



Farm Inspection and Regulation Review

December 2018

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Foreword



I am pleased to present this final report on farm inspection and regulation in England, having reported on an interim basis earlier this year.

Most land in England is farmed, and UK farmers produce most of the food we eat. People will be aware that farmers receive payments under the European Common Agricultural Policy (CAP), but may not realise that CAP very much shapes what we farm and the way we farm. It also dictates to a large extent how we regulate farming in this country. There are laudable exceptions but the way we regulate farming is characterised overall by inflexible and pernickety rules and too much tick-box regulation.

Regulation is really all about getting people to act in ways they would not otherwise choose, for the best. Modern-day regulators start by making sure those who need to change know that, understand why, and are motivated and able to do it. We are a far cry from that now, in the way we regulate farming. As we leave the EU, the government wants to take the opportunity to enhance animal and plant health, animal welfare and our farmed environment. It wants more from our farmers on all fronts. In our view it must change how we regulate to deliver its aspirations.

Hard-edged rules will always be needed for big harms such as avian influenza or bovine TB. Swingeing sanctions should be imposed on those rare occasions where they are justified. But for much of what the government and most farmers want from farming, the more contemporary, flexible and nuanced regulatory approaches used more commonly in other spheres will work so much better. Liberated from CAP, we have an unprecedented chance to regulate more supportively and effectively, while still dealing robustly with rogues. Using modern technologies and modern-day regulatory approaches, we can regulate beyond the weary expectations and experience of today's farmers and land managers.

We need to change not just how we regulate, but how we are set up to do so. Regulation in its entirety should be seamless for farmers, and should integrate incentives rather than separating them. Leaving the EU will enable us to take a more joined-up approach, allowing for holistic regulation on a farm-by-farm basis and better overall spending of public money. It would make so much sense.

Many involved in regulating farming now are frustrated not to be able to regulate more effectively. What we propose would make so much difference, but it would mean big organisational changes for Defra and the Defra group. I do think they are necessary, to regulate sufficiently well. We rarely get the chance to think this fundamentally, and I hope that with EU exit, the government seizes the opportunity.

A handwritten signature in black ink, appearing to be 'G Stacey', written in a cursive style.

Dame Glenys Stacey

Chair, Farm Inspection and Regulation Review

Key Facts

£8 billion	farming's net contribution to the UK economy
300,000	number of people working in agriculture in England
107,000	estimated number of commercial farm holdings in England - total number of farms is not known
70%	proportion of land utilised for agriculture in England
76%	proportion of our food produced in the UK
172	number of Acts of Parliament and other legal instruments that set standards for farming and land management
5	number of Defra bodies overseeing farming and land management
150,000	number of farm visits each year by Defra group bodies and local authorities
45%	proportion of visits to farm that are for bovine TB surveillance or control
16%	proportion of farms making a loss
61%	proportion of farm income from direct (Common Agricultural Policy) payments, in England, 2014-2017
50%	proportion of slurry storage arrangements thought to be inadequate



Executive Summary

We begin this report by looking in detail at what farming is like today, because the way we regulate farming should be well-aligned to farming itself. We go on to explain why the government regulates farming, as regulation should always be with specific aims in mind. We should regulate in ways that are most likely to achieve those aims, over time.

For almost half a century, a lot of UK farming has been regulated by a set of rules. Most farmers have experienced nothing else by way of regulation. But during that time, regulatory thinking elsewhere has developed. We outline modern-day concepts of regulation, to explain a little of how regulation has developed elsewhere.

We summarise how farming is regulated now, before looking in detail at how it could be regulated more effectively if we apply modern-day concepts. That leads us to make a set of recommendations.

Farming today

Farming makes a significant net contribution (£8 billion) to the economy and employs 1.5% of the UK workforce. In that sense it is big business, but many farms do not regard themselves as businesses and would not wish to. Instead, farms are largely defined by the livestock they keep and the crops they grow.

Farms differ markedly from one another, as we show. In England in 2016, 7% of farms produced more than half the agricultural output using just 30% of farmed land. Pigs and poultry are farmed in very large numbers but use little land, relative to other types of production. Farmers are traditionally thought of as growers, but some are also processors and packers. Some store produce in controlled conditions. Many have diversified as well. Farming is a complex and solitary job, yet only a small minority pay for advice. Some take out farm insurance, but that is not commonplace.

Farm incomes can fluctuate markedly. Interestingly, currency variations are a big factor together with a more expected influence - our weather. Farmers are price-takers, and farming is not always a profitable business. Profit varies by year and by farm. Recent figures show 16% of farms making a loss. Without CAP payments, it seems many more would be in the same position⁽¹⁾. CAP payments have been a key source of stability and income for farmers, but the amount each farmer receives varies considerably, as payments depend on acreage⁽²⁾. 10% of claimants receive almost half the total amount paid. CAP payments will reduce over the coming years before stopping altogether.

National estimates show the cost of endemic animal disease to be significant. Bovine TB is generally regarded as the most pressing animal health problem in England, but tackling it is not straightforward. A recent independent review⁽³⁾ has proposed ways to address the disease, for the government to consider.

Farms are necessarily deeply connected with the environment and ecosystems. Our natural assets such as soil, air, pollinators and so on have suffered over many years through what were thought at the time to be good farming practices. Some current farm practices have consequences for the environment, now and for the future, but on the other hand, responsible agricultural practice can improve things.

This is the broad context for regulation. The goal is to regulate, knowing the detail. The government's

1. Recent Defra analysis suggested that removal of direct payments might result in 42% of farms making a loss but we note the estimations are complex and are heavily caveated.

2. CAP uses a metric measure: hectares. One hectare is about the size of a rugby pitch.

3. <https://www.gov.uk/government/publications/a-strategy-for-achieving-bovine-tuberculosis-free-status-for-england-2018-review>.

aims for farming, animal and plant health and the environment and ecosystems are much more likely to be met if we regulate wisely, and always with the reality of farming in mind.

Why we regulate

All regulation is to get people to act in ways that they may not otherwise choose, in furtherance of the government's aims. Regulation is all about changing people's behaviours, and it helps to keep that firmly in mind.

Regulation has an enduring role to play in managing the risks of harm (such as preventing the spread of animal disease) and dealing with harms effectively when they materialise. Most farmers agree there is a compelling case for regulation, for these reasons. With the government's fresh ambitions for the sector⁽⁴⁾, we see that in regulating farming, the government aims to safeguard, maintain and *enhance* plant and animal health and animal welfare and secure, maintain and *enhance* good management of farmed land and the natural environment. It is significant that the government wants the sector to deliver more on all fronts. This should influence the way we regulate to deliver those aims.

Understanding the nature of likely harms and how to best deal with them is central to good regulation. In farming, some harms are immediately spotted and dealt with. Others take longer to sort, and some are not detectable straight away. When damage (for example, to biodiversity) is not detected for a long time, restoration can be a long challenge as well.

The range of hazards and harms in farming is broad and timescales vary. They range from exotic disease outbreaks that require immediate, national action, to farming practices where harm materialises over a long period and is cumulative and widespread in its nature (for example the removal of hedgerows, where the harm to bird numbers is only evident with hindsight). Different regulatory strategies are needed, to regulate the range well. For the most part though, we suggest it would be more effective for the regulator to work alongside farmers – to 'do with' rather than to 'do to' – and to adopt a supportive approach.

We suggest a third government aim for regulation: to facilitate international trade. To be sure of the safety and quality of products, we already have regulatory systems in place. And we pay regulatory attention to seeds, feed, fertiliser and pesticides, to protect farming from the potentially devastating impact of poor quality or harmful inputs to farms.

It will be possible to regulate to deliver the government's fresh ambitions for farming more readily, as we are released from a pan-EU approach. To restore as well as to protect from harms requires a greater breadth of regulatory approaches, greater than we are used to or have been able to deploy whilst in the EU and through CAP. This requires a different, modern regulatory culture.

The building blocks of effective regulation

In this chapter we outline the established cornerstones of regulation before explaining some of the ways in which regulation in other sectors has developed in recent decades.

Standards – the regulatory requirements – have always been the bedrock of regulation. The main thing is that standards need to make sense. If not, there is little chance that they will work as intended. There is an accepted hierarchy of standards, from Acts of Parliament, up to best practice guidance. It can be confusing. When standards are expressed legalistically, as in statutes, regulators tend to transpose them into something simpler. Not all standards originate in Acts of Parliament and the like. Some regulators can set standards themselves, normally consulting as they do so.

