

Consultation response : HEALTH AND HARMONY: THE FUTURE FOR FOOD, FARMING AND THE ENVIRONMENT IN A GREEN BREXIT

Royal Agricultural University, May 2018

The Royal Agricultural University (RAU) is a specialist Higher Education Institution (HEI) that was founded in 1845 to educate those who had to face the challenge of feeding Britain at the time of the industrial revolution. As we approach another period of rapid change the RAU has a clear mandate to contribute to the leadership in the sector. We, therefore, **strongly welcome the ambitious goals outlined in the Health and Harmony consultation** and commit to support all rural business and communities as they face the forthcoming challenges and opportunities. For example, our expertise in knowledge exchange will be valuable in supporting collaborative approaches to rural policy, promoting practice-led rural innovation, and accelerating rural enterprises that will be the future life blood of our rural communities.

Whilst there is much to commend within the Health and Harmony consultation, it is clear that all stakeholders will need to contribute to fleshing out to the details of the new approach. RAU, especially in collaboration with our partners in Countryside and Community Research Institute also based in Gloucestershire, is very willing to contribute to this task.

In particular we highlight the following general points that should be considered in future policy discussions :

1) The consultation has primarily focused on the potential future Government role, however, future policy, supported by Higher Education Institutions, such as RAU need to be a **genuine collaboration between Government, industry and civil society organisations**. For example, the RAU can facilitate all relevant stakeholders to work towards an evidence-based approach to national level claims for high animal welfare. This can ensure that a reinvigorated government interest in animal welfare aligns with the world-leading industry and civil society innovations in farm assurance.

2) Even though the consultation necessarily describes a generic approach to UK agricultural policy, **future policy will need to be tailored to sector-specific needs**. Policy instruments will also need to be sufficiently flexible to ensure that they are relevant in each sector. For example, support for facilitation services could stimulate practice-led rural

innovation focussed on the specific needs of groups of farmers rather than top-down imposed policy priorities.

3) Alongside the recognition that our countryside can deliver significant public goods, **future policy should encourage rural enterprise** including promoting rural communities as a great place to live and work. As demonstrated within the RAU 491 growth hub, this can include a broad range of industries including food, drink and technology firms.

4) Finally, a common theme within the Health and Harmony consultation is the clear **need for a pro-active approach to developing skills in the agri-food sector**. RAU, working collaboratively with other land-based institutions, is help the industry develop the skills to use the emerging technology aimed at increasing productivity and a greater adoption of “soft skills” such as collaboration, facilitation and leadership.

The RAU has responded to the detailed questions raised by the Health and Harmony consultation paying attention to the areas of technical and policy expertise of RAU academic staff. The detailed response is included in this document.

Also included in this document is an analysis of the policy challenges with respect to reform within CAP, agricultural transition, public money for public goods and risk management and resilience. This analysis undertaken by Agra CEAS Consulting, part of Informa Agribusiness Consulting has informed the detailed RAU response and is provided here to help inform the future detailed policy decisions.

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Submitted to **Health and Harmony: the future for food, farming and the environment in a Green Brexit**

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- 1 **Please tick the box that best describes the organisation:** Academic/research
- 2 **What is your name?** Professor David Main
- 3 **What is the name of your organisation?** Royal Agricultural University
- 4 **Approximately how many people does the organisation represent?** 101-1,000
- 5 **What is your job title?** Professor of Production Animal Health and Welfare
- 6 **What is the postcode of your workplace?** GL7 6JS
- 7 **What region is your workplace in?** England (South West)
- 8 **Is the organisation in a rural or urban area?** Rural
- 9 **What is your age?** 45-54 years old
- 10 **What is your gender?** Male

1 Reform within CAP

1 **Please rank the following ideas for simplification of the current CAP, indicating the three options which are most appealing to you. Please rank your choices by order of preference (from 1 as your most preferred to 3 as your least preferred):**

- 1 a. **Develop further simplified packages:**
- 2 d. **Reduce evidence requirements in the rest of the scheme:**
- 3 b. **Simplify the application form:**

Please give a short explanation as to your ranking preferences::

In general terms, and against this background, simplifying Countryside Stewardship for 2018 and simplifying it further in 2019 seems to be a good idea, although this should be done without compromising the scheme's ability to deliver positive outcomes. In doing this it will be important to minimise deadweight, i.e. ensure that as far as possible, supported actions are additional to what would be undertaken by farmers without support.

2 Reform within CAP (continued)

1 **How can we improve the delivery of the current Countryside Stewardship scheme and increase uptake by farmers and land managers to help achieve valuable environmental outcomes?**

Environmental Land Management schemes are designed to go beyond legal minimum requirements. This baseline is currently provided by the requirements of cross-compliance and greening. Whatever form simplified packages take, they ought to still go beyond this baseline. This baseline may though change depending on the conditions put on the receipt of Direct Payments during the transition phase (see section 3).

There is a tension in the provision of Environmental Land Management schemes between "broad and shallow" (mid-tier) and "deep and narrow" (higher tier) approaches. The former approach is simpler to administer and deliver, and attracts more participants; the latter, while more complicated to design and implement, can deliver better outcomes.

In deciding how to simplify Countryside Stewardship, it will be necessary to be clear whether the objective is to maximise the delivery of environmental outcomes or to maximise participation. There is a risk in providing simplified packages that these will not produce the desired environmental outcomes and there will be considerable deadweight.

As a general principle, management options which involve passive management (i.e. there are restrictions setting out what cannot be done) are likely to have relatively high deadweight. Options involving active management (i.e. rules on when and how to carry out specific actions) will tend to carry a risk of moderate deadweight. The restoration to previous environmental/historic condition is likely to have a low deadweight risk and the creation of new features and habitats will carry a very low risk of deadweight. However, deadweight is not always a bad thing and there are reasons why it should be tolerated including the prevention of loss or damage to existing habitats; rewarding current good practice (as opposed to only paying those not employing good practice to change); and, avoidance of perverse incentives (remove a feature and then be paid to create it again).

It is also worth noting that the intention to develop a simplified package is a short-term measure while a new Environmental Land Management scheme is developed. However, if the simplified packages only deliver marginal environmental benefit then the length of agreement entered into should be considered; short-term agreements would not leave a legacy of poorly performing actions running parallel to a successor scheme which delivers greater benefit.

3 An 'agricultural transition'

1 **What is the best way of applying reductions to Direct Payments? Please select your preferred option from the following:** b. Apply a cap to the largest payments

Please provide views on the payment bands and percentage reductions we should apply::

The Defra command document suggests that the savings from the reduction in direct payments during the agricultural transition could be used to fund agri-environment pilot projects. While we share this approach, there are other priorities too, not least a new grant scheme to provide incentives to innovate and improve farm productivity to help the industry prepare for the future. The consultation document proposes that direct payments will continue to be paid to farmers during an agricultural transition period which will last a number of years. We agree that such a transition period is necessary in order to enable farmers to plan and to provide some certainty, but we would argue that in order to provide farmers with maximum certainty, Defra should be clear at the outset when the transition period will end. It is suggested that reducing direct payments will encourage farmers to restructure but knowing that they will finish in 5-10 years will be an incentive as well. It is essential that the model adopted for the reduction in direct payments is simple and transparent and as far as possible avoid unintended consequences.

The simplest way of applying reductions to direct payments is to apply a cap to the largest payments and reduce the threshold appropriately each year during the period of the transition in order to ensure that there are sufficient resources to fund pilot projects. Applying a cap to the very largest farms (most of whom benefit from economies of scale and have the greatest assets) would reduce the burden of cuts on the majority of farms, at least in the early years of the transition. It is arguably these farms that will need more time to adapt to the changes brought about by the new domestic agricultural policy.

2 What conditions should be attached to Direct Payments during the 'agricultural transition'? Please select your preferred options from the following:

- a. Retain and simplify the current requirements by removing all of the greening rules

Please give a short explanation as to your preferences: :

The greening rules have been shown not to have worked by bodies such as the European Court of Auditors. Aside from the simplification of the direct payment scheme during the agricultural transition, (and ways of doing so should be investigated by Defra), the other main aim of transition must be to prepare the industry for a new world of challenges, opportunities and increased competition. As a small specialised university with land use at its heart, our aim must be to enable our young people to be given every opportunity to utilise the skills they have learned during their educational career. As such we expect that the agricultural transition should provide an opportunity to begin to free up the industry, enabling more young people to get the opportunity to put what they have learned at the RAU into their careers.

4 An 'agricultural transition' (continued)

1 What are the factors that should drive the profile for reducing Direct Payments during the 'agricultural transition'?

It is essential that the model adopted for the reduction in direct payments is simple and transparent and as far as possible avoids unintended consequences.

Aside from the simplification of the direct payment scheme during the agricultural transition, (and ways of doing so should be investigated by Defra), the other main aim of transition must be to prepare the industry for a new world of challenges, opportunities and increased competition. As a small specialised university with land use at its heart, our aim must be to enable our students to be given every opportunity to utilise the skills they have learned during their educational career. We also have a responsibility to ensure that we review and refine our educational programmes to ensure that they include the generic skills (management, business and leadership skills etc) that will enable our graduates to cope with change and uncertainty. As such we expect that the agricultural transition should provide an opportunity to begin to free up the industry, enabling more young people to get the opportunity to put what they have learned at the RAU into their careers. We must also ensure that we offer a range of lifetime educational opportunities (short courses, distance learning programmes etc.) for those in the work place to develop their skills.

2 How long should the 'agricultural transition' period be?

Our view is that the agricultural transition should be between 5-10 years but as important as the timeframe is Defra ensuring that they are clear at the outset when the transition will end.

5 A successful future for farming: farming excellence and profitability

1 How can we improve the take-up of knowledge and advice by farmers and land managers? Please rank your top three options by order of preference (from 1 as your most preferred to 3 as your least preferred):

- 1 a. Encouraging benchmarking and farmer-to-farmer learning:
- 2 b. Working with industry to improve standards and coordination:
- 3 d. Developing formal incentives to encourage training and career development:

Please give a short explanation as to your ranking preferences::

Our rationale for choosing the options above is that we believe that the pace of change for agriculture and farming post Brexit will be rapid in relative terms and as such farmers and land managers will need to equip themselves with the leading edge of knowledge and advice and the aim must be to encourage that section of the farming community that has not, too date, taken the opportunities to improve their performance. In terms of the options that we did not rank: our view is that option e is essentially an extension of option d and that option c, better access to skills providers and resources, does not accurately reflect the problem; i.e. there are sufficient skills providers and resources but they are too often fragmented and not linked sufficiently to research institutions. Our view on this is that there should be a 'one-stop shop' for skills provision which is funded by government.

2 What are the main barriers to new capital investment that can boost profitability and improve animal and plant health on-farm? Please rank your top three options by order of the biggest issues (from 1 as your most important to 3 as your least important):

- g. Other (please specify): 1

If you have answered 'Other (please specify)', please explain your preferred alternative::

Our view would be all of the options are interlinked and important.

6 Farming excellence and profitability (continued)

1 What are the most effective ways to support new entrants and encourage more young people into a career in farming and land management?

