

British Agricultural Policy after BREXIT

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BREXIT will be played out in negotiations across a large range of policies. Amongst these, agriculture stands out. In terms of spending, the EU *is* mainly the Common Agricultural Policy. In the mid 1980s, it accounted for 70% of EU spending, and it has remained so, still at 40%, despite agriculture being now a small employer and a relatively insignificant European industry. No other sector, outside defence, has received so much government monies. In the British case, it is now just 0.7% of GDP (though the industry is fond of quoting a much larger number of the *whole* of the food and drinks industry, which is not relevant to the discussion of agricultural subsidies generally, since the wider industry does not greatly depend on home production, and to the extent that it does, the input costs from agriculture are a small proportion of total costs).

Though few outside its direct beneficiaries will mourn the CAP's passing, there is very little agreement about what should be put in its place. After 2020, when the current CAP agreement period ends and when the Chancellor's, recent guarantees of continuing subsidy run out. Whilst it is hard to think of anything that could produce worse outcomes (except earlier versions of the CAP), there are lots of options and opportunities.

This paper sets out three main options. It starts with a brief review of the CAP and its legacy, technical progress and the tensions between intensive food production and the environment. This provides the context for the assessment of the options. The paper concludes by proposing a gradual transitional path to a much more economically efficient (and therefore environmentally efficient) outcome.

The CAP and its legacy

The Common Agricultural Policy was conceived against the post World War Two background. The objectives were complex – self-sufficiency, protecting farming and the rural economy, and as a price the defeated Germans would pay to French farmers in exchange for access back into European markets. The CAP was the result of a very political deal, relevant to a very particular historical context.

The world has moved on, and to a limited extent so has the CAP. The CAP has absorbed the bulk of spending by the EEC and then the EU since the Treaty of Rome in 1957. Along the way it has created wine lakes and butter mountains, seriously damaged developing countries' agricultural prospects through its external tariffs and export subsidies, inflated land prices and transformed much of the European agricultural landscapes. Biodiversity has been seriously damaged: the European countryside is a fragment of what it was environmentally, and large areas have been converted to intensive production.

Though some farmers have benefitted, most of the gains have gone in the capitalisation of the subsidies and to the bigger and richer landowners. Farming at the margins remains a precarious economic proposition. Small farmers have been on the retreat for several decades, and their future looks bleak – and with it the kinds of countryside, biodiversity and landscapes that they traditionally maintain.

The many CAP reforms have been piecemeal, always growing from the initial structures that lay behind the original political settlement, and always in the face of resistance from farming lobbies. In this they have mirrored the resistance by the fishing industry to limiting and controlling catches and subsidies. Farmers, and especially landowners, have had good reason to resist: less subsidy means lower land values, and that hits the incumbents. Subsidies are addictive: few would willingly give up the public money that has been handed to them. Many farmers see themselves as *entitled* to subsidy, and it is rare to find a mainstream farmer who would actively campaign for fewer subsidies.

The pressure for change has however proved too great. The combination of the embarrassing surpluses, the cost to consumers, and enlargement of the EU together made the CAP in its original form unsustainable, and as a result it is not being sustained.

The core problem with the early CAP was that it aimed to increase production, and it was very successful in doing so (and it was the explicit objective). Rational profit seeking farmers confronted with guaranteed prices above world market levels, and export subsidies on top, responded as any business would: they increased supply above the competitive market levels dictated by underlying supply and demand. This reduced imports, squeezing developing countries, increased exports, and delivered surpluses. This is exactly what a drive to “food security” requires. Consumers, through significantly higher food bills, paid for all of this. Since food is a basic requirement taking up more of the household budgets of the poor, it was regressive. The poor paid to boost farmers’ incomes.

The normal way a market gets rid of surpluses is through the price mechanism. Excess supply leads to lower prices, bringing markets back into equilibrium. The CAP however continued to prop up prices and hence had to resort to direct quantity interventions to try to ameliorate the worst of the consequences. *It ended up fixing both prices and quantities.* These quantity interventions took the form of quotas and set aside. The former drew the Commission into directly managing outputs, and the latter introduced the idea that farmers would be paid to take land out of production. They were therefore paid to increase production and then paid to stop producing – both at the same time.