Regulators monitor. They want to know the rate of compliance and whether regulation is working. They generally use a combination of monitoring techniques. These may include random or risk-based

4. <https://www.gov.uk/government/publications/the-future-for-food-farming-and-the-environment-policy-statement-2018>

sampling. They tend to categorise those they regulate, to help them target their resource on those who appear most risky. Regulation of farms differs from regulation in most sectors, in that it includes surveillance for *system-wide* hazards, such as exotic animal disease, or bovine TB. Surveillance is not monitoring, but the two are sometimes confused.

If monitoring reveals a problem, regulators can then resort to enforcement to bring an individual back into compliance. In farming, however, by far the most common approach has been automatic financial penalties imposed through cross compliance.

In recent decades there has been a move away from regulatory approaches based on deterrence, to more supportive approaches that generally start with building awareness. To change when they need to, individuals need to *be aware* of the need to change, *be motivated* to do so, *understand* what it is they must do and *be able* to do it.

To motivate changes in behaviour, today's regulators sometimes use a carrot and stick approach. There are situations where it is appropriate for regulators to incentivise the right behaviours, for example where actions are needed that are not the first course of action for the individual concerned. Incentives can be financial, but they do not have to be. They can include expert advice or else a reduction in the regulatory burden, for example. Regulation is about maximising opportunities as well as minimising risks. This is particularly pertinent when the regulator's remit is to improve or enhance matters in the field regulated. Incentives have their part to play.

There are other approaches in use today, to change behaviours where needed. We explain two in particular: an outcome-based approach and a management-based approach. To confuse matters, hybrid approaches are not uncommon, and can fit well. Each of these approaches is more flexible than a set of rules. They allow and encourage individuals to take responsibility.

At the same time, modern day regulators look beyond the individuals they regulate. They focus not just the most worrisome individuals, but also on worrisome systemic issues that are getting in the way of government's aims. They often work with the sector to deal with systemic problems together, in the best possible ways.

Today's regulators generally have a wide range of enforcement options to choose from. The best regulators tend to use them wisely. They usually start by trying to get the individual to change behaviour and comply before they consider more formal enforcement, but sometimes it is right to jump straight to a tough sanction.

Some regulators (à la Ofsted), use ratings to drive improvement where needed. There is research to show when ratings are likely to work. We are not suggesting they are necessarily right for farming.

We conclude that rules will always have their place. They are essential to manage the risk of serious harms and deal with them when they happen. However, given the government's ambitions for farming, an approach focused on systemic issues (issue-based) has a lot of potential.

Outcome and management-based approaches and their hybrids are known to be useful where there is a significant level of heterogeneity in what is being regulated, and where development of rigid standards that assume 'one size fits all' creates difficulties. This is clearly the case for farming. They would require and allow farmers to take more responsibility, and farm responsibly overall.

In designing regulatory systems, it helps to think of the *system characteristics* that could align the regulatory system with the sector to be regulated. That helps the regulator to think through how to regulate in ways that are most likely to work. We set out the system characteristics we think are needed for farming regulation in a set of design principles that we return to later.

What we found

Here we look at the governance and delivery of regulation. We sum up how farming is regulated now and consider the culture of regulation today, before looking briefly at the overall effectiveness of farming regulation today.

Responsibility for regulation is split between Defra, five Defra group bodies and local authorities. The five Defra bodies each have different powers, and statutory remits that abut and overlap. The Environment Agency is an established regulator, whereas the other bodies do not see themselves as such. There is no single, overarching regulatory strategy for farming or across the Defra group. Rather, Defra and ministers retain a good deal of operational control. Regulation is not independent of the government. This is most unusual, and leads to difficulties. We return to this later.

Driven by their remits and constrained by largely separate information systems, the Defra bodies operate differently. In recent years, they have collaborated to try and improve their arrangements for working together, in the interests of farmers. There have been some successes but overall it is proving hard to generate efficiencies or reduce the regulatory burden. What is more, no single body has the full picture of each farm. The Defra arrangements make it almost impossible to take a holistic view of the risks and opportunities, farm by farm.

As we explained in our interim report, there is a proliferation of Acts of Parliament and other regulatory instruments that set out the standards required. Guidance has been reviewed and improved in recent years following two independent reviews⁽⁵⁾⁽⁶⁾. Nowadays, the guidance that is available is more often well-written. There is still so much of it though, with guidance often embedded within a permit, licence or other document. Even if farmers and land managers know guidance exists, it can be hard to find.

We touch on the different regulatory approaches in play across the Defra group. All use risk-based approaches, of which there are many. Issues-based approaches are in play, but they are not used to anywhere near their full extent. We see the differing bodies on a spectrum. The Rural Payments Agency is unavoidably at the rule-bound end, in contrast to the Forestry Commission and then the Environment Agency which deploys the widest range of approaches (including issues-based, management-based and hybrid systems).

Farmers experience sporadic but sometimes time-consuming inspections or other visits from the Defra group and also local authorities. Defra group staff visit farms for monitoring reasons, but roughly half of all farm visits are for surveillance rather than for monitoring, and surveillance must continue.

Enforcement approaches differ. Again, the Environment Agency appears to use the broadest spectrum of approaches. It benefits from the widest range of enforcement powers, when compared to others in the group. Overall the group is very reliant on cross compliance, yet that is necessarily inflexible and is often seen as unfair. Penalties disproportionate to the breach or with no recognition of a willingness to comply undermine trust and confidence in the system. Importantly, cross compliance does not influence farmers who are not eligible for, or who do not claim subsidy. The significant number of smaller farms are overlooked.

Farmers and land managers tell us they are aware of differing organisational cultures across the Defra group. The most frustration arises in relation to inspections linked to CAP payments. We have seen the differing cultures, over the course of this review. We see that differing cultures often stem back to fundamental differences in remit, structure and regulatory approach. As things stand it would be very hard to change culture materially. It is impossible to get to one effective regulatory culture while we are obliged (largely) by CAP to take a rule-based approach, and we have a good handful of delivery bodies.

We end with the impact of farming regulation. We do not doubt it has been effective in some areas. Some big farming risks that are well-suited to a rule-based approach are firmly regulated. However, it

5. <https://www.gov.uk/government/publications/independent-farming-regulation-task-force-report>

6. <https://www.nao.org.uk/report/streamlining-farm-oversight/>

is not known for certain how many farms there are. We cannot say at any one time, who is responsible for each stretch of land. We cannot identify with any certainty how compliant farmers are with core regulatory requirements. We cannot gauge the total burden of regulation. There is no one regular holistic assessment across farming of how things are. That leaves us with no valid measure of the extent to which our regulatory system promotes confidence or is effective overall.

What should change

In this chapter we consider what should change in order to regulate farming more effectively. We suggest that mandatory rules have their place, but they are often not the best approach. It depends on the individual or on the issue, but more supportive and collaborative approaches suit a lot of situations better. Working alongside the sector, regulation should flex its muscles only when it needs to.

Building confidence

We put forward what we believe to be a compelling case for regulation to be independent of the government, as it is in almost all other sectors in this country. We then make the case for a new, independent regulator for farming. This would mean significant changes for Defra. We consider whether any of the Defra group bodies should be developed instead. We explain that this would not be easy, one way or the other. Above all, a new independent regulator would signal to farmers and land managers, a commitment to doing things differently.

Given that we expect to leave the EU in Spring 2019, we propose that the sooner the new regulator exists, even in shadow form, the better. Regulation can then begin to evolve in desirable ways. We go on to outline some immediate considerations relating to funding and wider governance. In our view, the regulator should be fully accountable and completely open about how it regulates, in all respects. It should be an exemplar, to build confidence with Parliament as well as with farmers and land managers.

Finally, on matters of governance, we propose that the regulator should be responsible for a periodic 'state of the nation' report for farming, so that in future we can expect one periodic and comprehensive assessment across farming of how things are. We think it is important to take stock of positive trends, and to identify where things need to improve. We propose the regulator should develop, in consultation with the government and the sector, measures that enable farmers, land managers and the regulator to jointly track progress and areas of concern, and to help them make key decisions on a day-to-day basis. We know that some farmers would welcome this, and it would be just as valuable to the regulator.

The Environment Agency should retain the large majority of its field staff to suit its future remit, but otherwise we recommend there should be one consolidated Defra field force focused on farming under the authority of the new regulator.

This is not to say that every inspector can do everything. Skilled and knowledgeable staff will be needed in the field and back at base. Those in the field will need good interpersonal skills and should be able to form mutually trusting and constructive relationships with farmers and land managers. There is an opportunity to provide progression opportunities for staff as well as further training and development, to enable all to deliver well.

