

Annex 2 – Front page of full paper for Contributed Paper session

Paper Title	Towards a British Ecosystem Services Policy
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Contributed Paper prepared for presentation at the 91st Annual Conference of the Agricultural Economics Society, Royal Dublin Society in Dublin, Ireland

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Abstract	200 words max
<p>Brexit requires the UK government to develop its own policy for the governance of rural land. While the CAP has been reformed, payments remain untargeted and with uncertain purposes. A UK policy should be better targeted, integrated across the delivery of different ecosystem services, collaborative at a landscape scale and decision-making should be more devolved. Given the complexity of ecosystem functions and social decision making, the approach should be based on the adaptive governance of social-ecological systems. However, at this stage we lack the governance structures for the implementation of such an approach. Initially, policy can support an extended agri-environment programme doing more to promote collective action. Support can also be provided for a wider range of actions, such as large scale conservation areas, the implementation of conservation covenants or to develop institutional arrangements for PES schemes. At the same time, there should be more experimentation with alternative approaches to the engagement of stakeholders in novel forms of local environmental governance that can develop into a more devolved structure to local ecosystem governance. It is critical to embark on this trajectory at this point in order to avoid path dependency trapping policy into a direct substitute for a flawed CAP.</p>	
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Towards a British Ecosystem Services Policy

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Abstract

Brexit requires the UK government to develop its own policy for the governance of rural land. While the CAP has been reformed, payments remain untargeted and with uncertain purposes. A UK policy should be better targeted, integrated across the delivery of different ecosystem services, collaborative at a landscape scale and decision-making should be more devolved. Given the complexity of ecosystem functions and social decision making, the approach should be based on the adaptive governance of social-ecological systems. However, at this stage we lack the governance structures for the implementation of such an approach. Initially, policy can support an extended agri-environment programme doing more to promote collective action. Support can also be provided for a wider range of actions, such as large scale conservation areas, the implementation of conservation covenants or to develop institutional arrangements for PES schemes. At the same time, there should be more experimentation with alternative approaches to the engagement of stakeholders in novel forms of local environmental governance that can develop into a more devolved structure to local ecosystem governance. It is critical to embark on this trajectory at this point in order to avoid path dependency trapping policy into a direct substitute for a flawed CAP.

A new policy for rural land

Brexit requires the United Kingdom to develop its own policy towards agriculture and rural land to replace the Common Agricultural Policy (CAP). This must recognise the multiple benefits and costs associated with rural land use and promote the integrated management of rural land in the long term public interest through a British Ecosystem Services Policy (BESP).

Over the past forty three years, agriculture in the UK has been subject to the guidance and control of the CAP. As it has lurched from crisis to crisis, it has evolved from a policy focussed primarily on securing European food security by means of intervention in agricultural commodity markets towards a broader-based, more nationally differentiated policy concerned primarily with the support of farm incomes and the environment. But this process has failed to go far enough. Brexit offers a once in a generation opportunity to design a new approach that aligns with UK objectives and context.

The UK has advocated reform but reforms of the CAP have not gone far enough

The UK government has been consistently critical of the CAP, promoting a vision of a more economically liberal (HM Treasury and Defra, 2005) targeted on the delivery of public goods. The (House of Commons Environment, Food and Rural Affairs Committee, 2007) commented “The only long-term justification for future expenditure of taxpayer’s money in the agricultural sector is the provision of public benefits”. More recently, (Defra, 2013) commented in response to the 2013 CAP negotiations “The outcome of negotiations did not move the CAP anything like as far as the UK wanted in the direction of reform. From a UK perspective, the CAP should be about helping the EU agriculture sector to become more competitive and market-oriented whilst providing environmental public goods that the market does not reward.” And in 2016, the House of Lords European Union Committee, (2016) argued that the European Commission should “consider restructuring the CAP based mainly around the provision of public goods, potentially removing the distinction between the two pillars ...”.

The UK position has always been some way from the centre of EU agricultural policy perspectives. British farms are generally larger, an urbanised population is more concerned with rural amenity, wildlife and public access than it is with the agricultural economy, and the British orientation towards international trade is more open. While the CAP has been through a sequence of substantial reforms and there is much less intervention in commodity markets (Daugbjerg and Swinbank, 2016), particularly in the incorporation of environmental aspects (Matthews, 2013), it remains, at its core, an agricultural policy. And this was, if anything, reinforced in the most recent round of CAP reforms in 2013. Efforts were made then to shift the direction of CAP towards a greater focus on the provision of public goods through targeted programme spending under Pillar 2 (Cooper et al., 2009). But the farming interests in the European Union prevented any radical change. (Erjavec and Erjavec, 2015) have argued that while a publicly popular environmental discourse was used in the justification for the CAP, there was a strong productivist discourse at the level of measures and budgetary distribution. The continuing agricultural orientation of the CAP is illustrated by the titles of the two funds that finance the policy: the ‘European Agricultural Guarantee Fund’ and the ‘European Agricultural Fund for Rural Development’. The 2013 reforms reasserted the need to provide funding exclusively to farmers, so that only ‘active farmers’ are eligible for payments under the Basic payments Scheme. The direct payments continue to be paid to farmers for rather uncertain reasons (Tangermann, 2012). The requirements introduced in the 2013 reforms for ‘Greening’ are seen as ineffectual (Pe’er et al., 2014). A (JRC, 2015) analysis of crop diversification under greening concluded that less than 0.5% of the total agricultural area in the EU was reallocated due to the measure. Rural Development funds are paid for conservation land management and development in rural areas, but still, overwhelmingly, through the land management activities and businesses of farmers.