The enlargement of the EU confronted the Commission with the potential for a very large increase in CAP spending. The new Eastern European countries had a higher dependence on agriculture, and in general poorer farmers. So the total spend had to be capped. It could not be done without the mechanism itself being reformed.

The first key breakthrough was to break the link between subsidy and production. Over time the CAP has morphed into a system of income support, largely *independent* of production. Whilst this allows production to adjust to more market-oriented prices, the worst impacts of the CAP have at least been ameliorated, even if the tariffs were not entirely removed, despite the Uruguay trade round. Now the Commission justifies the main subsidies as a policy “to help stabilise farm revenues in the face of volatile market prices, unpredictable weather conditions and variable input costs.”

A second breakthrough has been the belated recognition of the scale of environmental damage that the CAP has wrought across Europe’s landscapes, and the creation of a second pillar to the CAP. Just removing the direct production subsidies would not lead to optimal production. There would still be overproduction because the private costs of farming do not reflect the full social costs. Farmers can avoid costs, by passing on their wastes to others to clean up. Thus fertilisers, pesticides and herbicides can flow into the water supply, for water companies to clean up – and for the water companies to charge their customers accordingly. Slurry and agricultural effluents can leach into the water systems. Land is drained to force off flood waters for others to cope with. Carbon is emitted from the soils without paying a carbon price. Overuse of antibiotics drives up the costs to health care as antibiotic resistance builds up. Crop plants escape into the wider landscape. More generally, biodiversity has been reduced without consequences to the farmers who have caused it.

These two reforms have helped, but in considering how to move on through BREXIT, it is important to recognise that neither is anything like optimal. There are still production elements in the subsidies, and the income payments go overwhelmingly to land owners and, despite some restrictions, to the richer ones. Smaller farms on more marginal land get less, and tenants get little benefit since the subsidy accrues to ownership not production. (Tenant farmers therefore have much less to lose from the phase out of subsidies.)

On the environmental side, the efficient policy would be to charge farmers for the pollution they cause. As the polluter, they should pay, just as other parts for the economy are confronted with the external costs they impose on the rest of us. Yet the CAP works the other way around: farmers are paid to do less environmental damage, subsidised not taxed.

These two reforms have been reflected in the split in CAP into a Pillar One, largely for income support; and a Pillar Two reserved for rural development. Pillar Two payments suffer from three problems. They are very small in comparison to the income subsidies; they provide for co-funded projects for “rural development” and hence not exclusively for the environment; and they are often poorly targeted. As a result the net environmental outcome of modern agriculture continues to worsen. It is true that the income subsidies under Pillar One do require an element of environmental responsibility (as well as animal welfare, food safety and traceability). There is the “cross compliance” condition. It is however weak, and largely unenforced. Pillar Two does not therefore adequately compensate for the costs of pollution and environmental damage, and hence production remains excessive.

There is one further aspect that reinforces this overproduction: the set of special protections, exceptions and general tax concessions that agriculture receives, and the rest of industry does not. Farmland is exempt from inheritance tax. Farm diesel is exempt from fuel duty. Farmers get concessions on rates. Farmers are not subject to the same planning restrictions as others. Farmers receive free advice on everything from medicines and drugs to farming practices. In the event of serious diseases, farmers get compensated for their losses. MAFF and now DEFRA spend considerable sums in supporting the farming sector. Again, being given tax concessions and free services means their costs are lower than the efficient level, and hence their output is higher. No other industry receives this sort of special treatment.

The conclusion that follows is that even after the CAP reforms “more of the same” will continue to be seriously suboptimal. The agricultural sector is very far

from efficient: it is definitely not on a level playing field, paying for the costs it imposes on others and paying its fair share of taxes, and paying for the services provided to it by the state. One of the side effects of the BREXIT vote is that almost all the interested parties accept that simply replicating the CAP into a British Agricultural Policy would not be a good idea, once the current 2014-2020 period ends.

Understanding agriculture and its developments: the inherent conflict between maximising production and the environment

It is often claimed that farmers are *special* - and therefore deserve *special* support - because they are “stewards of the land” and therefore have a special interest and responsibility to protect and enhance the environment. There are, on this view, no gaps between the public and the private interests: farmers will internalise the environmental and other societal objectives in their decision-making. On this view we can leave the environment to its best protector, the farmers.