Currently bigger farmers are able to take on extra acreage at marginal cost, by spreading their fixed costs and working their machinery a little longer. This makes it very difficult for young entrants to compete and get a foothold in farming - figures that come out of RAU students rent tendering exercises would seem to support this theory, as the market rents are higher than they can practically afford.

Some of the ways to help young people could be:

1. Capping and over time reducing the value of the BPS which could lead to a reduction in the value of rents for land as currently the BPS is capitalised in land and rental values.
2. A government supported loan scheme for new entrants to give them working capital, help for the first two years with cash flow, five years investment grants, etc.
3. Training and education bursaries to encourage students to do college/university courses that will give them knowledge and skills, certificates of competence, etc.
4. Encouraging existing major land owners to let more land to new entrants by providing incentives/tax breaks to, for example, the Church, Duchy and Crown Estates, Pension funds, etc.
5. The development of initiatives that will provide affordable housing for older farmers enabling them to retire and thus prevent 'farm blocking'.

2 Does existing tenancy law present barriers to new entrants, productivity and investment?

Existing tenancy law allows landowners the flexibility to let the land for any length of term and many such lettings are for less than 10 years. It also enables them to let their land at a market rent. Both of these issues potentially pose difficulties to new entrants.

If only a short term letting (i.e. 5 years or less) is granted, then this is likely to make the necessary investment in machinery, equipment, stock and labour more difficult and risky. It can also encourage a more short term approach to farming the land which in turn can compromise important aspects such as soil management and maintenance of the land and buildings.

Basing the rent on the market rent, also poses challenges to new entrants, as existing farmers (who are already farming and thus are likely to have the necessary machinery, equipment and labour etc.) are likely to be able to afford to pay a higher rent than a new entrant. They also have the experience and skills and thus may have a further advantage when tendering for land and farms advertised for rent.

Reducing the current flexibility of the length of term, by say requiring that land is let for a minimum of say 10 years will mean that some landowners will be less willing to let their land and so seek alternative arrangements which will have the result of reducing the amount of land available to let. Likewise requiring landowners to let their land below the "market rent" is likely to have similar consequences. There are also other factors that make it difficult for new entrants, in particular the significant investment (over and above the rent) to actually farm the land. It should also be remembered that renting land is just one way of getting into farming and that not all landowners choose to rent land to the highest bidder!

Thus any measures to facilitate opportunities for new entrants, particularly those seeking to rent land should be focussed on measures such as increased access to affordable and high quality education, training and support (including advice and mentoring), easier access to finance and subsidised finance. Also increased subsidy payments for new entrants will also help them overcome the above difficulties, without compromising the amount of land available to rent.

7 A successful future for farming: agricultural technology and research

1 What are the priority research topics that industry and government should focus on to drive improvements in productivity and resource efficiency? Please rank your top three options by order of importance (from 1 as your most important to 3 as your least important):

1 c. Data driven smart and precision agriculture:

2 d. Managing resources sustainably, including agro-chemicals:

3 e. Improving environmental performance, including soil health:

Please give a short explanation as to your ranking preferences::

For farming to improve it needs to understand more fully the environment in which the operations occur and the influence of different husbandry techniques in varied environments. This cannot be achieved without collecting and analysing large data sets. With this information farmers can acquire a greater understanding about the land they are farming and make better informed decisions to improve the application and apportioning of inputs. By understanding the land and environment more fully resources will be used more sustainably and therefore answer d should occur as a result of c. Factor e should also improve as more is known about the variability and management of the land. As a general rule crop performance is directly linked with soil health. Crops grown in compacted or damaged soils tend to have a poorer response to fertilisers and agro chemicals and this can often result in a downward spiral for soil health. When less crop is grown on an area due to poor soil health there is a small root structure, less above ground biomass resulting in lower organic matter returns to the soil and decreased soil stability. Also, as a result of poor crop growth there is a more open canopy for weed infestation which then results in greater seed returns and a negative spiral of crop/weed competition and declining soil health. In conclusion, improved environmental performance is vital and this does include soil health but this can be achieved by data driven smart and precision agriculture systems to make sure different zones are each treated appropriately to the soil and crop requirements.

2 How can industry and government put farmers in the driving seat to ensure that agricultural R&D delivers what they need? Please rank your top three options by order of importance (from 1 as your most important to 3 as your least important):

1 b. Bringing groups of farms together in research syndicates to deliver practical solutions:

2 d. Giving the farming industry a greater say in setting the strategic direction for research funding:

3 a. Encouraging a stronger focus on near-market applied agricultural R&D:

Please give a short explanation as to your ranking preferences::

Farmers tend to learn most effectively from each other, but this rarely happens without facilitation. Therefore, bringing groups of farmers together to solve problems through research syndicates should enable farmers to find practical and adoptable solutions to real problems but careful facilitation is required. As farmers are levy payers through the AHDB it is important for them to maintain a say in the strategic direction as they are aware of the hurdles that they need to overcome to improve environmental challenges, improve yields and increase efficiency. Many of the challenges in agriculture are near-market including some of the technological solutions, mechanisations developments and improvements in energy usage. Working on some of these solutions can deliver environmental and performance solutions with a low cost to benefit ratio. Again point (e) is strongly linked with farmers working together to develop these solutions (a) and formulating the issues that need to be resolved (point d).

8 Agricultural technology and research (continued)

1 What are the main barriers to adopting new technology and ideas on-farm, and how can we overcome them?

The high costs of new practices and technologies are reducing farmers' ability to adopt and implement innovative technologies, generating less productivity and causing environmental and social consequences. Promoting proper incentives and access to flexible capital from start-up to scale can boost cost-effective technologies ensuring their adoption. Inefficient infrastructure, information and support make it difficult for farmers to gain access to adequate information, services, suppliers and products that could otherwise improve farm productivity and efficiency. Other issues for farmer adoption are the lack of compatibility between different hard and soft ware systems meaning that many technological advancements cannot 'talk' with each other which makes management less effective. Another barrier is that farmers want to see successful adoption before they become involved. In certain sectors or as a consequence of the types of farmers that do adopt it can be difficult for some farmers to truly understand meaningful case studies as they cannot fully engage with them.

To address these challenges, it is necessary to support technological infrastructure and greater collaboration and complementarity between service providers. It is also highly important to encourage and support managerial and technical talent towards new high tech specialists and ag-tech farmers.

Other options for overcoming some of these barriers would be to form a consortium of agricultural tech companies and get them to universally uptake one system of recording and displaying data. It would be highly beneficial if this was fully compatible with existing systems to reduce the cost of adoption.

The lack of transparency in the supply chain is exacerbating a loss in consumer trust. This is affecting, in particular, plant breeding and genetic technologies, as well as, innovations in food product development. Enabling policies that guarantee transparency in food supply chains can reduce consumer's suspicions and lead to increased trust. In addition engaging consumers can close the knowledge gap in some areas of society related to the processes occurring from field-to-fork.

There is a growing need for systematic and holistic approaches across relevant sectors of the UK economy when it comes to food, taking in agriculture, the environment and health. By this we mean that food production should not be taken in isolation but should be joined up with other parts of the economy when it comes to policy making. This applies equally to the issue of technology adoption and research and implies the need to develop informed policies to drive technological adoption that will enable sustainable agricultural productivity and profitability that is in tune with the needs of society.

9 A successful future for farming: labour - a skilled workforce

1 What are the priority skills gaps across UK agriculture? Please rank your top three options by order of importance (from 1 as your most important to 3 as your least important):

a. Business/financial:

c. Leadership: -

g. Other (please specify):

If you have answered 'Other (please specify)', please explain your preferred alternative::

We consider that one of the fundamental gaps in skills in UK agriculture is a lack of collaboration, leadership and management skills.

Please give a short explanation as to your ranking preferences::

After the UK has left the EU, it is likely that UK farming will be exposed to even greater levels of competition, without the support structures provided by the Common Agricultural Policy. In order for businesses to thrive, farmers will need to hone their levels of business and financial acumen to ensure that they are as efficient as they can be with a view to cutting costs in order to remain competitive. To achieve this, the industry needs leaders, not only on their own businesses but throughout the farming industry in order to develop and showcase best practice.

10 Labour - a skilled workforce (continued)

1 What can industry do to help make agriculture and land management a great career choice?

In our view agriculture and land management has already taken some initiatives to change hearts and minds about a career in agriculture and land management. The promotion of the industry as modern and progressive, the focus on driving out old attitudes towards health and safety and the greater, though still limited, recognition of the role of women in the industry are just three of the sorts of changes that are being pursued. There is more that can be done and we would argue that this should be progressed under the banner of the contribution that agriculture and land management makes to rural communities and as important to wider society as a whole. Defining Agriculture as a STEM subject would make an enormous difference in attracting the brightest and best young talent to the sector by raising its profile and credibility as a discipline (e.g. with teachers and careers advisors).

We would also argue that agriculture and land management needs to re-cast itself as an open industry which seeks to widen participation beyond its traditional boundaries. There are of course notable examples of where this has happened but the industry should and can go further, particularly if it wishes to attract people to choose the industry as a career. Some of this work involves universities like RAU which are embracing this agenda and have established innovation strategies to attract young people from all socio demographic backgrounds. This not only increases interest in the industry but also offers the potential for fresh thinking on established issues.

2 How can government support industry to build the resilience of the agricultural sector to meet labour demand?

We welcome the recognition by the Government that the agricultural industry relies heavily on migrant workers and that the work of the Migration Advisory Committee (MAC) will inform further policy development in this vital area for the industry. There is a short term need for the industry, however, that must

be addressed immediately and we welcome the agreement that seems to have been reached between the UK and EU negotiators on an implementation arrangement that will ensure that the UK will continue to have access to migrant labour up to the 31 December 2020. If this agreement is confirmed it will provide some measure of comfort for businesses that rely on migrant labour although we note that anecdotal evidence from industry to date implies that the change in the value of sterling and the uncertainty of Brexit is already impacting on the ability of businesses to attract labour. We hope that the implementation arrangements will at least bring some certainty in the short term.

3 Do you have any further comments?

In the longer term after the implementation period it is vital that the Government ensures that its immigration policy is closely aligned to the wishes of the industry. There will still be a need for seasonal and permanent migrant labour in the agriculture industry for at least the foreseeable future, despite advancements in technology. For its part the industry can and must do more to attract British citizens to work in the sector and they must be helped by government that offers incentives and flexibilities that will enable seasonal migrant labour to be an option for British citizens. An example of this might be to ensure that the benefits system is made more flexible so that it does not penalize people that choose to take up seasonal work.

11 Public money for public goods

1 Which of the environmental outcomes listed below do you consider to be the most important public goods that government should support? Please rank your top three options by order of importance:

1 d. Increased biodiversity:

2 f. Enhanced beauty, heritage and engagement with the natural environment:

3 e. Climate change mitigation:

Please give a short explanation as to your ranking preferences::

All of the options listed in the consultation are important and highly desirable, but some e.g. soil health, water quality, animal welfare can and should be better implemented through mandatory and other regulatory measures. The priority therefore should be to develop and further support those options that deliver non-market benefits which are often at a landscape scale and may not always be within the immediate responsibility of individual farmers.

2 Of the other options listed below, which do you consider to be the most important public goods that government should support?

