the potential environmental gains of allowing field drainage to deteriorate (even under GAEC 5 in Scotland which encourages drain maintenance).

**Table 1: Labels<sup>34</sup> for SMR elements of cross-compliance in each part of the UK**

<b>Code</b>	<b>Scotland<sup>35</sup></b>	<b>England<sup>36</sup></b>	<b>Wales<sup>37</sup></b>	<b>Northern Ireland<sup>38</sup></b>
SMR 1	Conservation of wild birds	Wild birds	Conservation of wild birds	Conservation of wild birds
SMR 2	Protection of groundwater	Groundwater	Protection of groundwater	Conservation of natural habitats
SMR 3	Use of sewage sludge	Sewage sludge	Sewage sludge	Protection of groundwater
SMR 4	Protection of water in NVZs	Nitrate Vulnerable Zones (NVZs)	Protection of water in NVZs	Sewage sludge
SMR 5	Conservation of flora & fauna	Habitats and species	Conservation of flora and fauna	Protect water against nitrate pollution
SMR 6	Identification & registration of animals	Pig identification and registration	Pig identification & registration	Pig identification & registration
SMR 7	Framework for I&R of animals	Cattle identification & registration	Cattle identification & registration	Cattle identification & registration
SMR 8	I&R of bovine animals	Sheep and goats identification	Sheep and goats identification	Sheep and goats identification
SMR 8a	I&R of sheep & goats			
SMR 9	Restricted plant protection products	Restricted plant protection products	Restricted plant protection products	Restricted plant protection products
SMR 10	Restricted substances in animals	Restricted substances in animals	Restricted substances in animals	Food & feed law
SMR 11	Food law	Food and feed law	Food and feed law	Restricted substances in animals
SMR 12	Prevention and control of (TSEs)	Prevention and control of (TSEs)	Prevention and control of (TSEs)	Prevention and control of (TSEs)
SMR 13	Control of foot & mouth diseases	Control of foot and mouth disease, certain animal diseases and bluetongue	Control of foot and mouth disease, certain animal diseases and bluetongue	Control of foot & mouth diseases
SMR 14	Control of certain animal diseases			Control of certain animal diseases
SMR 15	Control of blue tongue			Control of blue tongue
SMR 16	Welfare of calves	Welfare of calves	Welfare of calves	Protection of calves
SMR 17	Welfare of pigs	Welfare of pigs	Welfare of pigs	Protection of pigs
SMR 18	Welfare of farmed animals	Animal welfare	Animal welfare	Protection of animals

<sup>34</sup> Edited slightly in some cases to fit Table

<sup>35</sup> [www.scotland.gov.uk/Topics/farmingrural/Agriculture/grants/Schemes/Crosscompliance/ccompliance](http://www.scotland.gov.uk/Topics/farmingrural/Agriculture/grants/Schemes/Crosscompliance/ccompliance)

<sup>36</sup> [rpa.defra.gov.uk/rpa/index.nsf/UIMenu/6EB355EA8482EA61802573B1003D2469?Opendocument](http://rpa.defra.gov.uk/rpa/index.nsf/UIMenu/6EB355EA8482EA61802573B1003D2469?Opendocument)

<sup>37</sup> [wales.gov.uk/topics/environmentcountryside/farmingandcountryside/farming/crosscompliance/farmersguidetocrosscompliance/farmersguidetocrosscompliance/?lang=en](http://wales.gov.uk/topics/environmentcountryside/farmingandcountryside/farming/crosscompliance/farmersguidetocrosscompliance/farmersguidetocrosscompliance/?lang=en)

<sup>38</sup> <http://www.dardni.gov.uk/index/grants-and-funding/cross-compliance.htm>