Though there may be such farmers, just as there are some benign industrialists more interested in workers’ wages than profits, this is not a good basis for designing policy. Modern agriculture has followed a path that has been evolved since people moved from hunter-gatherers to farming. The task, put simply, is to reduce and eliminate competitors to the crop or herd. The history of agriculture is the history of fighting back nature – clearing and burning forests, killing predators, pests and insects feeding on the crops, and reducing “weeds”. Agriculture has been one long fight against nature.

In the twentieth century, this battle has been intensified by rapid and unprecedented technical advances: the application of fertilisers, herbicides and pesticides, and by fossil fuels. The Haber-Bosch process to produce nitrogen transformed production. Tractors opened up land to the plough on a wholly new scale. Agrichemicals and the internal combustion engine gradually replaced manures and horsepower.

Recent herbicides now make it possible to simply wipe out competitor plants, whilst pesticides reduce insects and other invertebrates on a grand scale. Using Glyphosate to literally “round up” the weeds, and neo-nicotinoides to destroy insect pests are amongst the latest transformations. The combination of generic engineering and chemicals will intensify this process further. It is no accident that Monsanto wanted to go into genetic engineering in order to match seeds to its agrichemicals. This is where the technology is driving agriculture, aided by precision GPS technologies, robotics, genetics and artificial intelligence. Agriculture has been transformed in the twentieth century, but this is only a start to what is unfolding in the twenty first century. It is the context for any reform of agricultural policy after BREXIT.

This battle has a logical if unattainable ultimate set of goals: to eliminate everything that competes with the specific crop or animal group; and to prevent evolution in competitors and non-native species from fighting back, from pests accidentally imported, anti-biotic resistant bacteria, and mutations in mosquitos and viruses. For animals, and indeed some plant crops too, getting further away from nature into a more controlled environment is an important step in this process. Getting chickens and pigs indoors, and now cattle too, reduces exposure to the vagaries of the weather and allows animal feed to be precisely applied. In mega-chicken houses, dairy, and pig units this precision farming has obvious advantages. It is made possible by a further technological advance – the coming of ever more refined drugs. Antibiotics and growth hormones have become so ubiquitous that they threaten human health by encouraging fast evolution by bacteria and diseases. Indoor production does not however break the link to the soils – and their generally deteriorating state. The animals have to be fed from crops largely grown outside.

These developments are a continuing process. They have revolutionised our planet: without them, it would not have been possible to increase the population from under 2 billion in 1900 to 7 billion in 2015, and it will not be possible to increase this further to over 10 billion this century without more technological

advances. It is technology that has seen off the Malthusian nightmare and its technology that will be essential to keep it at bay in this century.

There is nothing wrong with new technologies, and new chemicals. They are neutral. It is what we do with them that matters. Haber-Bosch, tractors, antibiotics and genetic engineering cannot be dis-invented. They have brought many benefits. The task is to design a set of incentives for farmers that exploit the benign dimensions, whilst minimising the damage to the environment. That will not happen automatically: it will require policy interventions. The CAP does little to help.

In the battle against nature, nature has been losing badly. Whilst there have been some winners, they are few, and even fewer have been good since 1900 and the big breakthroughs in technology. Earlier farming had created hedgerows, meadows and increased the heterogeneity of the landscape. Many of the birds that we would come to know as “farmland birds” were the result. The patchwork quilt of hedgerows, copse, meadows and fields, which represent most people’s idea of the English countryside, are man-made and largely man-made before the twentieth century technological revolutions noted above.

Man-made nature in its un-intensive, and hence more benign, form has now been replaced by its intensive successor. Look at a field of oil seed rape, or wheat or barley. Everything except the crop has been killed off. At harvest time the fields are literally devoid of other life. They are dead. This is a triumph for modern farming, and it maximises both the size and quality of the crop yield. For nature, these are now more like deserts. Urban areas can have more biodiversity.

Since the Second World War much of this decline has been tracked. Farmland birds have declined dramatically in recent decades. Wild flower declines are perhaps less noticeable, but almost all of the key meadows have been turned into “improved grasslands” or ploughed up. Insect populations have been decimated, and with them the insect-eating birds and other insect-dependent creatures. Even honeybees have suffered. What is left is a patchwork of often-unconnected

nature reserves and protected areas (like SSSIs). Nature's retreat has been rapid and comprehensive.