Please rank your top three options by order of importance: -

1 f. Public access to the countryside:

2 e. Preserving rural resilience and traditional farming and landscapes in the uplands:

3 a. World-class animal welfare:

Please give a short explanation as to your ranking preferences: :

There have been a number of attempts to 'bolt on' public access options within agri-environment schemes dating back to the original Countryside Stewardship scheme launched by the Countryside Commission in 1992. These have not been encouraging, but the climate has changed particularly towards educational visits, Open Farm Sundays etc. and the capital funding associated with these remains a valuable focus for support. To a limited extent the development of open access implemented through the CROW Act 2000 has gone some way to addressing some demand for increased and improved access to the countryside. Furthermore, legislated access remains a partially developed option associated with coastal, riverside and woodland landscapes. However, and in particular, there is a need and public appetite for additions to the public rights of way network, especially to create links between existing routes, and to facilitate direct access from more urban areas.

3 Are there any other public goods which you think the government should support? No response

12 Enhancing our environment

1 From the list below, please select which outcomes would be best achieved by incentivising action across a number of farms or other land parcels in a future environmental land management system:

a. Recreation, b. Water quality, c. Flood mitigation, d. Habitat restoration, e. Species recovery, f. Soil quality, g. Cultural heritage, h. Carbon sequestration and greenhouse gas reduction, j. Woodlands and forestry

If you have answered 'Other (please specify)' please explain your preferred alternative::

Please give a short explanation as to your preferences::

There is an increasing recognition that delivering beneficial environmental outcomes is enhanced by focusing beyond the individual farm scale to landscape scale initiatives. The range of benefits from water quality enhancement through to species recovery can be underpinned by effective strategic planning such as provided by the aggregation of existing past and present initiatives aligned with the Lawtonian principles. This will include landscape conservation initiatives such as Nature Improvement Areas, Living Landscapes, Wetland Vision, Futurescapes, etc. There are further on-going initiatives such as farmer clusters which have no public funding to the increasing number and farmer participants in the Countryside Stewardship Facilitation Fund. Evaluation and assessment of additional environmental effectiveness of these is current, but initial understanding is for the high potential of such initiatives to promote conservation synergy within adjoining land holdings linked with public funded measures (see also How can farmers and land managers work together or with third parties to deliver environmental outcomes?). There have been some good and recognised successes in maintaining and enhancing the environment with agri-environment schemes. There is considerable experience in the development and costing of conservation management options within existing agri-environment schemes, and these can be broadly relied upon and built on. Although initially attractive both politically and economically, payments based on more complex and developed forms of Payment for Ecosystem Services (PES) remain a continuing challenge. Aligned to this is the increased awareness and value of natural capital, but its robust valuation at discrete and detailed levels also remains a challenge. The 'green box' baseline of income forgone with the added flexibility of additional incentives will remain more appropriate and pragmatic. (see also What role should outcome based payments have in a new environmental land management system?) A future environmental land management system will build on what has some familiarity and traction with the existing Countryside Stewardship scheme (CS). To increase biodiversity benefits for example, greater targeting of resources at ecological networks and at the landscape scale is required. There is some pressures and expectancy from some groups to re-introduce a version of the 'broad and shallow' Entry Level Stewardship, but evaluation of its impact has shown limited additionality and an overall poor value for money. However, field boundaries, pollinator conservation measures, and water quality measures are recognisably both widespread and of particular importance. With further development such measures could be accommodated within a more national programme

analogous to the capital works programme now operating (and with increased funding) as part of the Countryside Stewardship scheme. To address the consultation questions in this section we have ordered the outcomes which we believe would be best achieved incentivising action across a number of farms according to the approach and philosophy described above: These are: d. Habitat restoration e. Species recovery g. Cultural heritage c. Flood mitigation a. Recreation (mainly public access) j. Woodlands and forestry h. Carbon sequestration and greenhouse gas reduction b. Water quality f. Soil quality

Enhancing our environment (continued)

1 What role should outcome based payments have in a new environmental land management system?

Payments by results (PBR) has had several periods in the spotlight as a potential and improved alternative to the established systems of payments to farmers for conservation activities. Difficulties remain, for example the necessary costs involved for particular management undertaken, but no measurable benefits are evident (e.g. No's of nesting stone curlews), and payments are thereby threatened. This has been a particular concern among farmer and land management groups, as also has the liability for disproportionate transaction costs. There is also included within the consultation document, a current initiative to pilot and evaluate a PBR approach which could act as a model for the introduction of such a scheme. It will have a base level of payments for management to deliver specific environmental outputs giving some security to participating farmers, and topped up by a series of tiered payments, or essentially bonuses, designed to reward measurable outcomes.

Some additional consideration should be given to these payments to farmers to be made via long-term (25 year) contracts to best deliver environmental goods and services, based on outcomes rather than process. This gives the farming community a greater stake in the investments made and future income security.

Past experience of a range of evaluative studies of agro-environment schemes clearly show a reluctance to participate in long term management agreements.

However, such an approach will be suited to particular and high value sites, and particular landowners and farmers.

2 How can an approach to a new environmental land management system be developed that balances national and local priorities for environmental outcomes?

Notwithstanding the recognised difficulties with the newly launched CS, the direction and increased focusing on targeted support to the most appropriate features and geographic locations is a central pre-requisite in a budgeted scheme, and a logical progression if we are to accomplish increased and measurable environmental improvements. This is especially relevant to maintaining and increasing farmland biodiversity which continues to show species and habitat declines. There are individual and good examples of the benefits of agri-environment support, but there is a recognised need to promote smarter landscape scale conservation with a limited resource base.

There is now the opportunity – and a general and building consensus – to start again with an agri-environment scheme outside the parameters of any EU obligatory framework. As indicated there is a lot that is right with the developing direction of the new CS - with a greater emphasis given to landscape scale conservation. Concurrent with this approach is an acceptance that many farms do not and cannot provide high levels of conservation benefit and provide poorer value for money in agri-environment participation. There will need to be a more honest and clear conversation with the landowning sectors in this regard.

There will remain the need for a national framework of priorities working synergistically with existing policy documents such as Biodiversity 2020 and Water for Life. There will also be the opportunity to develop local priorities to reflect protected areas including National Parks, Conservation Boards and Areas of Outstanding Natural Beauty. Working within a national (and devolved) framework, this would include established and credible organisations taking responsibility for agri-environment or its equivalence. On a broader level of administration of an equivalent scheme – there is the opportunity to develop a more truly local dimension, which will also allow the opportunity to reduce administrative overlap. However the agri-environment is administered, it can retain its multi-functionality but its focus must be on attaining and increasing additionality and connectivity. The strategic focus upon biodiversity and water resources within CS can and should be maintained. In addition differential management, above expected regulatory requirements, should be adequately addressed within payment structures.

Such regions with locally derived and regularly reviewed statutory management plans, are ideally placed to prioritise and deliver schemes at a genuine landscape scale. Such a scenario inevitably creates a large proportion of farmland in England that is unable to access any standard publicly funded agri-environment scheme. The Pillar 1 payments have been assured until 2022 and any accompanying cross compliance and greening measures that apply. There is limited support from environment groups for its continuation, and there is little evidence of any traction within government and political ranks. An assumption can be made that Direct Payments will effectively cease over a timescale that will be subject to review, and with it the leverage attached to cross compliance including the greening measures where applicable. As a continued rationalisation for paying Pillar 1 support payments to farmers and landowners they have been successful, but the environmental and other public gain derived from these measures has been evaluated and is not significant. Cross-compliance and greening measures as is currently operated will not continue in the attempts to offer and encourage some degree of environmental standards in those areas not targeted for agri-environment funding. The approach indicated accepts that many farmers will not be able to access an area based agri-environment scheme, and that an effective two tier countryside would be more evident. However, and as outlined in the introduction to this section, widespread measures including pollinator conservation measures, and water quality measures could be accommodated within a more national programme across farms within all regions.

At a basic level, compliance with a range of environmental standards will rely more heavily upon existing and any developed regulatory mechanisms including legislation and measures linked with food and farm assurance schemes. Much of the current UK legislation protecting for example biodiversity, is from EU directives either directly such as the Habitats Directive or indirectly such as the Bathing Water Directive. It is essential this legislation is retained after the UK leaves the EU.

3 How can farmers and land managers work together or with third parties to deliver environmental outcomes?

Conservation schemes can provide and promote better environmental improvements with associated good advice. Where high quality and trusted advice is provided free at the point of delivery (such as Natural England project officers linked to HLS), good relationships between the provider and participant are evident and results and potential results can be more effective. Parallel with increased targeting of agri-environment schemes will be the targeting of associated advisory sectors. There will remain a need for a policing element but the differentiation that has been created between this and the advisory and implementation teams has not been helpful and will need to be addressed further. There would need to be a regulatory mechanism to maintain high environment performance standards of farming. A fully funded advisory service is an option to be established with sufficient capacity to deploy an integrated approach across the country between farming and environmental protection so that both objectives work together. To better integrate with a focus of local priorities by using local bodies to implement agri-environment, there may be a need and desirability for an equivalent national body to oversee standards and quality assure schemes (e.g. OffEnv).

The approaches taken from farmer clusters and subsequent development via the CS facilitation funded groups has shown promise. It is recognised that this is still too early for a measurable long term evaluation of effectiveness and additionality in providing good environmental outcomes. However there is some indications that these collaborative approaches have value, and the role of identifiable and embedded advice providers working with local groups has significant potential.

These need to be strengthened and increased.

Agri-environment outcomes have benefited with better delivery on the ground with the support of advisers who have a good working relationship with the agreement holders. This is an important element that has been more limited with some schemes in recent years.

On a broader perspective, there is a need for the narrative and relationship between farmer, government and taxpayer to change. It is perhaps unhelpful to continue to talk about support, subsidy, or agreement. Contracts would be commercial transactions perhaps through a market-based mechanism (environmental market) securing better and more cost-effective delivery, paying farmers more for better outcomes. Conservation covenants might be used to secure and protect the long-term value of the investments made which is currently not the case with short-term Countryside Stewardship agreements. In such an approach, the government, and ultimately the taxpayer, is the customer and the farmer is the service provider. A change in attitude and aspiration of government is needed, similar to that which the Forestry Commission displayed in the move away from so called productive forestry to broadleaved woodland conservation and management in the 1980's. Food production remains a priority to feed people as a matter of course, but depending upon locality and region it may not always be the priority of the farms concerned.

13 Fulfilling our responsibility to animals

1 Do you think there is a strong case for government funding pilots and other schemes which incentivise and deliver improved welfare?

Yes

Animal welfare, as with the environment, is a matter of citizen as well as consumer interest. Citizen concern has resulted in animal welfare legislation which is noted at several places in the consultation document. Public support for improved welfare is, therefore, justifiable. However, the real challenge is to maximise the benefit from such an investment. Our suggestion is that future support should be more strategic, collaborative and support common goals agreed within a National Animal Welfare Strategy involving government, industry and civil society. Some sectors already have animal welfare strategies so this is a realistic exercise. The focus of a strategy could be animal welfare as a positive quality criteria for UK products, including assessment of positive welfare. Following a well-attended policy workshop at RAU in February 2018 (full report provided separately) the RAU is developing plans to provide an evidence base for national claims in animal welfare.