The rationale for local governance of ecosystems

Rural land use has major impacts well beyond the agricultural sector, but the impacts are commonly the responsibility of government departments other than the Department for Environment, Food and Rural Affairs that is in charge of agricultural policy and consequently responses to these impacts are not well integrated. Agricultural change is often regarded as the primary cause in the decline in wildlife in Britain. A recent State of Nature report

(Hayhow, D.B. et al., 2016) concluded that “Many factors have resulted in changes to the UK’s wildlife over recent decades, but policy-driven agricultural change was by far the most significant driver”. Wildlife conservation is an area of responsibility of Natural England. Agricultural land management directly affects water quality and rates of run off that exacerbate flood risks. Water quality and flood prevention are the responsibility of the Environment Agency. The Government has a target for the expansion of forestry, which is under the remit of the Forestry Commission (Defra, 2013). The control of development in rural areas and the protection of hedgerows is a responsibility of local authorities. These different interests interact in complex and different ways within particular localities. There is no single national aim; these are not priorities that can be determined in Westminster or Whitehall. Rather local trade-offs and solutions have to be worked out against local interests and local priorities. Of course, there are national priorities and red lines that will constrain and influence the decision making domain of local decision makers. So national interests will share influence alongside local stakeholders.

An ecosystems approach starts from a recognition that these different social costs and benefits derive from a common source within particular localities. It is defined under the Convention on Biological Diversity as “a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way” (CBD, 2016). (Bateman et al. (2013) have illustrated how taking non-market values of land uses into account substantially increases the values generated by rural land.

The services and disservices that arise are highly interrelated, particularly through the use and management of rural land. And that the management of the ‘ecosystem’ can recognise these interrelationships (Austin et al., 2016). Agriculture itself is a provider of ecosystems services, particularly of provisioning services in the form of marketed commodities. It can be seen as both enhancing ecosystem services (Zhang et al., 2007; Power, 2010) such as in the maintenance of valued landscapes or valued habitats and diminishing them, such as through reductions in water quality or emissions of greenhouse gases.

Arguably a policy for the provision of public goods does not go far enough. The idea of public goods uses a metaphor of the market. The non-rival and non-excludable characteristics of public goods raise the transactions costs of a private market requiring government intervention or institutional change to make up for the missing market. But this requires that there is an identifiable product for which a market can be conceived. i.e. where there is a ‘missing’ market. This may be the case for a range of ecosystem services, most obviously for Provisioning Services, such as water quality. Cultural Services, particularly recreational, may be seen as providing benefits directly to identifiable groups of people. It can often be possible to identify benefits of Regulating Services through models of flood protection or climate mitigation. The greatest challenge lies in identifying benefits that arise from Supporting Services, such as nutrient cycling or from the presence of biodiversity. Given incomplete information and the complexity of ecosystem functions and the interrelationships amongst them, we cannot know the full value of all processes within ecosystems and so cannot design markets or explicit policies to ensure their maintenance or delivery.

In this context governance should be adaptive and applied at a landscape scale. The interrelationships and feedbacks amongst ecosystem functions and values of the services are imperfectly understood. Ecosystem management involves trade-offs with different actions

benefiting different taxa and ecosystem functions, and actions can take decades to become effective (Oliver et al., 2015). Outcomes are vulnerable to unpredictable changes in external factors and so the consequences of ecosystem interventions cannot be predicted with certainty. It is thus argued that sustainable management should be adaptive and focus on building the resilience of the system (Scheffer et al., 2001). Adaptive management (Westgate et al., 2013) recognises this context and argues that management cannot set clear objectives but rather operates on an iterative basis, seeing interventions as experiments to generate information to feed back into future decisions. The aim of ecosystem management may thus be to build the resilience of the system against unknown future shocks, such as through the maintenance of functional redundancy to underpin service provision, rather than to seek to achieve a predetermined output.