The three options

There are three main ways forward in designing a British agricultural policy to replace the CAP. The first is to stay with the existing framework, but to modify it to further promote more "food security" and "self sufficiency". This is the NFU's preferred option. The second is to stay with the existing level of subsidy but to move it from income support to environmental support – essentially moving from Pillar One to Pillar Two. Option three is to use public funds for public goods directly, ending Pillar One and Pillar Two subsidies.

Option one: Food security and self-sufficiency

The NFU argues that the obstacle to a subsidy free world is that the removal of the income payments would undermine the competitiveness of British agriculture, which does not, in its view, confront a level playing field. The others remaining in the EU, it argues, will continue to be subsidised by the CAP and hence British agriculture will be unable to compete. It further argues that British farmers need to be protected from lower animal welfare and transparency rules in the rest of the world. The NFU links this with its argument that *the overall objective of UK agricultural policy should be more food security and self-sufficiency*. The causal link the NFU may have in mind is from Pillar One income payments, to increased UK output, to lower imports.

Lets start with the first part of this causal chain. The "level playing field" argument has considerable merit, but not in respect of Pillar One payments. To repeat, the point of Pillar One payments is that they are *unrelated* to production. They are capitalised in the land prices, not the costs of production. Removing Pillar One payments would reduce land prices and have significant impacts on the wealth of landowners, but will make - in itself - no difference to the "playing field".

The way to address the subsidies and lower welfare standards elsewhere is directly – by putting in place an adjustment premium on imports, so that their prices reflect actual and not subsidised costs (and if necessary, regulation). A tariff is not a direct subsidy: the level playing field could be achieved without paying any direct subsidies to farmers. Furthermore, the CAP Pillar One is not designed to influence production costs, so this is not an issue in respect of trade with the remaining EU members. It is however an issue with non-EU imports, and this is where the EU agricultural tariffs on imports come into play.

There are a number of reasons why tariffs might be a bad idea in any event, not least their impact on developing countries. The NFU argument is better directed at what replaces EU agricultural import tariffs and not at Pillar One.

Food security and self sufficiency goes well beyond the level playing field argument. It is to maximise production and replace imports and exports with home production and home consumption. It is radical, has a long history and mandates a very different direction for future policy, one that is not deployed in any other sector, even defence equipment manufacture.

It also goes against the grain of history. The history of agriculture has been one of trade. Britain imported sugar from the Caribbean (using slave labour), and it imported grain after the repeal of the Corn Laws. It started importing New Zealand lamb and Argentinian beef once refrigeration technology was developed. Today, agricultural trade is pervasive.

Interruptions to trade came during the Second World War, though Britain still needed US grain and other imports, and the survival of the convoys was arguably more important than the increase in home production as part of the “dig for victory” campaigns. The War left a legacy: a concern about the exposure to reliance on imports and therefore the threat that in any future military situation, Britain might be starved into submission.

The subsequent developments in warfare technologies make a food siege of Britain, and the threat of starvation, highly unlikely. Modern warfare technologies focus on cyber space, drones and long-range missiles. There are many better ways of spending large sums on defence than on subsidising marginal increases in food production.

What the NFU fails to provide is a reasoned case as to *why* it is in the public interest to maximise production and in the process reduce external food dependency. This is combined with the lack of a coherent plan as how to achieve this objective, were it to be desirable.

A moment's reflection undermines the self-efficiency argument. To see its weaknesses, consider some obvious steps, if food self-sufficiency were really to be serious and the overriding objective as the NFU advocates. Step one is to ban exports, diverting production for exports to home consumption. This would immediately and directly increase security. Step two is to divert land use away from crops produced for other purposes, notably biofuels, solar farms and leisure activities like game shooting, horse riding and so on. A remarkable amount of British land is not actually used for food production, including a great deal of farmed land. This land should, on the self-sufficiency argument, be used for primary food production. Step three is critical: to develop home production (and possible British ownership) of fertilisers, chemicals, pesticides, herbicides and large scale antibiotics – now essential for self-sufficiency. Step four is to use taxation and other regulatory measures to reduce meat production and consumption relative to cereals and vegetarian diets, since this would achieve a higher level of self sufficiency for a given area of land. Then finally, draconian import tariffs should be imposed.