2 Should government set further standards to ensure greater consistency and understanding of welfare information at the point of purchase? Please indicate a single preference from the below options: e. Other (please specify)

Clear labelling is important for consumer and, perhaps more importantly, business to business purchasing decisions. Existing labelling systems include farm assurance and methods of production. Whilst a mandatory labelling method of production may be difficult to achieve in all sectors, there are further opportunities for standardising existing descriptors, for example with grass-fed and high health but zero grazed dairy systems. Industries, with government support, should be encouraged to produce standardised system descriptors that facilitate consumer (and industry) choice. However, since a simple system descriptor does not provide a welfare assurance this should be clearly linked with technical standards, including farm assurance standards, that can also provide assurance on the management of welfare outcomes as embraced by RSPCA Assured plus Red Tractor Pig and Dairy schemes.

Please give a short explanation as to your preference. If you answered 'perhaps in some areas', please elaborate::

3 What type of action do you feel is most likely to have the biggest impact on improving animal health on farms? Please rank your top 3 choices from the below list, in order of importance (from 1 as your most important to 3 as your least important):

1 g. Transparent and easily accessible data:

2 f. Research and knowledge exchange:

3 b. Use of financial incentives to support action:

Data has been prioritised as it is necessary to facilitate all of the following actions "understanding of animal health standards on comparable farms", "Making it easier for retailers and other parts of the supply chain to recognise and reward higher standards of animal health", "Use of financial incentives to support action" and "Supporting vets to provide targeted animal health advice on farm". Research and knowledge exchange can then promote the management of these issues.

14 Fulfilling our responsibility to animals (continued)

1 How can the government best support industry to develop an ambitious plan to tackle endemic diseases and drive up animal health standards?

Sector specific groups are best placed to tackle endemic disease. However, governments could provide flexible resources to support national initiatives. The general principles of this approach should be that government trusts each sector to develop their own specific approach and that each sector promotes a collaborative culture to share joint problems. Promoting a broader collaborative culture is a broader goal for all farming sectors. A culture of openness and transparency should also extend to farming related education in schools.

In addition positive non-judgemental targeted support should be provided, in the first instance, for farms with falling standards. Poor animal health and welfare is often a proxy indicator of more fundamental problems on farms, such as poor mental health and financial uncertainty. It is likely to be more effective to support to develop solutions rather than penalise such farms.

15 Supporting rural communities and remote farming

1 How should farming, land management and rural communities continue to be supported to deliver environmental, social and cultural benefits in the uplands?

Please respond in the text box provided::

No response

2 There are a number of challenges facing rural communities and businesses. Please rank your top three options by order of importance (from 1 as your most important to 3 as your least important):

a. Broadband coverage:

d. Affordable housing:

g. Transport connectivity:

In considering the above options, there is a need to develop multifunctional rural hubs to stimulate the economy in these areas. These hubs could have the following functions: business support for local businesses; a marketing hub for products and services, business incubation and key skills development. Such hubs would need effective broadband connections to connect to the outside world and markets, allied to improved transport connectivity for both people and goods. In essence the hub should become a one-stop shop for the community. An ageing farmer population is not exclusive to upland farming, but it is a particular issue compounded by more limited opportunities to move but stay within their rural community. This is exacerbated by the attractiveness of many upland areas for holiday or second homes, leading to high and increasing house prices. Accordingly, the vacant farmhouse is a benefit to succession for farmers into the industry. There are examples of initiatives to address some of these issues including for example The Addington Fund. These need to be further developed and supported. Rural communities could arguably become even more detached in a post-EU Britain and it will be important that government moves quickly to ensure that the focus of policy is not considered urban centric. Affordable housing is an example of a national issue that requires a national policy that is sufficiently nuanced to apply to both urban and rural communities. However, such is the scale of the affordable housing problem in the UK, it is considered that specific policies need to be adopted to free up and build more rural affordable housing.

16 Supporting rural communities and remote farming (continued)

1 With reference to the way you have ranked your answer to the previous question, what should government do to address the challenges faced by rural communities and businesses post-EU Exit?

Rural communities could arguably become even more detached in a post-EU Britain and it will be important that government moves quickly to ensure that the focus of policy is not considered as urban centric. Affordable housing is an example of a national issue that requires a national policy that is sufficiently nuanced to apply to both urban and rural communities. However such is the scale of the affordable housing problem in the UK, it is considered that specific policies need to be adopted to free up and build more rural affordable housing.

17 Changing regulatory culture

1 How can we improve inspections for environmental, animal health and welfare standards? Please indicate any of your preferred options below (Select as many options as you wish).

Greater use of risk-based targeting, Greater use of earned recognition, for instance for membership of assurance schemes

Please give a short explanation as to your preferences::

The principle of risk-based targeting has been established, however, this approach could be more sophisticated if better data sources could be adopted into the model. For example, Red Tractor Dairy scheme is collecting welfare outcome data which even though a relatively small sample size does provide a reasonable indicator of further problems that could be investigated further.

18 Changing regulatory culture (continued)

1 Which parts of the regulatory baseline could be improved, and how?

There are still significant opportunities to improve the interaction between private assurance schemes and government enforcement. Private schemes assess the majority of farms every year whereas as government enforcement is currently less than 5% of farms. Better interaction could include collaboration on the content of standards and more effective targeting of farms that are at greater risk of non-compliance. Separation from existing compliance systems associated with EU institutions should provide more flexibility in more effective private-public collaboration.

2 How can we deliver a more targeted and proportionate enforcement system?

In addition to better collaboration with private assurance schemes, there are opportunities for enforcement systems to take a more sophisticated supportive community approach. Farms that have non-compliance issues are often an indication of other more systemic issues, such as financial crisis, family issues or mental health. Perhaps better co-ordination with local community or civil society organisations may result in faster change than a purely enforcement approach.

19 Risk management and resilience

1 What factors most affect farm businesses' decisions on whether to buy agricultural insurance? Please rank your top three options by order of importance (from 1 as your most important to 3 as your least important):

1 a. Desire to protect themselves from general risks (e.g. revenue protection):

2 f. Availability of relevant insurance products:

3 d. Cost of insurance:

In deciding our ranking preferences we have noted that the decision to buy insurance is part of any business decision making process and farm businesses will take a number of factors into account when deciding to purchase. Our view is that farm businesses will tend to consider general risks first, rather than specific risks because specific risks such as flooding are harder to quantify from a decision making perspective (unless specific experience of said risk has occurred). The factors of cost and availability will then be taken together with a farm business weighing up the potential threat to his business against the cost of taking out the insurance and the impact on the farm's profitability. Clearly other factors such as the availability of government compensation and how complex the insurance instrument will also have a bearing on whether a business take out insurance.

20 Risk management and resilience (continued)

1 What additional skills, data and tools would help better manage volatility in agricultural production and revenues for: a. Farm businesses? Please respond in the text box provided::

Government should provide information on the scale of risks that farm businesses are likely to encounter and more importantly training on what the options are for dealing with them. Furthermore in order to aid the development of market based insurance options for farm businesses, government should facilitate good 'start-up' conditions - information, regulation and training - so that effective futures, insurance and marketing futures are developed.

b. Insurance providers? Please respond in the text box provided::

There has been some discussion over whether we could replace farm assurance as a market instrument with farm insurance as a co-regulation programme. Many of the audit points checked by farm assurance inspectors overlap with factors that would link to an insurance model. Those additional areas beyond market driven assurance could be also audited by inspectors who are visiting farms already but with the additional costs and public reporting being picked up by government or factored into assurance as an insurance check? This would then leave only those farmers who are not part of farm assurance schemes unaudited. These could be picked up by public auditors, who could also shadow audit private inspections as a mechanism of verification – a similar process to UKAS witnessed audits already carried out under accreditation of certification bodies.

2 How can current arrangements for managing market crises and providing crisis support be improved?

no response

21 Ensuring fairness in the supply chain

1 How can we improve transparency and relationships across the food supply chain? Please rank your top three options by order of importance (from 1 as your most important to 3 as your least important):

1 a. Promoting Producer Organisations and other formal structures?:

2 b. Introducing statutory codes of conduct?:

3 c. Improving the provision of data on volumes, stocks and prices etc.?:

Please give a short explanation as to your ranking preferences::

In prioritising the options above, it is important to note that supply chain relationships from farmers to retailers and food service are complex. Furthermore, most of the rules of the game are tied up in farm and food industry private standards from Red tractor, Freedom Foods and organic for example to BRC and proprietary food standards. It is also interesting to note that two Competition Commission investigations identified that food supply is effectively a complex monopoly with those further along the supply chain exercising their powers to control supply to their own advantage. Although there has been some progress including the Groceries Code Adjudicator, it is important to increase transparency around trading relationships. In stating this, however, it should be recognised that assurance schemes are in fact private sector mechanisms. At the primary sector level however, it is reasonable for government to create an enabling environment from farmers and groups ranging from model contracts to support in business/marketing development and in relation to helping farmers to group together to give a size and scale of activity comparable to the rest of the supply chain, thus giving them improved bargaining power. A good example of this is the success of the British Celery Growers. Accordingly, if the government is serious about promoting the role of producer organisations (PO's) it needs to put in place incentives that encourage farmers to be part of them. The role of producer organisations in the fruit and vegetable industry is matched by the availability of government financial support that encourages growers to be a part of PO's as a part of an EU wide scheme. It is important that on leaving the EU this scheme is maintained and importantly widened to include other sectors of agriculture. While the fruit and vegetable PO scheme in the UK has had its problems in the past, it still plays a valuable role in the industry including incentivising growers to develop increasingly sustainable practices as well as improving productivity and investments in capital infrastructure to increase competitiveness. The success of the Groceries Code Adjudicator (GCA) indicates that the introduction of codes of conduct make important contributions to treating farmers fairly in the supply chain. In our view the architecture of the GCA should be considered as a model for how to develop codes in the future both statutory and non-statutory. We also consider that the decision to not extend the groceries code to the relationships that farmers have with their suppliers was a missed opportunity and we hope that the issue will be re-visited again in the future. Local food supply chains; An argument for specific policy measures For too long now we have tended to focus policies on urban or rural challenges and have not taken the opportunity to consider integrated policies that mutually build resilience into both urban and rural communities simultaneously. As an example, consider three related problems, namely, economic livelihoods of smaller family farms, food availability in urban areas and the municipal challenge of dealing with green and food wastes. Based on DEFRA's own aggregate accounts, the UK food industry is worth around \$110 billion per year. However, for every UK food £ spent, farmers trap as little as 8p on average while the food chain receives 35p. In contrast retail and catering retain 27p and 30p respectively. Furthermore, only a limited amount of this spend at retail and catering remains in the local community where food purchases are made, the majority is directed out of the community to fund profits and shareholder premiums. Contrast this with local food supply where a study by CPRE of local food supply noted that some 50% of local food spend recirculates within the local economy and that for every £ spent on food, farmers can get; 18p if selling to wholesale, 38p if processing and wholesaling and 100p if selling directly to consumers or through direct catering. This argument accepts that there would be extra costs associated with those options other than wholesaling. There are added sustainability benefits to supporting local food supply models, a major challenge to the food industry is the level of food waste generated domestically and commercially. A logical way of improving the ecological footprint of agriculture is to find ways of trapping the nutrient exported from farms in raw material and food that ends up in food waste and then returning this to the land. Technologies relating to composting and to anaerobic digestion are becoming more reliable, predictable and affordable, however, many schemes are challenged by the logistics of systems. Supporting either farm based or community based organic recycling is far easier with a local supply model and has the benefits of maintaining farm fertility whilst removing the problems associated with food waste; furthermore, with AD systems there is the opportunity to generate energy and supply safer bio-fertilisers.

