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Agricultural land use policy in the European Union: A brief history and lessons learnt

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Key lessons

- Unforeseen consequences: the origins of the European Union's land use policy was in setting aside agricultural land as an instrument of production control. It was not aimed at generating environmental benefits, and yet it ended up doing this as well.
- Carrots versus sticks: the European Union has felt (increasingly) socially empowered to use policy sticks on its farmers to deliver improved environmental goods and services from the agricultural landscape, whereas in the US and Australia policymakers have felt obliged to offer mainly carrots to farmers to do so.
- Environmental benefits versus foregone agricultural income: the UK is in the process of introducing a new Countryside Stewardship Scheme whereby applications to participate will be scored according to their fit with empirically validated attributes of environmental benefit. As a consequence, the cost-effectiveness of environmental stewardship in delivering benefits to society will be improved.

Figure 6.1: Cattle in a UK field ringed by stone walls.

Source: Photo by Colin Virden.

This chapter provides both a brief history of agricultural land use policy as a component of the Common Agricultural Policy (CAP) of the European Union (EU) and a discussion of some lessons learnt in this context.

Note that the term ‘agricultural land use policy’ refers to the component of the CAP which is now widely referred to as agri-environmental policy, because it relates (in policy terms) to the impact of food production on the environment **within the specific context of the agricultural landscape**. It focuses primarily on the impacts associated with habitats, species (flora and fauna), and water and soil quality rather than effects on other aspects of the environment such as the air or ocean — it is not concerned with greenhouse gas emissions, for example.

A brief history

The CAP's agricultural land use policy has a comparatively short history, having been introduced in the form of voluntary set-aside as a production control mechanism in the CAP's 'crisis years' of the late 1980s, when the cost of funding ongoing production surpluses of the EU's major farm commodities threatened to derail the CAP's budget. In this context, the most comprehensive and up-to-date account of the history of the CAP is provided by the European Commission on its website: ec.europa/agriculture/cap-history/index_en.htm.

According to the European Commission, the CAP is characterised as comprising three main stages:

- i. from 1957 — productivity
- ii. from the 1992 CAP reform — competitiveness
- iii. from the Agenda 2000 CAP reform — sustainability

In this account, the CAP's agricultural land use policy is formally introduced as a compliance land set-aside program within the package of the 1992 CAP reforms. Its aim was to improve competitiveness in EU agriculture. (In this program, farmers were required to take a stipulated proportion of their arable land out of production in order to receive compensation payments for reductions in previous (guaranteed) levels of price support.) This characterisation overlooks the earlier introduction of voluntary set-aside (in 1988), but in so doing emphasises the new (in 1992) requirement of set-aside in order to receive compensatory payments for reductions in price support, which were central to the 1992 CAP reform package.

Moreover, the sustainability characterisation represents the formal creation of 'Pillar 2' as part of the CAP, and the explicit recognition of farmers as environmental stewards, who became (in 2003) not just required to keep their land in good agricultural and environmental condition in order to receive direct payments (previously called compensatory payments), but were also offered further financial incentives to protect and enhance their provision of environmental goods and services on their land. ('Pillar 1' is the term used to refer to EU budget funding for direct payments; 'Pillar 2' is the term used to refer to EU budget funding for environmental stewardship.)

Looking ahead, as the CAP moves towards 2020 we can already see proposals to shift more of the CAP's budget from Pillar 1 to Pillar 2, thereby further strengthening the role of the CAP's agricultural land use policy as one of supporting environmental sustainability, with farmers as central providers of environmental benefits from this support.

The goal of productivity

If we go back to the 1980s, to what the European Commission calls the CAP's 'crisis years', with the benefit of hindsight we can clearly see the beginnings of the agricultural land use policy process by which farmers have now come to be seen as environmental stewards, rather than destroyers of the environment, as they were at the time.

Recalling that the first stage of the CAP is characterised by the European Commission as 'productivity', we are reminded that one of the principle objectives of creating the European Economic Community in 1957 was to deliver food security. As a consequence, farmers were encouraged to increase their production with a range of market intervention measures designed to provide price support (e.g. tariffs, intervention purchasing). In response to this price support, farmers did take steps to increase their production, both by the intensification (increasing yields on a given area of land) and extensification (increasing the area under agricultural production) of land use.

This productivity stage continued successfully through the 1960s and 1970s, at which point ongoing production surpluses began to become apparent, initially in the dairy sector but by the early 1980s extending across the range of the EU's major farm commodities.

These production surpluses can now be seen as the cause of two separate concerns that developed during the 1980s. The first was the policy concern relating to the CAP's budget, which was required to fund the (supported) prices of surplus farm commodities. The second was a social concern, relating to the perceived negative effect of the intensification and extensification of agricultural land use on the environment.