**Table 2: Descriptive labels<sup>39</sup> for GAEC elements of cross-compliance in each part of the UK**

<b>Scotland<sup>40</sup></b>	<b>England</b>	<b>Wales</b>	<b>Northern Ireland</b>
1: Post-harvest management of land	1: Soil Protection Review	A: Soils	1: Soil management
2: Wind erosion		B: Overgrazing	2: Supplementary feeding
3: Soil capping		C: Undergrazing/under-management	3: Overgrazing
4: Erosion caused by livestock		D: Supplementary feeding	4: Undergrazing
5: Maintenance of field drain systems	5: Environmental Impact Assessment	E: Boundaries	5: Field boundaries
6: Muirburn code	6: Sites of Special Scientific Interest	F: Scheduled ancient monuments	6: Protection of habitats, archaeological sites and permanent pasture
7: Arable crop rotation standards	7: Scheduled Monuments	G: Permanent pasture	
8: Arable stubble management	8: Public rights of way	H: Heather & grass burning code	7: Irrigation authorisations
9: Appropriate machinery use	9: Overgrazing & supplementary feeding	I: Environmental Impact Assessment	
10: Undergrazing	10: Heather and grass burning	J: Tree preservation & felling	
11: Overgrazing	11: Control of weeds	K: Sites of Special Scientific Interest	
12: Ploughing high env/arch value land	12: Agricultural land not in production		
13: Protection of RG/semi-natural areas	13: Stone walls	M: Water abstraction	
14: Lime/fert on RG/semi-natural areas	14: Protection of hedgerows / watercourses	N: Retention of landscape features	
15: Field boundaries	15: Hedgerows	0: Buffer strips along water courses	
16: Non-productive landscape features	16: Felling of trees		
17: Historic features	17: Tree Preservation Orders		
18: Encroachment of unwanted vegetation	18: Water abstraction		
19: Abstraction of water irrigation			
20: Buffer strips along water courses			

<sup>39</sup> Edited slightly in some cases to fit Table

<sup>40</sup> References as for Table 1

## Discussion

In abstract, cross-compliance may be viewed as the “reference level” below which land managers are penalised for poor practice and above which they are rewarded for additional environmental gains. That is, cross-compliance seeks to maintain certain minimum standards of (e.g.) environmental condition with compliance costs met by the land manager whilst agri-environmental schemes offer additional payments for exceeding the minimum. Penalties are thus a sanction designed to encourage maintenance of minimum standards and Pillar II payments are a reward for enhancements.

However, the efficacy of cross-compliance, either for individual elements or in aggregate is difficult to judge – partly due to the complexity of land management systems, partly due to a lack of monitoring (e.g. before and after, controlling for confounding factors). In the case of peatlands, cessation of damaging activities without accompanying positive management is generally regarded as insufficient to restore functionality and thus cross-compliance alone is unlikely to significantly improve peatland condition. This suggests a role for more proactive management, such as through RDP measures or more intensive local projects.

Although the precise prescriptions and payment rates may vary, the types of peatland-relevant measures available under RDPs in different parts of the UK are fairly similar. For example, constraints on stocking rates and land improvement activities plus support for grip blocking and scrub clearance. Yet, although based on best practice, the actual efficacy of agri-environment measures in delivering the maintenance and/or enhancement of upland peatlands remains uncertain due to a general lack of monitoring information. Improved monitoring would help to identify the impact of RDP measures.

More immediately, it is increasingly acknowledged that both the uptake and implementation of agri-environment schemes can be improved through the provision of appropriate information, advice and training to land managers, recognising that changing land management behaviour is as much a social as a technical process involving “landscapes, lifestyles and livelihoods”.<sup>41</sup> This suggests that some conscious effort will be required to engage with upland land managers, drawing upon the existing body of technical knowledge<sup>42</sup> but presenting it in a form and a language that encourages dialogue and mutual awareness rather than mutual suspicion. For example, it is necessary to explain and to discuss peatland ecosystems and the impact of land management upon them plus to be open about displacement effects (if any) on current land management practices (and thus livelihoods) of restoration activities. For example, how does rewetting affect sheep or grouse numbers? Can landscape-level adjustments compensate for localised impacts on particular parcels of land or tracks?

Separately, some further generic observations on the design of RDP measures in relation to SEPA’s broader interests may be made. First, unlike LMOs, entry-level schemes elsewhere have a points-based enrolment threshold and apply to the whole-farm. Second, enrolment in an

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<sup>41</sup> Pannell & Vanclay (2011) *Changing Land Management Practices*. CSIRO Publishing

<sup>42</sup> e.g. see various outputs from the IUCN <http://www.iucn-uk-peatlandprogramme.org/>

entry-level scheme can require nutrient and waste management plans, participation in environmental training and formal recording of scheme activities. Third, although the precise approach taken varies, some degree of spatial prioritisation of entry-level and (more generally) higher-level options is now commonplace. As such, although not specific to peatland issues, there may also be scope for modest but general design adjustments to aid achievement of desired outcomes in the face of tighter budgetary constraints.