In our view, the regulator should be organised so that it can deliver services (including advice) at a local level, with staff available on the ground and within reasonable reach of farmers and land managers. One consolidated field force makes this much more achievable. One field force will be the most efficient arrangement, and is also likely to be the most effective: the regulator will need to understand farming at a local as well as sectoral level.

We then move on to consider the future role of local authorities. Given the significant delivery difficulties we describe, we consider responsibilities should change. We argue that it is not acceptable

or fair for enforcement to depend on locality, that the regulatory system should respond consistently to welfare complaints, and that oversight of animal health and welfare should not ever reduce because of local resource pressures.

We appreciate there is a cadre of capable and dedicated local authority animal health and welfare staff, albeit numbers are most likely reducing. We propose the regulator should be empowered to commission regulatory activities (such as the first response to welfare complaints) from individual local authorities or other suitable bodies but should do so only where that would be effective as well as efficient. In that way, local authorities that retain animal health and welfare competence and capability may choose to play a role, in line with the regulator's priorities and expectations.

We propose that the government should review local authority statutory obligations relating to the health and welfare of farmed animals. Of course, local authorities have much wider responsibilities than just animal health and welfare on farm, and will wish to continue to investigate and prosecute within their own areas. In exotic disease outbreaks and other emergency situations they have, and will continue to have, an important and valued role.

As we leave the EU, and in the years that follow, it is essential that we maintain international confidence in our compliance with standards for farming and land management. Our national systems to detect, contain and deal with things such as animal or plant disease should be maintained. There is an opportunity to think afresh about the detail of some requirements derived from the EU, however. Some cover not just the standard itself, but also how compliance should be monitored. This is most unusual and unhelpful as it can constrain the development of an effective regulatory strategy.

More straightforward regulation

In this section we consider how regulation can be made less complicated than it is now, for farmers and land managers. Firstly, we propose registration requirements should be simplified, and rationalised down to two basic and linked requirements. In our view, a system of land-keeper registration should start the relationship between the regulator and the individual.

We consider that all land utilised for farming⁷ should have a registered 'keeper'. This draws on experience from other systems that have stood the test of time. A registered keeper system will allow different models of business to flow, while clearly placing the onus of responsibility at any point in time with one individual. We suggest the land registered by a land keeper should be described by reference England's foremost and most commonly understood map reference system, the Ordnance Survey grid. Post CAP, this will be accurate enough for the regulator's purposes.

Currently, minimum number requirements for the registration of farmed animals and poultry differ. We think there is a good case for registration requirements to be decided on a principled basis matched to prevailing risks, while always remaining proportionate. Most immediately, we advocate the removal of the lower bird number limit for registration of poultry, because of the risk of exotic disease and the operational need to reach all poultry owners when an outbreak occurs.

We then go on to consider monitoring and risk-based approaches - two of the well-established ways in which regulators work. It will be no surprise that we advocate risk-based approaches, while making the point that large enterprises are not necessarily riskier than others. We do urge that risk-modelling is kept as simple as possible. Overly complex risk-based systems are inevitably troublesome, in our experience. We point to the opportunity to do risk categorisation straightforwardly, alongside registration. We explore how well-designed information systems can support that, and build up one holistic picture of the farm, over time.

Being clear about what is expected, and why

We discuss standards – the regulatory requirements themselves – and make suggestions for how they

7. All land used for agricultural production and/or all land that draws down any form of environmental incentive payment.

can be clear, relevant and kept up to date. Working with the industry, we see this will be a significant and ongoing task for the regulator.

For monitoring compliance with standards, we suggest that with more use of remote surveillance technologies, the balance between 'on foot' and remote monitoring should change materially. Although some on-foot *surveillance* to meet international trade and disease detection and control requirements must be maintained, the regulator will be able to rely notably more on modern technologies in its day to day work. Modern technologies hold yet more promise, in our view. We give some examples of how they could bring other benefits to the regulator and the industry, working together.

Mature regulatory thinking

We then turn to what can be learned from mature regulatory thinking and regulation in the modern day. Throughout this review, we have been aware of a common view that regulation is predominantly a set of rules. We think it essential that at this juncture, Defra recognises that contemporary regulation is so much more than what is referred to by some as 'the regulatory baseline'. That misses most of the point and all of the opportunity of regulation, in the modern day. We suggest that for regulation to become much more effective and deliver the government's enduring and new aspirations for agriculture requires a seismic shift from that view.

We explain a briefly how regulatory thinking has developed in recent decades. It is understood now that although rules have their place, regulators need to be able to apply the right approach to the right issue. To do that requires regulatory approaches well beyond a rule book. We go on to suggest examples of where the issues-based, management-based and hybrid approaches we have described earlier could apply, and when rule-based approaches will still fit best.

A sophisticated and balanced view of regulation

We develop the notion of advice. There is no in-principle reason why regulators should not give advice. If we are to *enhance* plant and animal health and welfare, and the good management of farmed land, advice has an important role. Advice should enable a farmer to see the risks of harm and the opportunities for enhancement for their farm and their way of farming. It should also enable the farmer to make good decisions that are likely to align with the government's overall aims for farming. We propose the regulator should ensure holistic advice of this nature is available to farmers. We also suggest that advice in the form of in a written report to the farmer, a stock-take of the farm that could include basic metrics and measures agreed with the sector, could be of real value.

Some immediate hazards or harms are left unaddressed at individual farm level. They may require infrastructure work that the farmer is unable or reluctant to make, given the economics of the farm. We see a widespread problem of this nature, in relation to poor or insufficient slurry storage. Grants or guaranteed loans to help with agreed priority infrastructure projects could redress big harms not otherwise likely to be addressed. Were these financial incentives available, the regulator could apply an enforcing and enabling approach when needed: a direction to comply, to stop harms, and an invitation to apply for a financial incentive, if conditions are met. We propose the government considers grants or loans to assist in addressing harms of this nature.

We raise an important question of public policy: should those who ignore the rules (core regulatory requirements) for their farm be able to receive payments from the government, for example under the proposed Environmental Land Management scheme? We suggest a way through. We want farmers and land managers not complying with the rules to come into line. We suggest it will be possible to achieve that and at the same time spend public money appropriately on each farm, with an integrated and intelligent regulatory approach. As a matter of principle, we suggest grants, loans and other public funding should be well-targeted, to make the optimum positive difference overall.

We discuss enforcement. We propose that best practice approaches should apply, with the aim of

bringing individuals into compliance. Swingeing sanctions will be appropriate on rare occasions, but enforcement should much more often start with advice and an opportunity to comply. It is important that the regulator applies the right combination of approaches to the situation.

We go on to propose a variety of ways in which the regulatory burden could be reduced for farmers. Many farmers press for fewer inspections if they are a member of a farm assurance scheme, and we show how a strong farm assurance record could make a difference. Equally, there are other ways in which farmers can demonstrate they farm responsibly, and can be given due credit. We give an immediate example, from another regulator.

We indicate throughout this report the benefits of working with the sector. We end by proposing how the system can be fully joined up, for the good of all.

We envisage the new regulator will become the main repository of information and performance data, for farms. As mentioned previously, those regulated should not have to provide the same information twice. Newly designed information systems can form the backbone of regulation. In combination with sophisticated mapping and remote surveillance imagery, these systems can be used to build a picture of farming as a whole, in an unprecedented way.

This will be a big regulator – because that is what is needed – but it need not be ‘Big Brother’. Internal and external governance controls can point it in the right direction and clarify the expected approach. Size will enable the regulator to organise itself to work well at a local level, place by place, so that it is accessible to farmers. It should be able to get out to markets, shows and other places where farmers gather, and it should readily get out ‘on-farm’. The regulator needs to do that to give advice, consolidate its presence on farm and develop its relationships with farmers.

As the Environmental Land Management scheme (ELM) is yet to be piloted, the details of its eventual operation have not been finalised. We have suggested earlier that a management-based approach has appeal. In any event, delivering the scheme will require visits to farms, and advice at farm level as well. As the regulator will be the main repository of farm information, and as it will be out on farm giving advice, there is an obvious opportunity for efficient arrangements, should the regulator hold responsibility for incentives and opportunity funding to be provided by the ELM.

We think the efficiency arguments are persuasive in themselves, but a yet more compelling argument is that to regulate effectively and deliver the government’s enduring and new aims for farming and land management, the regulator needs all the right levers to change behaviours where needed, and to enable as well as to enforce. It needs to be able to identify the priorities nationally, locally and ultimately on each farm. It needs to influence individual farm priorities, in constructive relationships that take into account the context of the farm, its sector and locality.