The first concern led to the realisation that steps needed to be taken to control farm production within the EU. How might this be achieved? Across the Atlantic, the US had developed a land-diversion policy as a production control mechanism in the 1985 Farm Bill (see Ervin 1988). Following this lead, the EU took its first step into the domain of an agricultural land use policy by introducing voluntary set-aside in 1988. This embryonic policy offered a carrot to farmers in the form of set-aside payments to take a proportion of their land out of production. However, given the level of these payments compared with the foregone production income (with supported prices) from set-aside land, the incentive for farmers to engage with the policy was very weak, and the uptake was therefore very low.

Environmental concerns

Meanwhile, developing alongside this policy concern was the social concern about environmental degradation caused by the intensification and extensification of agricultural land use. In relation to intensification, supported prices gave farmers the incentive to increase yields with the addition of fertiliser, leading specifically to the problem of nitrate leaching affecting groundwater. This was of particular concern in areas where groundwater was used to provide potable water for domestic consumption. In addition, this price support encouraged farmers to maximise the area of their land under production, thereby leading to the destruction of habitats (e.g. hedgerows, native woodland).

This social concern gave rise to calls in the academic literature for conservation set-aside to be introduced — to deliver a policy win-win by encouraging farmers to take land out of production which would also deliver environmental benefits (see, for example, Gasson and Potter 1988). While there is no doubt that the formal introduction of voluntary set-aside as an agricultural land use policy in 1988, and its modification in the 1992 CAP reform to compliance set-aside, was driven primarily by the EU's ongoing production surpluses and the associated crisis in the CAP's budget, this social concern in the 1980s was undoubtedly a precursor to the subsequent policy process in the late 1990s. This led to the introduction of the environmental 'sustainability' stage of the CAP with the Agenda 2000 reforms.

While this social concern about the negative impact of farming on the environment was developing further into the 1990s, so was the policy awareness that the CAP's voluntary set-aside scheme was not delivering sufficient production control. In this context, the EC's website detailing the history of the CAP (see above) contains an excellent package of information about the development of the 1992 CAP reform (known also as the MacSharry reform).

Specifically, it was acknowledged that price support was at the centre of the production surplus problem, and so this needed to be reduced, encouraging the de-intensification of agricultural land use. In addition, the evolution of the CAP's agricultural land use policy from voluntary to compliance set-aside was intended to encourage the de-extensification of agricultural land use. The only risk to compliance set-aside was that farmers would choose to forego their compensatory payment for reduced price support in order to keep all their land in production. As it turned out, this risk proved to be extremely low.

As a consequence, the implementation of the 1992 CAP reform saw the amelioration of the EU's production surplus problem. And while compliance set-aside played its role in this process, academic analysis of the land-use response of farmers to their set-aside requirement also revealed the policy win-win anticipated by the movement for conservation set-aside in the 1980s. This situation applied particularly to what was called 'non-rotational set-aside', whereby land was set-aside for at least five years. This was always the set-aside option widely preferred by farmers.

Striving for sustainability

This reduced concern about the CAP budget, combined with the growing social awareness of the environmental impacts of agricultural land use, led to increased support for further CAP reform to raise the profile of environmental considerations in its operation — hence the 'sustainability' stage of the CAP introduced with the Agenda 2000 reform.

The creation of Pillar 2 was central to the Agenda 2000 CAP reform. Pillar 2 provided explicit financial support for the 'integration of environmental concerns into agricultural policy' (see the Agenda 2000 reform page of the European Commission's *History of the CAP* website). Although set-aside was retained as an agricultural land use policy within this reform, increasingly farmers were encouraged to see their set-aside land in terms of the policy win-win — production control plus environmental benefit.

Moreover, as previously noted, this policy impetus towards environmental stewardship by farmers was maintained with the 2003 CAP reform, which both de-coupled direct payments from production and introduced cross-compliance, whereby farmers were required to keep their land in good agricultural and environmental condition in order to receive direct payments. In addition, there was a further shift of CAP financial support from Pillar 1 to Pillar 2 — known as 'modulation', resulting in the development of voluntary environmental stewardship schemes such as the UK's Higher Level Stewardship Scheme.

So successful was the refocusing of the CAP's agricultural land use policy towards environmental sustainability that the decision was taken in 2008 to abolish set-aside. By this time, production surpluses were a thing of the past, and social support for farmers to be incentivised to protect and enhance environmental goods and services had become commonplace.

Moreover, given the increased exposure of farmers to production income risk from market price volatility (following reduced price support), farmers themselves were becoming increasingly attracted to the certain income stream associated with participating in environmental stewardship schemes. Schemes such as the English Higher Level Stewardship Scheme became increasingly important to farmers in determining agricultural land use. It is now a common sight to see field margins and buffer strips side-by-side with crops as joint features of agricultural land use.