It is interesting that the NFU does not advocate *any* of these policies, and instead goes for increasing production *generally* through subsidies. *Genuine self sufficiency means what it says: there must be home control of all the factor inputs, and trade should only take place after the self sufficiency has been achieved.*

Given the reliance on imported agrichemicals, seeds, medicines and so on, it is obvious that the interdependencies that have developed in European and global agriculture make the simple objective simply unattainable. We are left with a weaker argument: *more* home production, and *more* home control of the supply chain is better than less. Yet again this is a very weak argument, and indeed it is very demanding in policy terms. Rather than the “do everything” required to achieve the full autarky above, now we need to sort out *which* are the most critical bits of the supply chain contribution to self sufficiency. The agrichemicals are probably very high up this list, and banning exports is a big first step. We could add the end of biofuel diversion of food to this immediate list.

Would the NFU be prepared to advocate these measures? Which of the 50,000 members it is balloting on the future of agricultural policy has been asked about these specific measures?

There is of course a good case for analysing critical supplies, and thinking through the measures that would need to be taken to feed the population in an event of war. It is theoretically possible that Britain could face a food siege like those currently being inflicted on some Syrian towns. Food is a weapon of war. But the £3 billion in CAP-replacement British subsidy regime is not addressing this question. Encouraging food trade (rightly) may enhance global food security: but that is not what the NFU advocates.

Option two: moving from income subsidies to environmental subsidies

A second option, advocated by a number of environmental NGOs, is to shift the emphasis from income support to environmental subsidies. This case recognises that there is no justification for Pillar One, yet does not challenge the overall level of subsidies. It is not subsidies that are the problem: rather it is what they are spent on.

Yet the case for environmental subsidies to agriculture – the Pillar Two payments – is also questionable, but for a rather different reason. Other than

rural development, payments under Pillar Two are designed to protect land from the pollution and destruction that would otherwise take place. An obvious question to raise is why this damage is allowed to take place. In any other industry, polluters pay, rather than the polluted. In any other industry, such damage would be subject to regulatory restraints and pollution taxes. In farming, it is the other way around.

Environmental subsidies encourage the idea that farmers have a right to do what they want to their land, irrespective of the impacts on the wider environment. As noted earlier, farmers sometimes argue that they are the stewards of the land, and that they are the best custodians. They have a direct interest in maintaining its natural capital, including its soils.

A moment's reflection tells us that this is at best a partial argument, and a look at the evidence indicates that it is generally untrue. Farmers have an interest in protecting their natural capital in so far as it maximises profits. To take an example, removing a hedgerow increases field size, and therefore the ability to use large machinery. The destruction of British hedgerows has been a rational commercial response. Similarly applying fertilisers, pesticides and herbicides is commercially rational, given that the full costs of doing so fall on others, and not the farmers. It is not part of their profit maximising calculations.

The challenge then is to internalise these external costs, so farmers make their profit maximising decisions in the context of their full costs of production. They should internalise the externalities. Policy should ensure that they face these full costs.

Subsidy has a number of other drawbacks. Whereas it is plausible to apply taxes for pollution, it is often hard to apply a subsidy regime without a great deal of granularity about precisely what the subsidy is for. The result is that the subsidy regime requires a lot of regulatory oversight and with it lots of regulatory resources. To qualify for Entry Level and Higher Level Stewardship Schemes,

farmers must meet a host of conditions. Who defines these, and who regulates them?

One idea is licensing each and every farm. The model would probably follow that of the water utilities: each farm's licence would specify the functions that the licence holder would be required to fulfil. The line between the farmer and the regulator would become blurred: the farm decisions would slip towards the regulator.

Licensing 90,000 farms and then regulating each would be an enormous extension of state involvement in the detail of farming. The costs would be great, and the benefits would depend upon the ways in which farmers and regulators played their respective roles. Most likely, a process of regulatory capture would take place. It is important to recognise that the way the CAP works does in fact currently require an enormous regulatory burden, on a farm-by-farm basis.

These considerations point to the complexity of environmental subsidies and undermine simplistic arguments about taking money from one (inefficient) pot to give to another (inefficient pot). Transferring money out of Pillar One would be a good idea for the reasons outlined above about the inefficiency of income supports. But simply expanding the environmental pot would not necessarily produce the desired impacts.