The regulator will be most effective if it is able to apply the whole spectrum of regulation including incentivisation, as we describe throughout the report.

Recommendations

We recommend that the government should:

1. Create a new independent regulator for farming and land management as soon as possible, with the Statement of Purpose and range of powers proposed for it in this report. The government should consider establishing the regulator under shadow arrangements pending legislation, given our anticipated date for leaving the EU. The government should retain responsibility for agricultural strategy and public policy, with the regulator responsible for detailed standard-setting and for operational delivery. Funding arrangements for the regulator should be well-aligned to the government's strategic aims and support effective regulation of the sector, in the public interest.
2. Ensure that the design principles we propose and the mature regulatory approaches we describe underpin the regulatory system, to bring about culture change. On leaving the EU, the government should adopt a sophisticated and balanced view of regulation, beyond a mere set of binding rules, so that regulation *maximises opportunities* (for example, to enhance the environment) as well as *minimising risks of harm*.
3. Vest responsibility for incentives-based regulation (including Environment Land Management scheme incentives) with the regulator, so that regulation is efficient, effective, joined-up and seamless for farmers and land managers. The regulator should be responsible for ensuring on-farm, holistic advice is available to farm and land managers.
4. Decide (as a matter of public policy) whether those who consistently do not comply with a binding rule can apply for public funds⁽⁸⁾ to build on opportunities on the farm or land, without adequately dealing with harms.
5. Consider (during the agricultural transition period) the provision of financial incentives to farmers with poor or insufficient slurry storage facilities.
6. Ensure as far as possible that regulatory requirements to support international trade (e.g. a common rulebook) are not unduly constricting, and allow for effective regulatory approaches in England. The government should develop its UK-wide agricultural strategy liaison arrangements, as responsibility and authority is repatriated from the EU to England and the devolved administrations.
7. Require the regulator to report periodically and comprehensively on the extent to which the government's stated priorities are being met. The regulator should develop, in consultation with the government and the sector, measures that enable farmers, land managers and the regulator to jointly track progress and areas of concern, and to help farmers and land managers make key business decisions day-to-day.
8. Legislate to rationalise farm and land registration requirements and to allow for the creation of a single land-keepers' register, to be held by the regulator. The government should assess and simplify the current requirements for registering land parcels as soon as possible. The new register should draw on Ordnance Survey mapping capabilities and reference land using the OS grid, removing the need for more precise measurement. Current arrangements for registering land

8. For example, through an Environmental Land Management scheme.

parcels should be carefully assessed and simplified as soon as possible.

9. Simplify and standardise animal registration, while retaining the use of CPH⁽⁹⁾ numbers (for disease control purposes). All poultry should be registered, given exotic disease risks, and the government should consider whether South American camelids and horses should be registered, for endemic disease control or welfare reasons. The Livestock Information Service should be aligned with land-keeper registration and be able to support exotic and endemic disease strategies.
10. Review the Defra group configuration. The government should ensure any decisions that are made do not compromise the vision for regulation. The government should retain sufficient field staff with the Environment Agency to enable it to deliver its future remit, but otherwise consolidate and create one field force under the auspices of the new regulator. The government should develop a transition plan and robust transition arrangements. The government should protect the country's ability to detect and respond effectively to outbreaks of exotic animal disease and maintain or improve bovine TB controls during the transition to the new regulator.
11. Empower the regulator to commission elements of farming and land management regulation from individual local authorities and other suitable bodies and individuals, where the regulator judges such arrangements are likely to be efficient and effective. The government should review local authority statutory obligations relating to the health and welfare of farmed animals in the light of the new regulator's remit.

We recommend that the new regulator should:

12. Regulate in accordance with the design principles we propose and using the full range of mature regulatory approaches we describe.
13. Develop the capabilities, competencies and functions necessary to regulate well.

9. County Parish Herd (CPH) numbers are used to identify livestock holdings and record animal movements between holdings.

Introduction to the review

This independent review of farm inspection and regulation was commissioned in February 2018 by the Secretary of State for Environment, Food and Rural Affairs. Our terms of reference required us to identify opportunities, before and after EU exit, for improving farming-related regulation and enforcement, including inspections, in order to reduce burdens on farmers while maintaining and enhancing our animal, plant and environmental health standards.

In our interim report we summarised our progress to date, and identified the issues that had emerged as priorities for further consideration. We put forward for the Secretary of State's consideration our preliminary appraisal of how farming is regulated now. We proposed a set of design principles that we thought could shape farming regulation in future, and proposed the regulatory powers needed to regulate farming more effectively.

This final report concludes the review. We make wide-ranging recommendations, which, if implemented carefully, we believe would provide the grounding for a more effective regulatory system. We go on to detail how regulation could then develop, in line with the design principles we suggest.

How we have carried out our work

In the first phase of our work, we considered why and how we regulate farming now, with an initial appraisal of farm regulation and inspection. We met with senior staff from each of Defra's arms-length bodies⁽¹⁰⁾ covered by the review and followed up these meetings with semi-structured interviews and other discussions, to elicit and check the detail.

We have met with key stakeholders representing farmers, and with farmers themselves in sector-led focus groups facilitated by NFU. We have talked with representatives of environmental groups, farm assurance schemes and others. We have visited farms (with Defra group inspectors and separately) across the sector.

We have been helped enormously in this review by a wide range of people and organisations (listed in Annex 4) who spared time to talk to us and provide us with information. We are very grateful. It has enabled us to get to the root of the issues, not just for farmers and land managers now, but for the next generation and for the wider public.

Governance of the review

Dame Glenys Stacey chaired the review, with the support of a small review team. The review has also benefited greatly from advice on a range of related issues from members of the review's advisory group: Helen Crews, Caroline Drummond, Nigel Gibbens, Richard Macdonald and Stephanie Young. While responsibility for the report and recommendations rests solely with the review team, the support of the advisory board has been invaluable.

10. These are the Rural Payments Agency (RPA), Natural England, the Animal Plant and Health Agency (APHA), the Environment Agency and the Forestry Commission.



Farming today

In 2016, agriculture generated £23 billion worth of produce, consumed £15 billion of goods and services and generated a net contribution of £8 billion to the UK economy, with England contributing around three quarters of the net total. Almost 60% of production comes from the livestock sectors (£12.7 billion in 2016) of which dairy and beef are the largest.

Agriculture is part of the wider food and drink sector value chain, which added a net contribution of £112 billion to the economy in 2016. Agriculture employs almost half a million people (1.5% of the total workforce) in the UK. More than 300,000 of these are employed in England. As a primary industry, farming is a driver for other businesses such as agricultural engineering and manufacturing, transport and haulage and local rural businesses.

Good regulation recognises context and here we paint a picture of the different nature of farms and farming in England today. Farmers have different motivations and behaviours which affect farming practices and have consequences for productivity and profitability. They also affect the willingness and ability of a farmer to operate in a way that mitigates risk, not just to their own operation but potentially to the whole sector's production chain and critically to the environment. Equally these human factors also affect whether a farmer responds to opportunities to reduce risks or enhance the environment.

Farming is deeply intertwined and inseparable from land management. Production activities affect the environment and ecosystems but farming offers significant opportunities for environment and ecosystem enhancement if managed and regulated well.



Farming in England

In England around 70% of land is agricultural⁽¹¹⁾ and there are around 107,000 commercial farm holdings⁽¹²⁾ of which about half are owner-occupied. A farm census is now only conducted once every ten years, the last one being in 2010. Defra currently follows EU requirements for annual agricultural surveys and as a result many small agricultural holdings are excluded from the survey. We understand that the best estimate of the number of these small holdings is around 40% of the commercial holdings, but until the next full census is conducted the number is uncertain.

Farms are largely defined by the livestock they keep and the crops they grow, but vary significantly in size, scale and what they produce. There are further variations in the approach to production such as intensive, outdoor, organic or other sustainable approaches that are important influences on farming practices.

Figure 1 shows the numbers of farm holdings in England according to the primary production type, and the area of the holding. Note the primary production type does not mean it is exclusively that type. A farmer who grows cereals may also keep some sheep, pigs or chickens for example.

Production varies across the country, primarily due to prevailing conditions such as available pasture, soil fertility, terrain, weather patterns and water availability. Figures 2 and 3 show the regional distribution of the predominant livestock and crop types. There are variations within this as well, such as concentrations of intensive or outdoor farms, and farms that grow crops for energy use and so on. These variations can also be determined by local planning decisions.