22 Ensuring fairness in the supply chain (continued)

1 What are the biggest barriers to collaboration amongst farmers?

We would suggest that policy should focus on the benefits of collaboration rather than focusing on the barriers. The next generation of farmers can be encouraged and provided with skills to take a more positive approach to collaboration. This was a major theme of the recent OECD conference on supporting rural innovation.

A common feature of collaboration is pride and satisfaction on working towards a common goal.

2 What are the most important benefits that collaboration between farmers and other parts of the supply chain can bring?

Collaboration can benefit farmers at many different levels. Collaboration can be based on local geography for environmental benefits and animal and plant disease control . Collaboration based on shared marketing objectives can work with products that have shared quality criteria. Collaboration at a

national level can also benefit where common goals including strategies to control endemic diseases and national level marketing claims, such as higher welfare.

How could government help to enable this?

Higher and Further Education institutes could collaborate to develop professional skills training in all land-based courses. This would include collaboration, facilitation and leadership skills. The RAU intends to organise a policy workshop amongst land-based institutions to share experiences, expertise and develop collaborative training materials and curriculum. We would welcome Government involvement and support in this initiative.

3 Do you have any further comments?

Local food supply chains: Specific policy measures

For too long now we have tended to focus policies on urban or rural challenges and have not taken the opportunity to consider integrated policies that mutually build resilience into both urban and rural communities simultaneously. As an example, consider three related problems, namely, economic livelihoods of smaller family farms, food availability in urban areas and the municipal challenge of dealing with green and food wastes.

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There are added sustainability benefits to supporting local food supply models, a major challenge to the food industry is the level of food waste generated domestically and commercially. A logical way of improving the ecological footprint of agriculture is to find ways of trapping the nutrients exported from farms in raw material and food that ends up in food waste and then returning this to the land. Technologies relating to composting and to anaerobic digestion are becoming more reliable, predictable and affordable, however, many schemes are challenged by the logistics of systems. Supporting either farm based or community based organic recycling is far easier with a local supply model and has the benefits of maintaining farm fertility whilst removing the problems associated with food waste.

Furthermore, with AD systems there is the opportunity to generate energy and supply safer bio-fertilisers.

23 Protecting crop, tree, plant and bee health

1 Where there are insufficient commercial drivers, how far do you agree or disagree that government should play a role in supporting:

a. Industry, woodland owners and others to respond collaboratively and swiftly to outbreaks of priority pests and diseases in trees?:

Strongly agree

b. Landscape recovery following pest and disease outbreaks, and the development of more resilient trees?:

Strongly agree

c. The development of a bio-secure supply chain across the forestry, horticulture and beekeeping sectors?:

Strongly agree

24 Protecting crop, tree, plant and bee health (continued)

1 Where there are insufficient commercial drivers, what role should government play in:

a. Supporting industry, woodland owners and others to respond collaboratively and swiftly to outbreaks of priority pests and diseases in trees?

The government's role should include a number of initiatives and actions, including the provision of an early warning system, improved detection, education, awareness and continued (and ideally improved) financial support to help encourage swift and appropriate action to be taken – these issues are discussed further below.

There are also understandable concerns about the impact of BREXIT on the UK's plant biosecurity – the UK's membership of the EU allows it to participate in a range of biosecurity information sharing mechanisms and early warning systems with its EU counterparts to help prevent the spread of pests, diseases and pathogens. Thus it will be important for the UK to have arrangements and mechanisms in place to be able to continue to have this exchange of information – the current enquiry by the House of lords EU Energy and Environment sub-committee into this issue is thus very much welcomed.

Increased awareness and education about not only pests and diseases, but also appropriate management options and techniques would also be desirable. There are loads of good free resources and guidance on pests and diseases on websites such as forestry Commission, Forest Research and Observatree – however help and support to tailor these resources so that landowners can quickly identify the threats and take the appropriate actions would also be helpful - for example the formation of "local biosecurity groups" and increased liaison with and use of industry groups such as Confor, ICF, RICS, RFS etc, and the universities and colleges offering forestry courses and modules would also help facilitate this.

b. Promoting landscape recovery following pest and disease outbreaks, and the development of more resilient trees? Please respond in the text box provided:

This should include support and encouragement to affected landowners, including continued financial support to fell infected trees, treat infection and where necessary, restock with new appropriate tree species.

Also the formation of "local biosecurity groups" and increased liaison with and use of industry groups (as mentioned above).

For issues a) and b), there are also other measures that can be taken to help to make the nation's trees more resilient to pest and disease attacks. These include maintaining and enhancing the current tree breeding and tree improvement programmes and in turn facilitating better silviculture and better yields, encouraging a greater diversity of species to be planted and a greater diversity of silvicultural systems to create more diverse woodlands in terms of age, structure, and habitats.

It is also important that policies and incentives continue to seek to bring existing woodlands back into management, as well as planning new woodlands. There is a significant area of woodland that is under managed, particularly the "farm woodland resource" - if this resource is not actively managed then there is an increased risk that pests and disease outbreaks will not be quickly detected. Continued and ideally enhanced financial support, together with a simplified grant application and approval system as well as increased awareness and increased provision of free or subsidized advice will help in encouraging more active and appropriate management which in turn should create healthier, more productive and biodiverse woods.

2 What support, if any, can the government offer to promote the development of a bio-secure supply chain across the forestry, horticulture and beekeeping sectors?

From the woodland/forestry perspective, there are a range of measures that have and can be taken. The Forestry Commission are the largest woodland owner in England – thus leading by example and working collaboratively with those in the supply chain, including those suppliers and organisations based outside the UK.

Continued (and may be increased) surveillance and controls, particularly on imports.

25 Devolution: maintaining cohesion and flexibility

1 With reference to the principles set out by JMC(EN) and listed in the devolution chapter, what are the agriculture and land management policy areas where a common approach across the UK is necessary?

There are a number of policy areas that would benefit from a common approach across the UK including a common regulatory framework. These specifically include:

Policies on supply chains including fairness in the supply chain and the Groceries Code Adjudicator;

Policies on immigration, specifically seasonal migrant labour;

Trade;

Animal welfare.

2 What are the likely impacts on cross-border farms if each administration can tailor its own agriculture and land management policy? No response

26 International Trade

1 How far do you agree or disagree with the broad priorities set out in the trade chapter?

Agree

2 How can government and industry work together to open up new markets?

To open up new markets, the government must provide opportunities for industry by ensuring negotiating minimum or no tariffs and minimum non-tariff barriers to trade.

Trade essentially occurs when there is a need within one country for another country's products. Therefore, trade tends to occur in the commercial sector with government facilitation to reduce the frictions of trade. A potential role for government and industry to work together, is to identify where there are deficiencies within the structure of UK agriculture and the processing industries lie. From this it will be necessary to plan strategies to improve the infrastructure that service the UK agricultural and food industry. This should focus on those sectors that have the greatest potential to add value to UK exports. Furthermore, government has a role in funding training that can increase productivity within agriculture sectors, in-line with the aspirations of improved animal welfare, environmental protection of farmed landscapes, and high levels of food safety standards. Allied to this, if new markets are to be developed, training in soft skills may be necessary to negotiate, market and develop and enhance new trade networks of high quality British agricultural products.

3 How can we best protect and promote our brand, remaining global leaders in environmental protection, food safety, and in standards of production and animal welfare?

The most effective way to protect and promote UK brand is to ensure that the quality of products exported meet this expectation. This will require that farmers themselves are producing to this standard for export. Arguably, they should also be producing at the standards for domestic markets. In trade, establishing a brand and keeping that brand are essential to the success of the brand. Media stories that damage the image of a brand can damage the image within the market place. Therefore, protecting the UK agri-food brand requires that farmers produce agri-food products for the domestic market to the same standard. Diversions between standards within the domestic and international markets could lead to social media stories that may imply that UK standards in agriculture and food production are not as high as suggested; there are also implications if there are two different standards such as the need for identity preservation, segregation and traceability to prevent 'lower' standard food being sold into the premium market.

4 Do you have any further comments?

The chapter on international trade is strong on positive rhetoric so it is difficult not to agree with the broad priorities set out. However, herein also lies the weaknesses of the stated priorities. Questions must be raised about accessing new markets. Any analysis of trade data illustrates that trade in agricultural and food products have a long-tailed distribution. This is not unexpected given that the proportion of trade in such products is much greater with our nearest neighbours. Therefore, assumptions about developing new markets to enable farmers to export more British products to is likely to be time-consuming taking many years to develop. In developing new markets, convincing arguments as to why British products are better than those from neighbouring countries of the importing nation will need to be made. This is particularly so for agricultural commodities where there is little or no differentiation in the product itself. However, it is acknowledged that to gain improved access to markets, UK agricultural and food products need to differentiate themselves from those available from local markets. Therefore, one of the main priorities for British trade is to move beyond standard agri-food products and effectively market products that have high standards of food safety, animal welfare and enhance environmental protection enabling British farming businesses to also seek markets that command high premiums and profitability.

While it is important to explore and develop new markets, it is acknowledged in Chapter 14 that the EU remains the UK's biggest trading partner agricultural products. Indeed, for many agricultural products well over 80% of that trade goes to other EU countries. As noted, much of this trade is with our nearest neighbours. Therefore, while the UK seeks a trade deal with the EU that has minimum or no tariffs on UK agricultural exports, a realistic

assumption is that some tariffs are likely to occur once (or if) the UK is outside the current customs union. Furthermore, once this occurs, so will trade diversion both within the EU 27 and the UK itself. Trade diversion is likely to reduce markets for UK's agricultural products in the EU 27 as other countries take advantage of the changed situation. Although it may also benefit some UK farming businesses that are able to produce previously imported agri-food products for the domestic market. A further consideration is that a UK outside the EU customs union is likely to lead to non-tariff barriers such as additional checks and paperwork on British exports entering the EU, thus increasing the transactional costs of trade.

27 Legislation: the Agriculture Bill

28 How far do you agree with the proposed powers of the Agriculture Bill?

Please choose one of the options from the dropdown

list:: Agree

29 What other measures might we need in the Agriculture Bill to achieve our objectives?

Please respond in the text box provided::

No response

Policy briefing paper for the Royal Agricultural University

Prepared by Agra CEAS Consulting Ltd

RAU commissioned Agra CEAS Consulting, part of Informa Agribusiness Consulting, to produce a policy brief in response to Defra's Command Paper Health and Harmony: the future for food, farming and the environment in a Green Brexit. This briefing is helped inform RAU's detailed response to the consultation. This policy brief discusses the issues highlighted in the Command Paper and draws out uncertainties, challenges and research questions which arise.

The brief focuses on four areas of the Command Paper which were identified as being of special interest:

- Reform within the CAP (section 2 of the Command Paper).
- An 'agricultural transition' (section 3).
- Public money for public goods (section 5).
- Risk management and resilience (section 10).