Option three: public money for public goods

A third option is to do away with all the subsidies, and instead concentrate any spending on directly purchasing the public goods that public money is paying for. This approach would sort out what the public goods from the land are, and how the natural capital embedded in the landscape could be enhanced. There are already public bodies responsible for managing parts of the land, and trusts and other bodies too. Why should money be channelled generally only to farmers when it could go directly to those charged with providing and enhancing public goods (which would include some farmers too)?

An example helps to clarify this important distinction. Consider the dry-stone walls of the Lake District and the Peak District, and the hedgerow banks of Exmoor. Option One makes no contribution: indeed enlarging fields by getting rid of hedgerows and walls would probably increase profits. Under Option Two, more money could be put into Pillar Two with added conditions about the maintenance of walls and hedgerows. Under Option Three, we could in these National Park examples channel the money to the respective park authorities and they could contract for the works – from farmers and others, including voluntary bodies. Option Two is general, and vaguely defined, and would require inspection and enforcement. Option Three is precise: the public good is defined, and the contracts specify what needs to be done. It is the approach taken for many other public goods paid for by public monies.

Thinking in this way points to the general idea that the specific public goods are best defined by those directly responsible for the public (rather than the private) interest. There could be one body responsible for these public goods in land use, or perhaps many. They would decide which are the priorities, and allocate their budgets accordingly. Contractors, including farmers, could then bid for these contracts, and the income that goes with them. Where farmers are well placed to improve the natural environment, they will gain the specific contracts.

The money required to meet the public good could come straight out of Pillar One and Pillar Two. It could be augmented from other sources too. The government's explicit manifesto commitment to leave the natural environment in a better state for the next generation, and to achieve this through a 25-year plan, requires that where further damage is done, it must be compensated for – otherwise the natural environment would obviously get worse, not better. This compensation could be channelled to those responsible for pursuing the public good.

Pillar Two is not therefore the panacea for improving the natural environment that a number of NGOs suggest. It is not obvious that the payments should go

direct to farmers. However, the shift to public management of public monies for public goods would, as with the removal of the Pillar One subsidies, need to be very carefully managed. We are where we are, and the CAP payments are integrated into the farming structures we now have. Any change would need to have a carefully worked out transitional path – to which we now turn.

A workable transition – protecting smaller farmers at the margin

If Pillar One is to be gradually removed, and if Pillar Two is to be gradually reformed, how could this be done without creating upheaval, uncertainty and unintended consequences to the farmers?

The starting point for the NFU is to argue that the total level of subsidies should be maintained. Ministers have lent support to this idea up until 2020. The reason is not, as we have seen, the “level playing field” argument: Pillar One and Pillar Two have both evolved to break the link between income and production. Rather it is the impact of the withdrawal of the subsidies on *existing farmers* that is the main concern. Land prices would fall, creating losses for *existing* landowners.

This land price fall would have widely differing impacts on farmers. For large-scale industrial farmers, the impacts would be on *wealth* but not output. The great landowners would take a hit, but the grain heartlands of East Anglia would carry on much as they do now. For small marginal and typically upland farmers, the loss of Pillar One and Pillar Two might mean an end to their farms. They would be the ones going out of business.

In terms of overall economic impact on the economy, the value of their agricultural outputs is already so low as to have no noticeable effects. It would not be noticed in GDP. Indeed GDP might go up, since the subsidies would no longer be a drag. Some of the land would be “re-wilded”, left to nature to manage for us. But the environmental effects could be very significant. The uplands are not “natural”: they are man-made landscapes of hedgerows, dry stonewalls, meadows and grazed moorlands. It is naïve to think that a simple retreat and

leaving nature to take its course would necessarily be the best environmental outcome.

There is also a powerful argument that these small upland farmers represent a culture that has value separate from the narrow economic outputs. They play a role in communities greatly in excess of their incomes and spending. Uplands given over to tourism would also not work without the management of the land.

The upland farmers have a key role in managing the land. Someone has to do it for the public benefit, and upland farmers tend to be rooted in these landscapes and understand them in a way that few from outside do. These are the marginal farmers, and the ones who are most dependent on subsidy. In any transition, these are the ones we should worry about – and not the large landowners in intensively large farms in the lowlands.