While farms are primary producers at the start of the food supply chain, they may also supply stock, seed or feed to other farmers or markets. Some are specialists in providing these supplies (for example chicks for rearing, breeding ewes,

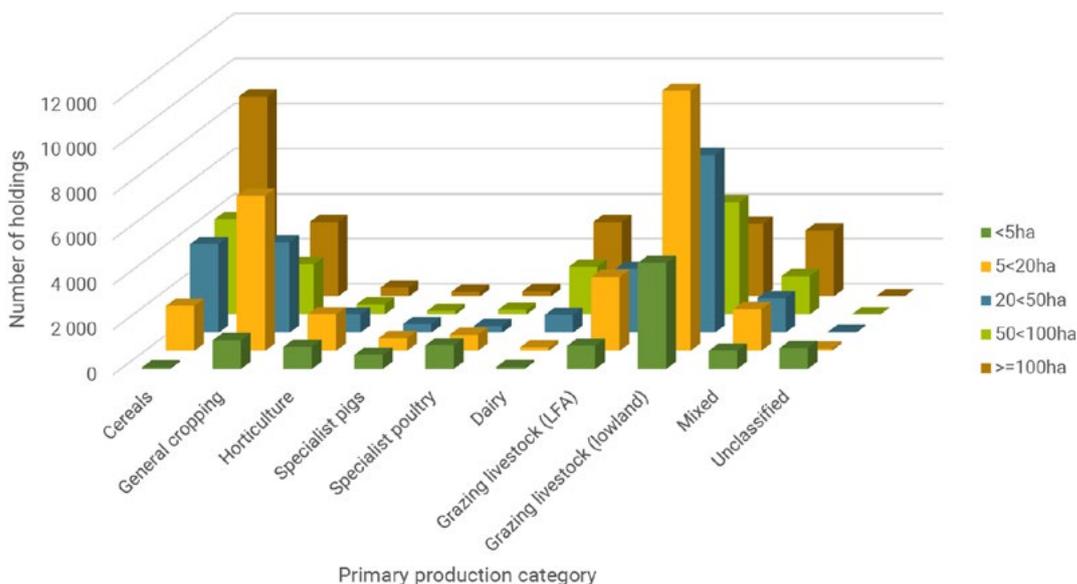


Figure 1: Numbers of farm holdings in England by primary production category and area of land utilised.

11. Unless otherwise specified, data in this chapter is drawn from Defra's June survey (<https://www.gov.uk/government/statistical-data-sets/structure-of-the-agricultural-industry-in-england-and-the-uk-at-june>) and Farm Business Survey (<https://www.gov.uk/government/collections/farm-business-survey>).

12. This includes all English holdings which have more than five hectares of agricultural land, one hectare of orchards, 0.5 hectares of vegetables or 0.1 hectares of protected crops, or more than 10 cattle, 50 pigs, 20 sheep, 20 goats, or 1,000 poultry. These thresholds are specified in the EU Farm Structure Survey Regulation (EC 1166/2008).

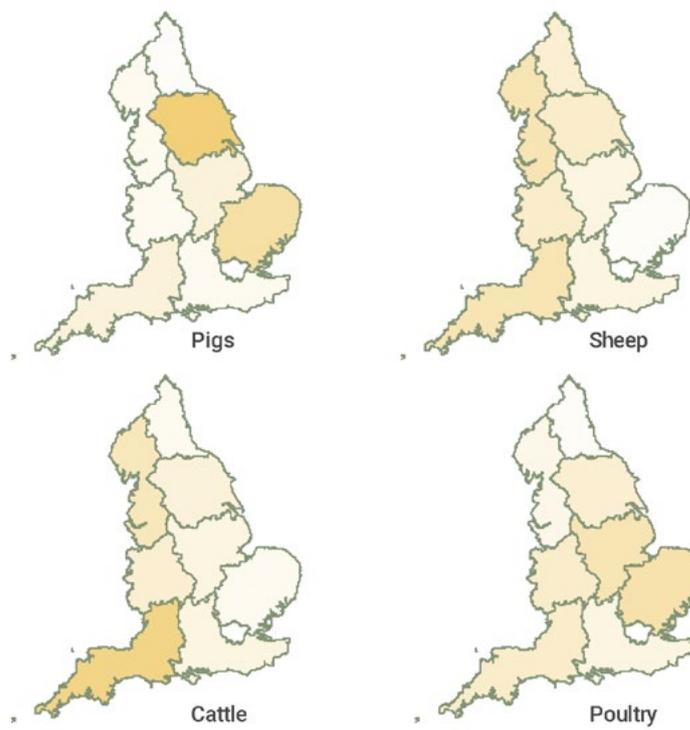


Figure 2 Livestock distribution by region

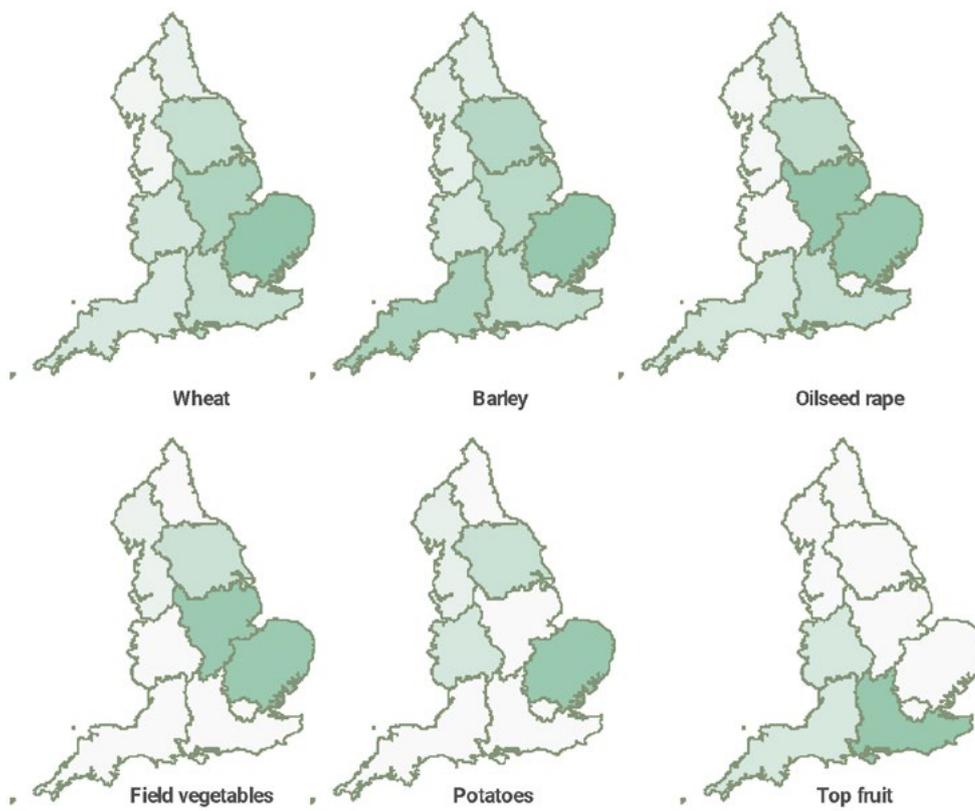


Figure 3: Crop distribution by region

seed potatoes) but are likely to have other aspects to their production cycles as well. Many farmers will have local arrangements with other farmers and regularly buy stock or feed from the same source, but there are also dealers and markets who supply more widely and trade internationally. This can result in significant movements of goods, plants and livestock around the country and across borders.

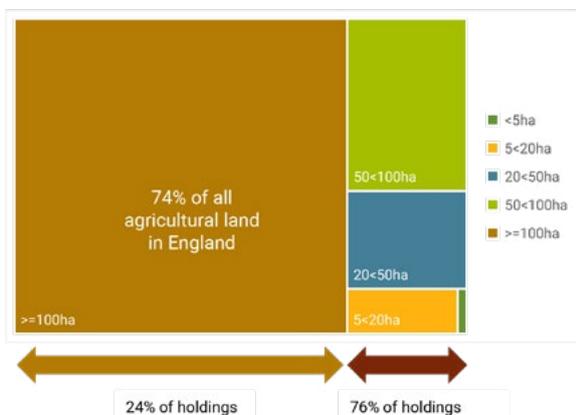
Farmers are traditionally thought of as growers, but some go beyond harvesting crops, collecting milk and eggs, or finishing animals and have on-farm facilities to process and package the product as well (cheese, yoghurt, fruit, vegetables or meats). In horticulture, advances in technology and machinery have enabled crops to be processed and packaged as they are picked in fields. In top fruit production, controlled storage is key to ensure ripened fruit is available for the longest possible period.