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1. Reform within the CAP

1.1. The Countryside Stewardship Scheme

The current Environmental Land Management scheme in England is the Countryside Stewardship Scheme which was launched in 2015 under the 2014–2015 England Rural Development Plan (RDP); there are different schemes under the Scotland, Wales and Northern Ireland RDPs. The scheme is targeted and competitive and is delivered through three elements:

- **Mid-tier:** simple agri–environment agreements which go beyond the requirements of greening and cross–compliance, but which remain “broad and shallow”.
- **Higher-tier:** more complicated “deep and narrow” agreements which can deliver more significant environmental outcomes as they reflect the needs of the more environmentally significant sites.
- **Capital grants:** available for hedgerows and boundaries; woodland support; planning for more complex higher tier agreements.

The Command Paper proposes to make it easier to apply for Countryside Stewardship and to improve the applicant experience. The rationale for this is that many farmers and land managers are put off by the complexity of the scheme and that this has resulted in a lower than hoped for uptake. Some 2,314 farmers applied to the scheme in the first year and while Natural England stated that they were happy with both the number and quality of the applications received, they had budgeted for in the region of 4,500 applicants.¹

¹ Reported in the Farmers’ Guardian: <https://www.fginsight.com/news/news/nfu-calls-for-changes-to-countryside-stewardship-after-survey-confirms-member-disillusionment-7504>

A survey of 646 members carried out by the NFU in autumn 2015 to establish perceptions of the new Countryside Stewardship (CS) scheme and support for the Campaign for the Farmed Environment (CFE)² found:

- High awareness of the scheme (93% of those contacted had heard of it).
- Issues with scheme's design and the application process deterred farmers.
- Guidance was not user-friendly (41% said it was poor) and was insufficient for making decisions.
- Payments are considered to be too low compared to the additional labour input needed and potentially lost income (48% said that joining the scheme would not be worthwhile for their business).
- It is over-complicated, bureaucratic and too prescriptive.
- Small farmers and upland farmers are at a disadvantage.

In general terms, and against this background, simplifying Countryside Stewardship for 2018 and simplifying it further in 2019 seems to be a good idea, although this should be done without compromising the scheme's ability to deliver positive outcomes. In doing this it will be important to minimise deadweight, i.e. ensure that as far as possible, supported actions are additional to what would be undertaken by farmers without support.

The Command Paper presents four options for Countryside Stewardship in 2019, each of which is discussed in the following sub-sections.

1.2. Develop further simplified packages

Environmental Land Management schemes are designed to go beyond legal minimum requirements. This baseline is currently provided by the requirements of cross-compliance and greening. Whatever form simplified packages take, they ought to still go beyond this baseline. This baseline may though change depending on the conditions put on the receipt of Direct Payments during the transition phase (see section 2).

There is a tension in the provision of Environmental Land Management schemes between "broad and shallow" (mid-tier) and "deep and narrow" (higher tier) approaches. The former approach is simpler to administer and deliver, and attracts more participants; the latter, while more complicated to design and implement, can deliver better outcomes.

² <https://www.nfuonline.com/assets/54412>

In deciding how to simplify Countryside Stewardship, it will be necessary to be clear whether the objective is to maximise the delivery of environmental outcomes or to maximise participation. There is a risk in providing simplified packages that these will not produce the desired environmental outcomes and there will be considerable deadweight.

As a general principle, management options which involve *passive management* (i.e. there are restrictions setting out what cannot be done) are likely to have relatively high deadweight. Options involving *active management* (i.e. rules on when and how to carry out specific actions) will tend to carry a risk of moderate deadweight. The *restoration* to previous environmental/historic condition is likely to have a low deadweight risk and the *creation* of new features and habitats will carry a very low risk of deadweight. However, deadweight is not always a bad thing and there are reasons why it should be tolerated including the prevention of loss or damage to existing habitats; rewarding current good practice (as opposed to only paying those not employing good practice to change); and, avoidance of perverse incentives (remove a feature and then be paid to create it again).³

It is also worth noting that the intention to develop a simplified package is a short-term measure while a new Environmental Land Management scheme is developed. However, if the simplified packages only deliver marginal environmental benefit then the length of agreement entered into should be considered; short-term agreements would not leave a legacy of poorly performing actions running parallel to a successor scheme which delivers greater benefit.

1.3. Simplify the application form

To the extent possible, application forms should always be as simple as possible. However, this should not compromise the ability to successfully operate the scheme or the ability to be able to measure the operation of the scheme; it is necessary to collect certain information to help in the later evaluation of performance. This will be especially important post-Brexit as the agricultural budget will be competing with general government funding for the NHS, defence, etc. and there will be a need to be able to demonstrate positive impacts to justify continued public expenditure.

In the longer-term, ways in which to link all the information held on specific farmers/farm holdings together could be developed so information requests can be kept to a minimum. Information collected for one purpose should be available without re-collection for other purposes. This might require the

³ GHK (2012) Dynamic Deadweight in Environmental Stewardship – Towards a better understanding of the added benefits of the scheme. Final Report. Defra 30 March 2012.

farmer's agreement for data protection reasons, but this is likely to be given if the rationale is to reduce the farmer's administrative burden.

1.4. Expand the online offer

As a general point, making schemes available online is a good idea to improve the efficiency of the application process. However, access to broadband remains an ongoing issue in some rural areas (see section 3.7). Some groups of farmers, principally older and those that might be defined as "hard to reach", may also be resistant, or unable, to access schemes in this way. The existing methods of application should therefore be retained to avoid excluding these groups.

If it were considered necessary to nudge farmers towards an online approach, a small incentive could be offered for online applications reflecting the lower administrative costs. In the longer-term, improving access to broadband in rural areas ought to remain a key activity.

1.5. Reduce evidence requirements

Whilst this might appear to be a tempting option, it would be important to ensure that this does not compromise the ability to recognise outcomes. It will be increasingly important to be able to demonstrate positive outcomes and this requires a robust evidence base. This is important both in competing for funds with other activities (see section 1.3), but also so that the balance of initiatives can be adjusted to increase value for money. Without a suitable evidence base it will not be possible to know which schemes, farm types, regions, etc. are delivering appropriate value.

1.6. The Hedgerows and Boundaries Grant

According to GHK (2012), the loss of hedgerows averaged 4,500 miles per year between 1945 and 1970, and accelerated between 1984 and 1990 when a further 155,000 km (23%) of hedgerows were lost in Great Britain. Since then, hedgerows have stabilised (dry stone walls have followed the same trend).

The Command Paper states that the Hedgerows and Boundaries Grant is a popular scheme. However, the reasons for its popularity are not specified. It would seem logical that the most popular schemes from a farmer's point of view would be those that provide the greatest income for the smallest additional work/loss of income. In this context, it is important to bear in mind that livestock farmers need to maintain stock-proof boundaries for their own purposes, although of course they could do this in ways which bring fewer environmental benefits. Given the above, there is therefore likely to be at least some deadweight associated with the scheme. Support could though have brought forward actions and could have increased the scale and quality of work undertaken.

GHK (2012) found in relation to the Entry Level Stewardship scheme that the highest levels of static deadweight were associated with boundary feature options (covering hedgerow, stone-faced hedge bank, ditch and stonewall management). Deadweight could though moderately decrease if output prices increase and if structural change drives the removal of features over time; it could moderately increase if input prices/property prices increase; and/or, there is an increase in diversification into game shooting or tourism. There could be a strong increase in deadweight if there is strong protection for hedgerows under specific regulation, cross-compliance or rights of way legislation unless the requirements of the scheme increase above this baseline.

2. An agricultural transition

2.1. The importance and structure of Direct Payments

Direct Payments (Arable Area Payments) were introduced to compensate farmers for a cut in prices as support was (gradually) decoupled from production from the 1992 MacSharry reform of the CAP. To be eligible to receive Direct Payments, farms must have more than five hectares of land. Payments are then made per unit of land, so large farms receive more payments in total. The Command Paper's Evidence Compendium states that 10% of claimants receive 47% of Direct Payments while, at the other end of the scale, 20% of claimants receive just 2% of total Direct Payments.

The Evidence Compendium sets out how important Direct Payments are to Farm Business Income (FBI) for certain types of farm. Direct Payments are equivalent to 61% of FBI for the average farm in England. There is considerable variation in importance by farm type with Direct Payments equivalent to 114% of FBI for mixed farms, 94% for lowland grazing farms and 91% for LFA grazing livestock farms. At the other end of the spectrum, Direct Payments account for 8% of FBI for poultry farms, 10% for horticulture farms and 20% for pig farms. However, 58% of farms would still be profitable without Direct Payments.

Without Direct Payments, and with no subsequent adjustments, mixed farms, lowland and LFA grazing livestock, general cropping and cereal farms would not make profits from their agricultural activities. However, many farm households have off-farm income (in 40% of cases this exceeds income from the farm business), so it does not follow that removing Direct Payments would result in all these farms going out of business.

Because Direct Payments are linked to the management of agricultural land these payments have contributed to increases in land value. This increases the asset value held by owner-occupiers and the rents paid by tenants. Removing Direct Payments is therefore likely to result in decreases in the value of agricultural land and, as a consequence, decreases in rental value. However, rents may be “sticky” with landowners reluctant to lower them as some farmers will be prepared to pay a premium to expand; this may result in disproportionate implications for tenant farmers.

It should be noted that even without Direct Payments, farmers will continue to receive other support in the form of tax averaging, exemption from inheritance tax and fuel duty, concessions on rates, provision of free advice, etc.⁴

2.2. Ways to apply reductions to Direct Payments

The Command Paper sets out two main approaches to reducing Direct Payments in a transitional period (the Command Paper also allows for the possibility of a third, hybrid approach):

- a) Progressive reductions to payments with higher percentage reductions applied to amounts in higher payment bands.
- b) Apply a cap to the largest payments.

The Evidence Compendium explains the implications of these approaches in terms of the effect that they would have. There are several issues to consider:

- **Administrative simplicity.** As a general rule, the simpler the approach, the lower the likely administration costs. It follows from this that the fewer number of people affected, the cheaper to administer the scheme will be. Introducing a simple cap on payments is likely to be easier to administer than applying a progressive reduction.
- **Equity.** The approach taken needs to be seen as being “fair” by as much of the industry as possible. This means balancing the number of people affected against the degree to which they are affected. Under this argument, it might be advantageous for a wide group of farmers to be affected by a relatively small amount.
- **Driving adaptation.** As the Command Paper notes, those farmers who are affected by the reductions in Direct Payment are likely to begin adapting sooner than those that are not.
- **Impact on sector efficiency.** Shielding inefficient producers from the withdrawal of support will slow down improvements in sector efficiency.

⁴ Helm, D. (2016) *British Agricultural Policy after BREXIT*. Natural Capital Network – Paper 5. 1st September 2016.

- **Unintended consequences.** Farmers will adapt to whatever signal is sent. The use of thresholds will provide an incentive to come in just under, rather than just over, the levels chosen. Whilst farmers have no control over the amount of support they receive per hectare, there may be an incentive to change land ownership to ensure that payments do not exceed a threshold. However, this is not considered likely to be a significant problem and could be addressed with reference to a baseline or by delinking payments from the land entitlement, as suggested in the Command Paper. That said, possible unintended consequences ought to be considered in deciding which option to pursue.