A first transitional reform step would be to reallocate within the Pillar One subsidies, between size and types of farms, and in particular to further limit payments to the larger landowners. In principle, this is fairly uncontroversial, and indeed already being pursued in the CAP. But it could be done much more extensively and much faster, rebalancing the Pillar One payments between landowners and tenant farmers, and towards small farms engaged in environmental schemes. The Pillar One payments could persist for a considerable transitional period, but quite quickly only be paid to farmers currently receiving payments under Pillar Two. If the aggregate subsidies remained the same, the aggregate capitalisation effects would be the same, but significantly redistributed between farmers. Some would gain, but some would lose.

This could be part of a transition towards the eventual abolition of all income payments, and hence Pillar One. Over the transition, land prices would adjust, and for mainstream farming, fall. This would largely be “a good thing”, since it would make the market in land more open and competitive to new entrants, and

younger farmers currently unable to buy land at its inflated prices relative to outputs.

With these initial steps in place, and the bulk of the subsidies going in effect to Pillar Two farmers, the next transitional step is to sort out what public goods we want from the land, notably in those areas where farming is not economically efficient, and start diverting Pillar Two subsidies into direct payments for specific activities. As noted, the total value of the outputs of these marginal farms, properly managed to include the maintenance and enhancement of natural capital, is much greater than represented by focussing narrowly on their agricultural production. The framework would be the 25-year plan for the natural environment: working out which parts of natural capital have the greatest benefits and hence which to enhance, and which are in most danger of going below sustainable thresholds.

Someone has to do this, to be in charge of the public good. In the case of catchments, a catchment system operator is one way of achieving these outcomes (Helm, D. (2015) “Catchment Management, Abstraction and Flooding: the case for a catchment system operator and co-ordinated competition” Oxford.)¹ The National Parks authorities are another candidate. There could be a variety of such public goods bodies, sometimes overlapping, provided they all operated with the overarching 25-year plan. This would do the joining up of the various approaches.

A transitional hybrid arrangement might emerge. The marginal farmers might receive a basis income to keep their farms operational, and then the rest of the payments would flow via the public bodies in return for the specific public goods. The basic income would come through being designated worthy of higher-level stewardship status, and then payments for specific services would come, on the basis of competitive tendering.

¹ Helm, D. (2015) “Catchment Management, Abstraction and Flooding: the case for a catchment system operator and co-ordinated competition” Oxford.)
<http://www.dieterhelm.co.uk/natural-capital/water/water-catchment-management-abstraction-and-flooding-the-case-for-a-catchment-system-operator-and-coordinated-competition/>.

The prize- twenty first century agriculture with a twenty first century environment

BREXIT provides a unique opportunity to reset farming policy. Under the CAP policy it has been expensive and often perverse in its impacts. Few can be impressed by the net result: high costs to consumers, inefficient land use, subsidies for land ownership and serious environmental damage. The CAP has seriously damaged Britain's natural capital, and in consequence reduced economic growth. Without significant reform there is little chance of achieving the government's objective – and Manifesto commitment – to enhance the natural environment over the 25-year plan period, for the benefit of future generations.

There is no good general case for subsidising farmers, especially for simply owning land. There is also no good general case for subsidising polluters, rather than taxing and regulating pollution. In the long run, farmers should – like any other industry – operate without subsidies. The right answer is Option Three presented above: public money for public goods directly contracted through public bodies.

An immediate radical break with the past would however have considerable costs. Once the end game has been properly established, getting from here to there requires a pragmatic transition: first, rebalancing within Pillar One, with the focus on income payments going to the smaller, more environmentally sensitive farming areas, such as the uplands; then second the gradual shifting of Pillar Two money into direct contracting by public bodies for the public goods.

The prize is very considerable. Agriculture can deliver much more public benefit for much lower public costs. To carry on roughly as at present with what might be called a British CAP would be to carry on damaging the natural capital, perpetuate high food prices, and continue to damage developing countries. It would be to carry on holding sustainable economic growth below its potential. At

present British agriculture, net of all the environmental impacts, costs to water companies and others facing the pollution consequences and burden on consumers contributes very little to the economy. It can – and should – do much better than that.