The intensity of production varies considerably. Modern machines can be very large but are extremely costly so are only available to those with the largest investment capacity.

There is a significant trend for smaller farm holdings, and some tenant farmers, to rely on either outdated machinery or contracting of machinery and/or services rather than owning the machine.

In England in 2016, 7% of farms produced more than half the agricultural output using just 30% of the total farmed land area. This is in part due to large farms or co-operatives with large acreages per arable field, but is also due to

Figure 4: Land use by size of holdings

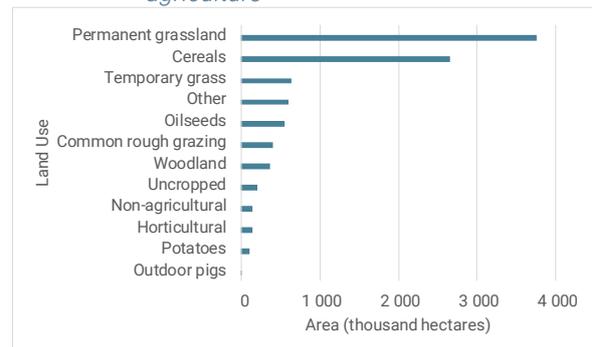


intensive poultry and pig production that have a high production-to-area ratio. Pigs and poultry are farmed in very large numbers but use little land relative to other types of production.

Figure 4 shows how 25% of holdings represent 75% of agricultural land use.

Figure 5 shows the acreage used for different types of agriculture, a distribution that has remained relatively stable over the years.

Figure 5: Land use for different aspects of agriculture



National Character Area Profiles

The regional variations in the character of the environment and ecosystems is significant and plays a key part in the production choices that farmers make. Certain areas are simply not suited to some kinds of production and will not yield profitable results. In 2014 Natural England completed and published the National Character Area Profiles⁽¹³⁾. These profiles divide England into 159 distinct natural areas based on natural lines in the landscape rather than administrative boundaries, making them an invaluable aid for planning environmental projects and decision-making for the environment. Each is defined by a unique combination of landscape, biodiversity, geodiversity, history, and cultural and economic activity. The statements of environmental opportunity found in each profile help to bring together this information and offer suggestions for where action can be best targeted to conserve and improve the natural environment.

13. <https://www.gov.uk/government/publications/national-character-area-profiles-data-for-local-decision-making/national-character-area-profiles>

Farming business organisation

Of the 107,000 farm holdings in England, 53% are owner-occupied, 21% mixed tenure but mainly owner-occupied, and 13% are tenanted farms. Some are owned and run or let to tenants by county councils, others are owned and managed by organisations such as the National Trust or are within national parks.

In March 2017 CIPFA⁽¹⁴⁾ conducted a survey⁽¹⁵⁾ of local authorities about their council or county farms. These farms are considered an important gateway into farming for those who do not have access through family-owned land or enough capital to purchase land. The total area of land held by the 42 authorities who responded was 87,070 hectares, of which the majority was let to 2,053 tenants as smallholdings.

There are many different arrangements in place for running farms, with farmers often drawing on family members to support them, while some employ farm managers and contract services from neighbouring farms. Farmers have a range of options in terms of business structures and trading vehicles. The structures include owner-occupiers, farm business tenancies, grazing licences, share farming, contract farming and hybrid joint venture agreements. Some may be sole traders, others may operate as partnerships or be incorporated. There are also different forms in which farm business may be aggregated as co-operatives or other corporate groupings of numbers of farms.

Farming incomes

Farming is not always a profitable business; the variable costs are significant for most types of farm (representing 56% for livestock farmers). Farmers are price-takers and generally have

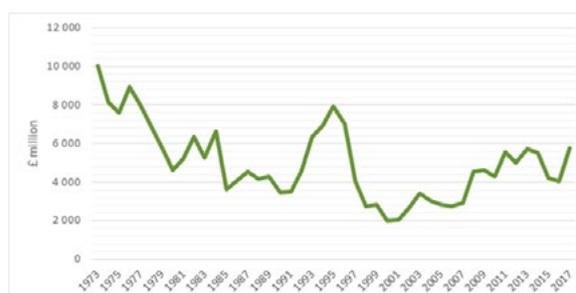


Figure 6: Fluctuation in farm income from agriculture

little control over the factors that affect prices. Some have formed co-operatives that give them greater negotiating power, but many rely on the prices they can get locally.

Figure 6 shows the long-term trend in agricultural income, with fluctuations of up to 40% in some years. A major factor in these variations is the value of currency.

Multiple factors affect both the prices farmers achieve for their product and the cost of inputs to the production cycle. International trade and the balance of imports and exports affects supply and demand, and consequent prices. The balance of imports and exports is affected by the value of the pound. When the pound is weak it is good for exports and consequent prices.

Another major factor is the weather, affecting the production of both crops and livestock. The effects are widespread and can have knock-on consequences. Depending on the rainfall and hours of sunshine at key times in production cycles, the weather can affect the planting of crops, availability of pasture for livestock, levels of animal and plant diseases, levels of pests, and availability of water for irrigation.

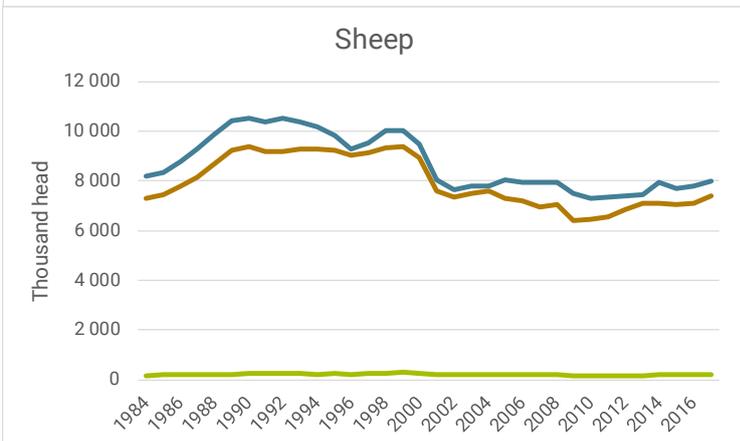
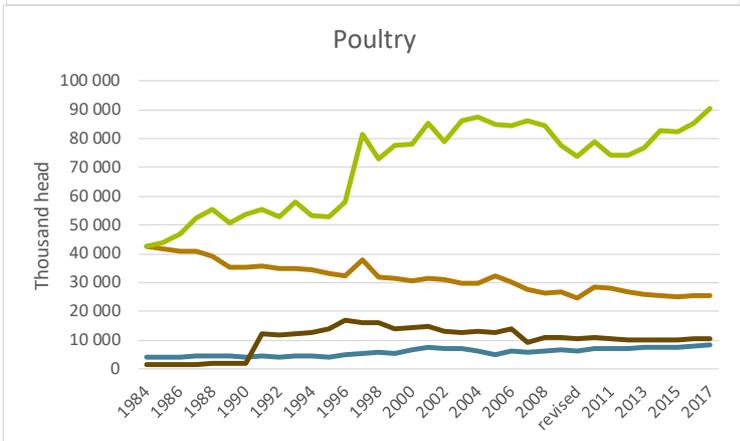
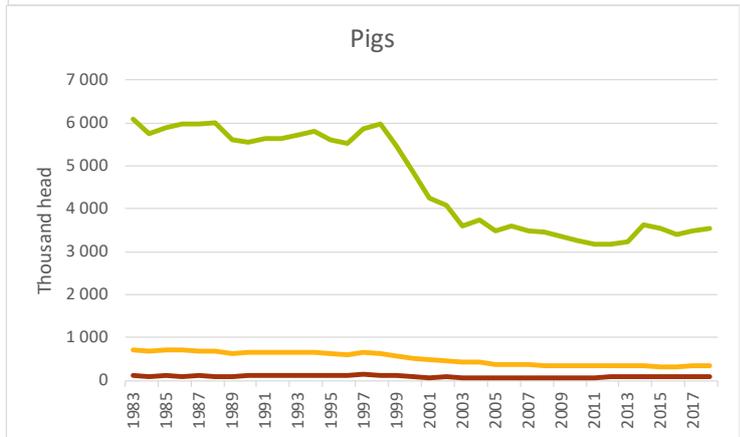
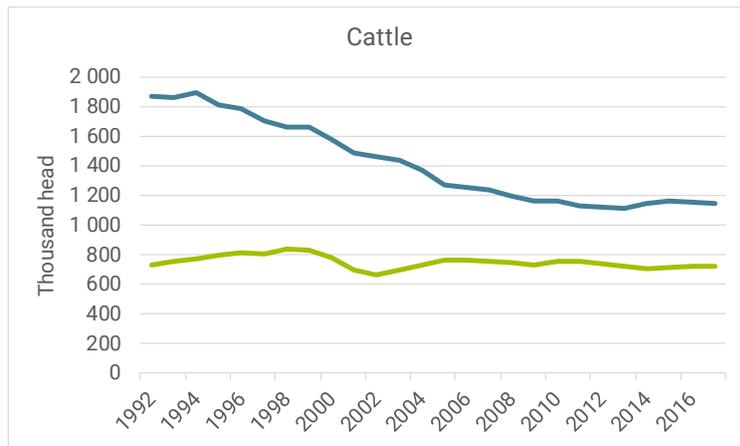
Figure 7 shows trends in livestock populations, which can fluctuate following changes to market conditions, the value of currency, weather conditions or disease outbreaks.