Further, the system being managed is not simply the ‘natural’ environment but rather is a complex mix of natural environment and human factors combined together in a social-ecological system (SES) (Folke et al., 2005). Taken together this indicates a role for the adaptive governance of social-ecological complexity (Armitage et al. (2008) defined as ‘a process by which institutional arrangements and ecological knowledge are tested and revised in a dynamic, ongoing, self-organized process of learning-by-doing’ (Olsson et al., 2004 p.75).

The critical question concerns the appropriate governance arrangements that can deliver the required management processes. (Lubell 2015 p. 44) has argued that determining “which institutional structures work best in different situations is one of the most important unresolved questions in the policy sciences”. This is the fundamental issue to be addressed in the development of a British Ecosystem Services Policy

A policy for ecosystem services

A British Ecosystem Services Policy (BESP) would start from the aim of securing the long term social value that is delivered from ecosystems in the UK. The policy would adopt a territorial rather than a sectoral perspective. Policy would seek to be decentralised, implemented with regard to the governance of ecosystems within particular localities.

Of course, agriculture would continue to be a key focus for BESP. Domestic agricultural production is critical as a major source of income, as an input into the food sector, as a factor promoting food security. Recent concerns have re-emphasised the importance of production, especially in response to longer term concerns about the capacity of global food supply to meet rising demand (Godfray et al., 2010). This is reflected in the shift towards sustainable intensification (Garnett, et al., 2013). Government has a key role to play in supporting research and development and in the dissemination of information and innovation. It also needs to maintain its regulatory roles in respect of livestock and plant disease, human health and safety, animal welfare, food standards and the food supply chain.

The management of land is key to the management of ecosystems and farmers manage three quarters of the land in the UK. Agricultural management is critical to the quality of the rural environment. What is valued in the British rural environment is largely a product of agricultural land uses and practices, even though at the same time agricultural practices, as indicated, can be a primary source of damage. Influencing agricultural land management will

thus continue to be a core concern such that a major part of BESP expenditure will be directed to farmers in support of socially valued land uses.

But BESP challenges farmers' automatic entitlement to direct payment. Rather it should encourage land managers to search for the ways in which their land can provide value. For the majority of farmers and farm income, this will be through the production and sale of marketed commodities. However, alongside this, BESP will offer payment for the delivery of public goods and the promotion of resilient ecosystems. This would include direct payments to farmers in order to maintain agricultural management of the land where this generates net public benefit and is not profitable under ruling market institutions and prices. In the longer term this would be complemented with and potential substituted by a system of payments for ecosystem services from a wider array of beneficiaries (Green Alliance, 2016).

Achieving a BESP

BESP is not a policy that can simply be switched on immediately. Rather it represents a longer term goal. It demands a different system of governance, more collaborative, adaptive and devolved. Decisions about the best social use of individual parcels of land cannot be made by central government, although central government has a critical role in guiding decisions towards those uses. However, we currently lack the institutions for the governance of a spatially decentralised policy within local areas that can take account of the values and preferences of stakeholders and make the necessary trade-offs in a transparent, accountable and democratic way. A range of collective decisions arrangements are already in existence in the UK with varying remits and capacities but none is fully developed in order to implement an ecosystem services policy at a local level (Dwyer and Hodge, 2016). Amongst current structures, National Park Authorities may be seen as coming closest to what is required. But Brexit offers a unique and unrepeatable opportunity to set out on that journey, free from the demands and constraints of 27 other different and competing interests.

A BESP would initially be in the form of an extended and increased scale of agri-environment programme supporting the delivery of landscapes, biodiversity, flood protection, public access, archaeological conservation, farm open days and educational visits, higher water quality standards, and so on. Projects and schemes would be developed and funding provided to deliver targeted outcomes within defined locations. This would provide greater support for collaborative initiatives that can be implemented across larger spatial units. But BESP should embrace a broader variety of approaches (Hodge, 2001) that would not have been possible under the CAP and the watchful eye of the European Commission. Support might be provided for the administration of large scale conservation areas, to support the withdrawal of land from agriculture, to pay for the implementation of conservation covenants (Law Commission, 2014), for the permanent protection of conservation sites, or to develop institutional arrangements for the implementation of PES schemes.

Conclusions

The UK government has to establish a new policy for rural land. This should start from the objective of promoting the best management of land for the delivery of ecosystem services and not from an aim to duplicate the CAP. The present context provides an opportunity to break with the past. A failure to take the opportunity will re-establish the inevitable path dependency that has dogged the historical development of the CAP. The new policy should

be integrated across the delivery of different ecosystems, implemented at a local level with decisions based on the principles of adaptive governance. However, at present we lack the governance structures by means of which such a policy may be implemented. The immediate aim should thus be to set out on a trajectory that that can take us to a British Ecosystem Services Policy.

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