Figure 6.2: Hedgerows (in this picture with oak tree) can be now be counted as part of Ecological Focus Areas on farms. Farmers in the EU need to set aside a portion of their land to such uses in order to be eligible for CAP payments.

Source: Photo by Tom Hynes, CCBY-SA 3.0.

Lessons learnt

Unforeseen consequences

Set-aside was introduced as a production control instrument. However, what became clear during the 1990s was that, in being forced to set aside agricultural land, farmers were delivering enhanced environmental benefits from that land both in terms of reduced negative consequences, such as nitrate pollution and soil erosion from cropping, and in terms of increased positive consequences, such as improved habitats (see Rygnestad and Fraser 1999 for research findings in support of these consequences). That is, the reality of the compliance set-aside policy was that farmers, in taking the land out of production that was least detrimental to their production income, were also de-extensifying their land use in ways that were delivering a win-win for the levels of environmental goods and services provided by agricultural land.

This evidence set the European Commission on the path of developing an agricultural land use policy within the Agenda 2000 CAP. Although it was based on the concept of set-aside as a production-control policy, it transformed itself into a policy that saw farmers as environmental stewards, charged with the task of managing their agricultural land to provide environmental goods and services for society, and being appropriately remunerated for this provision within the CAP's budget.

The recently revealed CAP Reform 2014–2020 has seen the re-introduction of set-aside as a requirement, although it is now to be called an 'Ecological Focus Area' (initially 5 per cent of land, rising to 7 per cent in 2017).

Carrots versus sticks

The EU was quick to move its agricultural land use policy into the realms of compulsory participation by farmers (and is set to move further with the Ecological Focus Area of the CAP Reform 2014–2020). Why have other developed countries such as the US and Australia not taken this step?

I don't think this difference is to do with the history of government support for farm incomes — the US is not unlike the EU in having a long tradition of supporting farmers' incomes with taxation receipts, whereas in Australia there is only a history of taxpayer-funding for drought relief.

Rather, I think this difference is more likely to be due to different perceptions between these countries in the level of demand by society for the provision of environmental goods and services from agricultural land. These demand differences probably have their origins in the proportion of the population living in or close to the agricultural landscape, and therefore more exposed to the environmental problems created by the farming of this landscape.

As a consequence, I think the EU has felt (increasingly) socially empowered to use policy sticks on its farmers to deliver improved environmental goods and services from the agricultural landscape, whereas in the US and Australia policymakers have felt obliged to mainly offer carrots to farmers to do so.

Environmental benefits versus foregone agricultural income

The success of environmental stewardship in the UK in terms of improving the provision of environmental goods and services from the agricultural landscape has been largely based on the voluntary participation of farmers in what is called the 'Higher Level Stewardship Scheme'. In this context, two of the most popular (with farmers) scheme options are field margins, whereby a farmer leaves a 4–5 metre margin around each cropped field, and buffer strips, whereby a farmer leaves a substantial uncropped strip of land which is adjacent to a waterway, wetland, or woodland area. Farmers receive the estimated foregone cropping income from these set-aside areas, even though this is, in most cases, an overestimation of the productivity of such land.

Recent empirical research in the UK has revealed that society places higher values on some components of the overall agricultural landscape than others (particularly upland areas compared with lowland areas), and that the extent to which people benefit from agricultural

landscape depends on its location — with areas of landscape closer to large population centres having higher overall social value (see, for example, Garrod et al. 2014).

As a consequence, the UK is in the process of introducing a new Countryside Stewardship Scheme, whereby applications to participate will be scored according to their fit with these empirically validated environmental benefit landscape attributes so that, although payments to farmers will still be based on foregone agricultural income, at least the cost-effectiveness of environmental stewardship in delivering benefits to society will be improved.

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References

- Ervin, D.E. (1988) 'Cropland diversion (set-aside) in the US and UK', *Journal of Agricultural Economics* 39(2): 183–96.
- Garrod, G., E. Ruto, K. Willis and N. Powe (2014) 'Investigating preferences for the local delivery of agri-environmental benefits', *Journal of Agricultural Economics* 65(1): 177–90.
- Gasson, R. and C. Potter (1988) 'Conservation through land diversion: A survey of farmers' attitudes', *Journal of Agricultural Economics* 39(2): 340–51.
- Rygnestad, H. and R.W. Fraser (1999) 'An assessment of the impact of implementing the European Commission's Agenda 2000 cereal proposals for specialist wheat growers in Denmark', *Journal of Agricultural Economics* 50(2): 328–35.

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