This year (2018) the exceptional dry summer has affected crop production in most areas, reducing the quantity but not quality of grain. At the same time pasture for grazing livestock was depleted by the exceptional summer weather and some farmers have had to use winter feed to sustain livestock over the summer. Together these mean farmers are expecting higher winter feed bills this year.

14. Chartered Institute of Public Finance and Accountancy.

15. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/692919/smallholdings-annual-report-2016-2017.pdf

Figure 7: Trends in national livestock numbers



- Dairy herd
- Beef herd

- Fattening pigs
- Female breeding herd
- Other breeding pigs

- Table chickens
- Egg production
- Other poultry
- Breeding flock

- Lambs under 1 year old
- Female breeding flock
- Rams

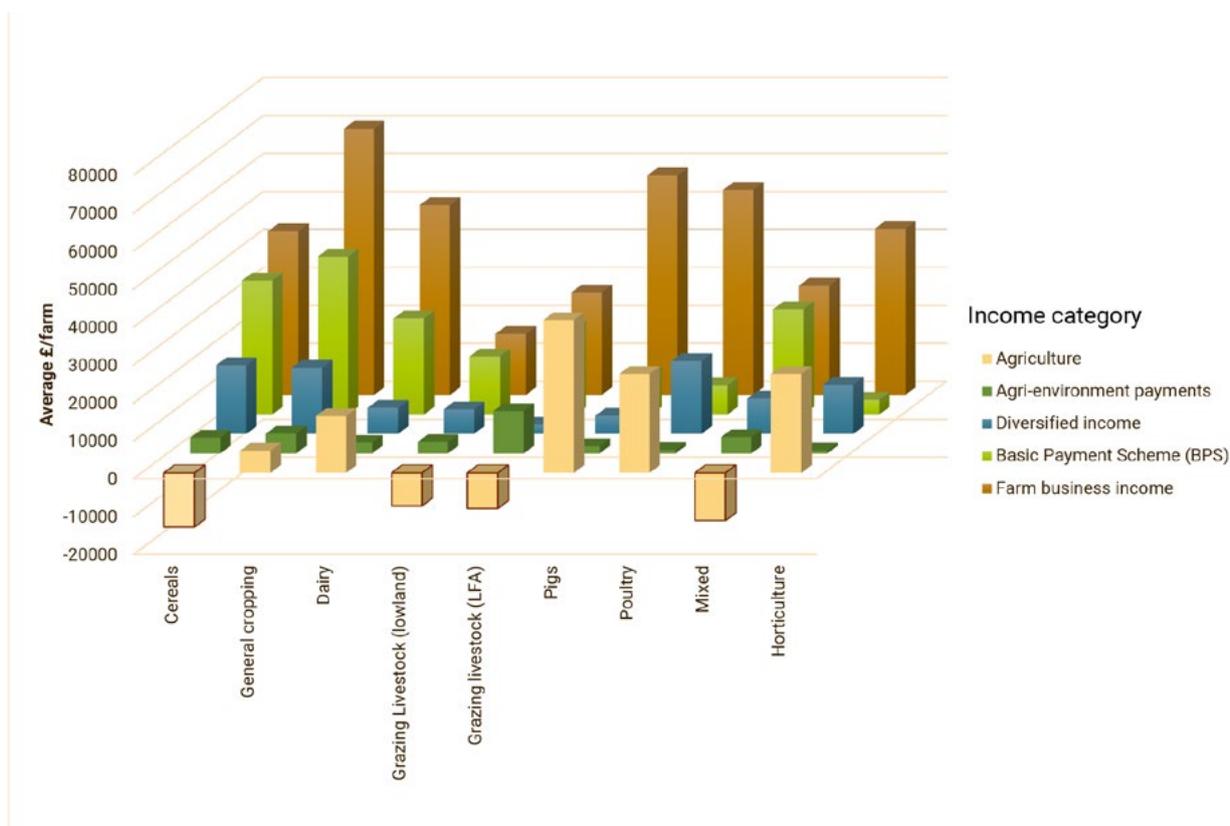


Figure 8: Sources of farm business incomes for different sectors

Farming production cycles are generally long and require commitment (both financially and physically) over years rather than months. This, together with the volatility of things that affect the industry, means that annual incomes from farming are also volatile and can vary for some by up to 50%. Bad years together with long production cycles can have a significant effect on capital investment, and poor results, together with the normal uncertainties of farming, stymies investment generally.

Fluctuations in costs and prices make it important to look at profitability across several years, to get a reasonable picture in any period. Between 2014/15 and 2016/17, 14% of farms in England made a profit of more than £75,000, while 16% of farms made a loss, with an average profit for all farms of £37,000. In this period 61% of farm income in England came from direct

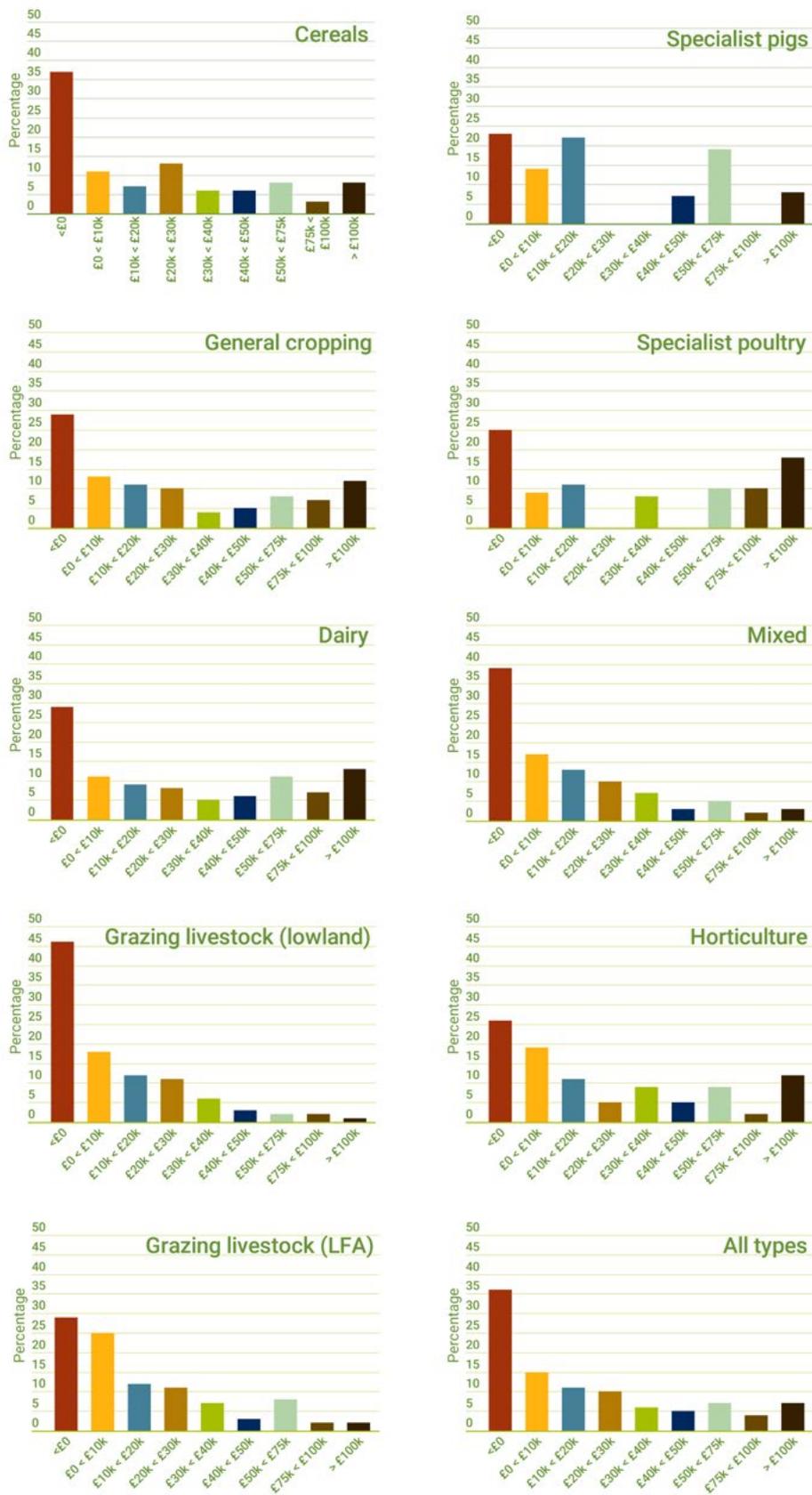
payments¹⁶. Defra analysis suggested that removing direct payments would have changed the 16% of farms making a loss to 42%, although this falls to 19% once depreciation is taken into account.