Taking the above into consideration, **Option (a) progressive reductions, with higher percentage reductions applied to amounts in higher payment bands**, would spread the impact over a greater number of farmers, which might be seen as being more equitable, would drive adaptation and would have a faster impact on sector efficiency. However, this approach would be more complex to administer and might prompt some farmers to examine ways to minimise the impact on their businesses.

Option (b) capping the largest payments, would offer administrative simplicity and would probably pose less of a risk of unintended consequences. On the other hand, this approach would expose only a small number of farmers to change and would thus slow down adaptation. This approach may also be seen to “reward” relatively inefficient producers and may therefore not be seen as equitable.

It will be important to ensure clear signalling of intentions whichever approach is taken. If farmers know what will happen to their payment with enough notice then they will be able to adapt their business. Some will choose to exit the sector. The assumption is that any remaining entitlement to payments remains with the land should this be sold and will therefore be reflected in land prices. As noted in the Command Paper, another approach would be to link the payment to the recipient and to offer those leaving the sector a lump sum equal to the outstanding payments (there could even be an incentive to encourage some to leave the sector, as proposed by Professor Stefan Tangermann in 1991 in advance of the MacSharry reform to the CAP). This could speed up the transfer of holdings to new entrants (whether genuine new entrant or succeeding family member). Again, this ought to be reflected in land prices.

If option (a) is pursued, the payment bands and percentage reductions ought to be informed by the number of farmers affected in each band and the extent to which they are affected. Ideally there would be a relatively smooth progression through the bands to avoid large changes around the boundaries. This implies relatively more boundaries with small increases in reductions as is suggested in the Command Paper. Avoiding “cliff edges” would also reduce the incentive for farmers to alter their land ownership arrangements).

2.1. Conditions to attach to Direct Payments during transition

The Command Paper sets out three approaches to the conditions which should be attached to Direct Payments during the transition period (it is also possible to suggest and specify a different approach).

- a) Retain and simplify the current requirements by removing all of the greening rules.
- b) Retain and simplify cross-compliance rules and their enforcement.
- c) Make payments to current recipients, who are allowed to leave the land, using the payment to help them do so.

Under cross-compliance, farmers must comply with 13 Statutory Management Requirements (which tend to enforce existing statutory controls) and seven Good Agricultural and Environmental Practice (GAEP) production standards. The GAEP standards are not onerous and generally codify accepted practice. An obvious observation is that when farmers no longer receive Direct Payments, the framework of cross-compliance ceases to have meaning because payments can no longer be removed for non-compliance. However, while farmers remain in receipt of Direct Payments (or proportions of them), they might be expected to follow the same rules, although these, and/or their enforcement, could be simplified.

The majority of UK arable farmers have to commit at least 5% of their land to activities which are eligible for greening payments. There is fairly wide acceptance that greening has not worked. For example, the European Court of Auditors found little evidence at the EU level that greening payments were sufficiently targeted or that they delivered value for money.⁵ The implication is that this money would be better spent under specific and targeted Environmental Land Management schemes.

The central tension in these options is between simplification and the desire to ensure basic protection of the environment. The Command Paper asserts that there are opportunities to make application for the Basic Payment Scheme easier, but notes that there is a need to continue to achieve environmental outcomes. The Command Paper does not make clear which elements of the Basic Payment Scheme could be simplified without risking compromising environmental outcomes, but it is likely that improvements to IT systems would fulfil this requirement. Other ways in which simplifications could be made without compromising environmental outcomes need to be investigated.

⁵ European Court of Auditors (2017) Greening: a more complex income support scheme, not yet environmentally effective. Special Report No. 21.

2.2. Transition period

It will be important that the transition period is long enough to allow farmers to adapt. This means that the period should fit within their planning horizon and reasonable depreciation of assets. The phasing out of conventional cages for laying hens can provide some insight. Directive 1999/74/EC stipulated that conventional cages would cease to be permitted from January 2007, i.e. a period of eight and a half years was allowed for adjustment, not including any pre-legislation signalling. Using this example, which involves capital assets, a period of between five and ten years would seem appropriate in which to phase out payments.

It should also be noted that the phase out of Direct Payments is not expected to take place until after 2020 as the Secretary of State has indicated that payments will remain as they currently are until then. If a clear signal is given by January 2019 in terms of how Direct Payments are to be removed, this will add one year to the notice period meaning that the actual transition period could reasonably be towards the shorter end of the spectrum.

The profile for reducing Direct Payments will be influenced by the length of the transition period and the way in which the transition is implemented (see the Evidence Compendium).

3. Public money for public goods

3.1. What are public goods?

“Public goods” have two characteristics. They are (i) non-excludable; and, (ii) non-rival. This means that (i) people cannot be excluded from benefiting from the provision of the good; and, (ii) benefiting from the good does not reduce the amount available for others to benefit from. Public goods are often under-provided because these characteristics mean there is no incentive for commercial operators to provide them.

3.2. Agriculture and public goods

It is appropriate to think about public goods in the context of agricultural policy because agricultural practices can have a detrimental impact on some public goods. For example, fertilisers, pesticides and livestock can reduce water quality. More generally, agriculture reduces the biodiversity that would otherwise be present. Although reform to the Common Agricultural Policy has introduced attempts to reduce the negative environmental impact of agriculture (cross-compliance and greening), many

indicators show negative trends. The Evidence Compendium illustrates this with, *inter alia*, the farmland birds index.⁶

Whilst Environmental Land Management schemes do have some positive impact, these receive a relatively small amount of support compared to the overall budget available to agriculture and, according to the European Court of Auditors, may not offer good value for money.⁷ In most cases Environmental Land Management schemes pay farmers for outputs (area under agreement) rather than outcomes (improvements in, for example, biodiversity).

It should be noted that the discussion on agriculture and public goods generally accepts without question that public money should be provided through Environmental Land Management schemes to address the damage that is and could be caused by agriculture. Some might argue that, in line with the polluter pays principle, there ought to be a high standard of environmental protection before consideration is given to support for the provision of specific and underprovided public goods.

3.3. Public money for public goods

Payment for public goods under the CAP follows the WTO Agreement on Agriculture (AoA). This means that payments can be made in respect of public goods as long as these payments do not distort production and trade. In order to meet this requirement, payments must be in respect of income foregone and additional costs incurred. It is also possible to add a further 20% to cover associated transaction costs. This approach allows these payments to be included within the WTO's green box. It is not generally considered permissible to provide an incentive payment. Under this framework, payment for public goods (beyond the costs of carrying out actions) is made with reference to the alternative use to which land might be put.

Helm (2012) puts forward a radical case for moving away from the structure of the CAP. He envisages a public body deciding which public goods should be purchased and then contracting directly with agents able to provide these. Of course, given that farmers are well placed to provide many public goods (and they are usually the land owner), they are likely to be the major beneficiaries; this approach would though also allow non-farmers to receive payment for the provision of public goods. Such a radical change to the current system would require considerable thought and a suitable transition period.

⁶ It should be noted that it is not easy to establish causality and other factors may be involved, for example, improvements to grain storage facilities.

⁷ European Court of Auditors (2011) *Is agri-environment support well designed and managed?* Special Report No 7.

The prerequisites for such an approach are that public goods can be valued in a meaningful way; a suitable pot of money is available; a body (or bodies) able to purchase public goods is (are) established; and, there is agreement on what public goods are required where (this could allow for considerable local flexibility).

Such a system would need to be underpinned by a mechanism which prevents damage to public goods as a consequence of agricultural activity. It is conceivable that the right to cause a certain amount of pollution could be given to farmers to begin with and that these rights could be progressively withdrawn and/or traded.

A key benefit of this approach could be a more explicit link between payment and outcome; this would also allow for a more flexible approach. However, this raises some issues in that if payment is for outcomes, say increased biodiversity, somebody needs to have a good idea of how these can be achieved in practice. This might result in a similar system to that currently in place of putting land under management practices which are designed to deliver certain outcomes, the difference being that payment would only result if the outcomes are actually delivered. The system is rather easier to envisage applied to boundary features, landscapes and the restoration of historic buildings than it is to biodiversity.

There may also be tensions between the provision of different public goods. It is theoretically possible to put monetary values on public goods and it should be possible to establish payment rates for their provision (related to the costs of provision rather than the value). However, there will be a need for a mechanism or approach to deciding whether, say, money should be spent on creating a woodland for carbon sequestration purposes or a species-rich meadow for biodiversity.

Finally, a results-oriented approach requires the ability to measure progress. The framework necessary to make these measurements, carry out required analysis and reporting could be considerable.

3.4. Environmental enhancement and protection

The Command Paper lists six aspects of natural capital which could be addressed by future agricultural policy:

- Improved soil health.
- Improved water quality.
- Better air quality.
- Increased biodiversity.
- Climate change mitigation.

- Enhanced beauty, heritage and engagement with the natural environment.

All of these, with one exception, can be thought of as public goods. It could be argued that improved soil health *per se* is not actually a public good in that ownership of the land makes this excludable and soil health could be used up if not maintained in good health; this example also has the clearest link to private benefit. However, as the Command Paper notes, healthy soil does underpin the provision of other undeniably public goods.

The Evidence Compendium explains that Countryside Stewardship is designed to address multiple aspects of natural capital through primary and secondary objectives. A categorisation of these objectives shows that the greatest area under management addresses *landscape* issues (200,000 hectares), although less than half of this area has landscape as the primary objective. A similar area is under agreement to target *biodiversity* issues, but in this case, almost all as the primary objective. Just under 200,000 hectares are under agreement with *water* as an (almost always) secondary objective. Approximately 175,000 hectares are under management with *soil* as an objective (around 25% of this area has soil as the primary objective) and just over 150,000 hectares are under management to protect the *historic environment* (mainly as a secondary objective).

The area under management is an *output* indicator and it does not necessarily follow that this delivers the *outcomes* which are desired. However, if schemes are correctly designed to deliver outcomes, then there will clearly be a relationship between output and outcome. Of course, this puts the onus on scheme design. The more targeted an action is, the more likely it is to deliver the outcomes for which it is designed. This suggests that areas which are addressed as a primary objective may be better served than those addressed as a secondary objective. Under this analysis, there is currently a clear focus on biodiversity and, to a lesser extent, landscapes.

For most aspects of natural capital, the desired objective is fairly self-evident: more biodiversity, cleaner water, etc. However, in relation to enhanced beauty (landscape), it is important to recognise that there are different opinions of what an attractive landscape looks like. The Command Paper refers to agriculture and farming practices which have shaped our rural historic environment and distinctive landscape features. Others might argue that this is not a natural environment and might wish to see rewilding of the uplands. Deciding who, or which groups, are the arbiters of “beauty” could be a complex issue.

Some of the natural capital elements identified have some links to private benefits which could be used as levers to address quality issues. The link to private benefit in relation to soil health has been mentioned

above. Water companies have a commercial interest in water quality as they incur the costs of rendering water safe for human consumption. In relation to soil health, there is clearly scope to raise farmer awareness of the importance of improved soil health in reducing input requirements and ultimately to increasing output and profitability, and to provide advice and training on soil nutrient profiling and subsequent actions to improve quality.

Given the difficulties in addressing diffuse pollution, a key issue in relation to water quality is the need for a large-scale approach. This is already provided through Catchment Sensitive Farming. The same coordinated approach could also be useful in relation to landscape from an aesthetic and an access point of view (see also section 3.8).

3.5. Better animal and plant health and animal welfare

The Command Paper lists three aspects of better animal and plant health and animal welfare:

- World-class animal welfare.
- High animal health standards.
- Protection of crops, tree, plant and bee health.

The Command Paper notes that the public has an expectation of *high animal welfare standards*.⁸ The difficulty is in ensuring that this does not put UK producers at a competitive disadvantage. This expectation is currently met through relatively high legislative requirements. Beyond these, private assurance schemes offer even higher animal welfare. The provision of high animal welfare standards implies additional cost which must be covered by a market premium to make these systems economically viable. A labelling scheme is therefore required to communicate the higher animal welfare to consumers, for example, RSPCA Assured.

In placing world-class animal welfare under the public money for public goods chapter, the implication is that the Command Paper is concerned with legislative standards rather than private schemes which go beyond these. The Command Paper states that consumers want to know what they are buying. This implies that consumers will be informed that UK livestock products confer higher animal welfare than imported products and also that consumers are able to distinguish these products in the shops.

⁸ Almost half (44%) of UK citizens say that the welfare of farmed animals is a matter for all citizens (i.e. not just consumers) and that this should be regulated by the public authorities; 40% say that this should be handled jointly by public authorities and business (Eurobarometer (2015) *Attitudes of Europeans towards Animal Welfare*. Special Eurobarometer 442).

However, as noted above, an issue here is that higher animal welfare implies higher costs of production. In this context it is worth drawing a distinction between the public (or citizens) and consumers. It is well recognised that while citizens say that they want certain things⁹, how they behave as consumers often differs; price is the main purchasing criteria for most consumers.¹⁰ There is therefore a risk that consumers will decide to buy cheaper imports from countries operating lower animal welfare standards rather than higher welfare UK production, unless a way can be found to prevent these imports which is compatible with the requirements of the WTO (Compassion in World Farming, amongst others, argues that this should be possible on the grounds of public morals).¹¹

It is worth considering what the public understands by higher animal welfare and how they can recognise this. It is the general perception that free range poultry or egg production systems confer higher animal welfare than indoor or (enriched) caged egg production. However, what exactly consumers understand from this in animal welfare terms is not clear. With the possible exception of pigs, other livestock sectors cannot be divided into production systems which convey an easy understanding of relative animal welfare standards. Many specific aspects of animal welfare do not lend themselves to descriptions which are easily understood by consumers.

The Command Paper explains that:

- Poor ***animal health and endemic disease*** costs millions of pounds each year in lost productivity. It is noted that action taken to improve animal health and manage risks can increase productivity and resilience. The impact of the increased use of anti-microbials leads to anti-microbial resistance (AMR) which reduces the effectiveness of medicines for both animals and humans and therefore increases pressure on the NHS.
- The ***protection of crops, tree, plant and bee health*** is important to avoid disease outbreaks which reduce productivity and ultimately can cost the taxpayer more if not dealt with promptly.

There is no suggestion in the Command Paper that the UK will seek to go beyond the existing approach to these issues (unlike animal welfare where improvements are implied by the phrase “world-class”). However, the Secretary of State has made it clear that the UK may go beyond the EU restrictions on the

⁹ More than half (55%) of UK citizens say they look for an animal welfare label when shopping and 72% said that they would pay more for higher animal welfare (Eurobarometer (2015) [Attitudes of Europeans towards Animal Welfare](#). Special Eurobarometer 442).

¹⁰ See for example FCEC (2015) [Study on information to consumers on the stunning of animals](#). Final Report to European Commission, DG SANCO. Project Leader: Agra CEAS Consulting (Bradley, D.).

¹¹ Evidence provided to the House of Lords (House of Lords (2017) [Brexit: farm animal welfare](#). European Union Committee. 5th report of session 2017–19. HL Paper 15.

use of neonicotinoid pesticides due to the risk they pose to bees and other pollinators.¹² If this class of pesticides is further restricted, consideration will need to be given to alternative control of insect pests such as aphids and flea beetles on cereal, vegetable and fruit crops.

3.6. Improved productivity and competitiveness

The Command Paper notes the public sector provision (directly or through funding) of research, Knowledge Exchange and training and how this can improve productivity and bring environmental benefits. The Command Paper does not though consider how this provision will help deliver public goods.

3.7. Preserving rural resilience and traditional farming and landscapes in the uplands

The Command Paper makes a special case for upland agriculture as a major deliverer of public goods. However, it does not go on to suggest how the public goods delivered by upland farms specifically will be delivered. There is though mention of dry stonewalls and grazed moorlands, the provision and maintenance of which could be supported. This Command Paper comments on the upland way of life, but does not explain what this is. It also notes that uplands attract visitors from around the world, although this is not quantified and there is no contextual comparison to tourism in other parts of the UK.

Although upland areas can deliver many public goods worthy of public investment, to remain consistent with the general message in the Command Paper, the delivery of specific goods is key, not the fact that upland areas in general are capable of delivering these. A geographically-designated support system similar to the Less Favoured Area Support Scheme in Scotland would not be targeted on the delivery of specific public goods and, as a result, would possibly not delivery good value for money.

The challenges faced by farm businesses in rural areas include physical and digital connectivity. Improving physical connectivity could bring significant economic rewards, but it could also damage part of the attraction of upland areas (landscape and remoteness) and so care will be needed to ensure the correct balance. This is less of an issue with respect to digital connectivity which ought to be encouraged, especially in light of aspirations to expand the online offer of Environmental Land Management scheme (section 1.4).

¹² <https://www.theguardian.com/environment/2017/nov/09/uk-will-back-total-ban-on-bee-harming-pesticides-michael-gove-reveals>

3.8. Public access to the countryside

Farmland accounts for 70% of land use in the UK and has important amenity value for those that can access it. There is already a network of public rights of way which must be maintained. It is possible to envisage public support for additions to this network, especially to create links between existing routes (short and long-distance) and to facilitate direct access from more urban areas. It is also possible to envisage support for open public access rather than simply for defined rights of way.

The Command Paper also mentions the Open Farm Sunday initiative and suggests that this sort of initiative can act as an important vehicle to educate the general public about food production and the natural environment. Public support for more widespread educational initiatives could be foreseen.

In considering increased public access to the countryside, a balance will need to be found between the benefits of this access to the public and the potential for disruption to farming activities, including the need to maintain appropriate biosecurity.

4. Risk management and resilience

4.1. Risk in agriculture

Agriculture is an activity that is subject to multiple risk factors, and its measurement and management is something that both farmers and governments have to consider. The OECD identifies three layers of risk:

- '**Risk retention layer**' (normal risk). These are losses (or gains) that are part of the normal business environment; they are very frequent but cause relatively limited losses (measured at aggregate level). Farmers should themselves be able to manage this type of risk with the instruments and strategies that are available at the farm, household or community level (such as choice of enterprises singly and in combination so that the risks are spread, diversification on and off the farm, and by engagement in other (non-agricultural) gainful activities), or through strategies that deal with income and consumption smoothing in the market (such as financial asset management) or through general government policies (such as tax system arrangements for income averaging and the use of tax-sheltered funds of income reserves).
- The '**market insurance layer**'. This corresponds to risks that are more significant, but less frequent. Both frequency and magnitude are in the middle of the respective ranges. In this layer there is scope for farmers to use additional specific market instruments such as insurance or options that are particularly designed to deal with farming risk.

- The '*market failure layer*' (catastrophic risk). This third layer includes risks that are catastrophic in nature because they generate very large losses (at industry level), even if their frequency is low. This type of risk is more difficult to share or pool through the market mechanism, particularly if it is systemic (that is, the whole agricultural industry in a specific area is affected). There are arguments in favour of some government action in the case of catastrophic risk based on combating market failure.

The OECD recommends the following in terms of the role of the government in the area of agricultural risk:

- Government policies should take a holistic approach to risk management, assessing all risks and their relationship to each other, and avoiding focusing on a single source of risk such as prices. Governments can help farmers to assess and manage their own risk by providing information and training.
- Agricultural risk management policies should focus on catastrophic risks that are rare but cause significant damage to many farmers at the same time. Contingency plans should define in advance the procedures, responsibilities and limits of the policy response.
- Subsidised insurance is one way of providing disaster assistance but it tends to crowd out the development of private insurance markets and has not been successful in preventing additional *ad hoc* assistance being granted after the event.
- Facilitating good "start-up" conditions – information, regulation and training – should be the primary role for the government in the development of market-based risk management tools such as futures, insurance and marketing contracts.
- Government policies should not provide support to deal with normal risk. Managing normal risk should be the preserve of farmers themselves. Minimum intervention prices or payments that are triggered when prices or returns are low may even be counter-productive as they tend to induce riskier farming practices.

4.2. What are "volatility" and "resilience"?

Price *volatility* in agriculture refers to excessive variations in commodity prices over time above and below an expected level. It should not be confused with periods of higher or lower than normal prices. Price volatility is normal as prices adjust to changes in supply and demand. In agriculture, this is exacerbated by the impact of weather, pests and diseases; political shocks such as bans on imports from certain countries; inelasticity in supply and demand; and, a lag between price signals and response resulting from relatively long production cycles. Despite common perception, there is little evidence that volatility is increasing. Price volatility leads to considerable inter-year variation in income.

Resilience is the ability to withstand shocks which are unpredictable and which can threaten business viability. Shocks include price volatility, but also extreme weather, disease outbreaks and market disruption. The Command Paper makes the assertion that profitable farms are more resilient and states that there ought to be a focus on improving productivity and profitability. However, some caution should be exercised here. Large farms are, on average, more profitable than small farms due to scale, but these may not be the most productive (efficient) farms in terms of the relationship between outputs and inputs. The more appropriate metric here is productivity/efficiency, not profit at the farm level.

4.3. The use of insurance in agriculture

The Command Paper explains that fewer than one in five farmers currently buy **agricultural insurance**. Most farmers will though have some form of insurance in place (fire, theft and property damage to buildings, machinery and other assets; cover for employers' liability and public liability; motor cover), so there is no intrinsic aversion to insurance; farmers insure against risks that they consider they need to insure against. It is more likely that there is a lack of demand for specific agricultural insurance and/or a lack of supply. In economic terms, the challenge is in finding the intersection between the supply and demand curves.¹³

Part of the issue on the demand side is likely to be historic in that the support provided via the CAP has provided a form of insurance and protection from volatility which means that farmers do not recognise a need for this form of insurance. Another possible explanation for low demand is the perception that the costs of specific agricultural insurance will be too high.

Potential problems on the supply side include the availability of suitable data to calculate the exposure to risk. A lack of data can be compensated for with higher premiums to cover this additional risk, but this makes policies less attractive to farmers. Another supply issue is that risk in agriculture is often systemic, i.e. a large number of farmers are likely to be affected at the same time thus increasing the cost of insurance provision. This problem might be exacerbated in a relatively small country; insurers in the USA may be better able to offset risk given the size and diversity of the country.

¹³ Agra CEAS Consulting (2018) Agri-insurance feasibility study. Final Report for Welsh Government. Job No2827/BDB/March 2018.