The income stream for different sectors varies significantly, primarily because direct payments are largely allocated based on areas of land. Small farm holdings of less than five hectares do not qualify for direct payments, which we have been told has had the indirect consequence of accelerating the trend towards larger holding sizes, particularly in the horticultural sector.

In 2016/17 almost 64% of farmers used diversification to supplement farm income and just over a quarter of these had more income from diversification than from agricultural production, suggesting they are more land managers than producers.

16. Direct payments are paid to farm businesses based on the amount of agricultural land they maintain. In England in 2016 £1.65 billion of payments were made across 85,000 farms. 10% received half, 33% received less than £5000. (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/740669/agri-bill-evidence-slide-pack-direct-payments.pdf).

Figure 9: Proportion of holdings in each net income bracket by sector (net income includes allowances for farmer salaries, depreciation and direct payments where eligible).



Diversification brought in a total of £620 million income across England, with letting out buildings for non-agricultural use being both the predominant type of diversification and the most profitable. Other activities included sport and recreation, processing and retailing farm produce, tourism accommodation and catering and renewable energy sources such as solar energy farms, wind turbines and anaerobic digestion.

Figure 8 shows the variation and sources of average farm business income for the major sectors. On average, cereals, livestock grazing, and mixed farming all make a loss from agricultural activity.

Average figures however do not tell the full story and to illustrate the extent of the variability across the sectors in any one year, Figure 9 shows the distribution of *net* farm incomes (after adjustments for costs) for farms in each major sector in 2016.

Direct payments have been a key source of income for farming, but the distribution and dependency on these also varies significantly.

Two key elements of direct payments are the basic payment and greening schemes. In 2016 farms in England received £1.65 billion in total payments. Greening represents 30% of payments but some of the measures implemented are failing to meet their environmental objectives and the EU Court of Auditors found a significant element of deadweight in the payments.⁽¹⁷⁾ The distributions of these payments are shown in Figures 10 and 11.

In 2016, 10% of recipients received 47% of the total payment (some of these larger payments were made to co-operatives or other business collectives rather than individual land holders).

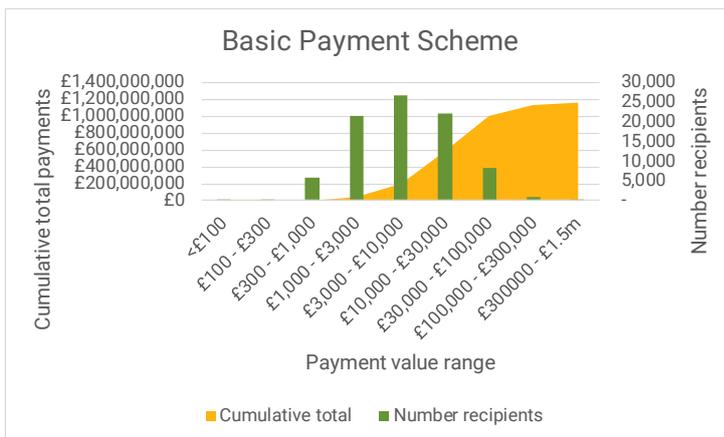


Figure 10: Distribution of Basic payment scheme payments

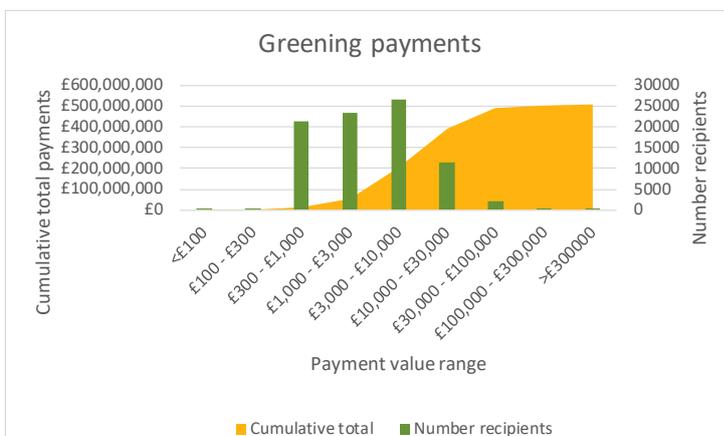


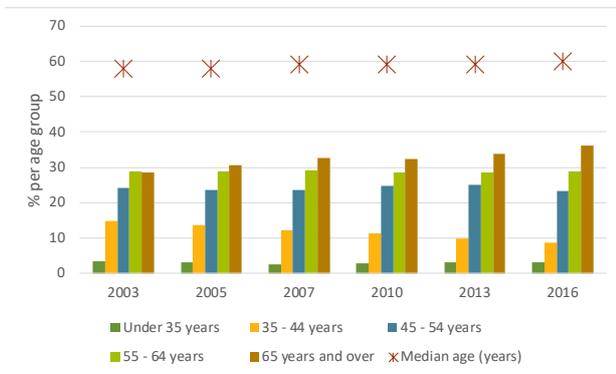
Figure 11: Distribution of greening payments

17. European Court of Auditors. 2017 Greening: a more complex income support scheme, not yet environmentally effective. (https://www.eca.europa.eu/Lists/ECADocuments/SR17_21/SR_GREENING_EN.pdf).

Behaviours and risk management

Farm households are also often supported by other sources of income either from other family members or second jobs, and 40% of principal farmer households said this external income exceeded the farm income. A Defra survey⁽¹⁸⁾ found that for many, profits were not the primary reason for farming: 93% agreed that the lifestyle is what they enjoy, 91% that maintaining the environmental assets is a priority and only 79% that farming is about maximising profit.

Figure 12: Age demographics of farmers 2003 - 2016



The age demographics for farmers has remained reasonably constant over the years (Figure 12). The median age is around 60, with fewer than 3% being under 35 and nearly 60% over 55 years of age⁽¹⁹⁾.

The Defra farm business survey⁽²⁰⁾ of farm holdings in England shows significant variations in farm business and risk management practices. Dividing farms into four income brackets, the top income bracket was more than twice as likely to look at the profit and loss account. This may be a factor contributing to the success of the business or it may reflect the focus of the farmer (some farm for lifestyle rather than profit).

The Defra farm business survey shows the top three most popular sources for obtaining farming advice and information were specialist independent farm advisers, the farming press and friends, colleagues or family (Figure 13).

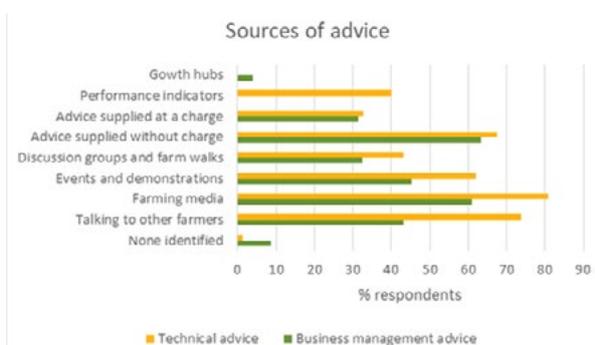
Farmers are unwilling to pay for advice: over 80% of farmers indicated they would like some form of advice if a government-funded independent adviser were to visit the farm. However, the majority (58%) would be unwilling to contribute to the cost.

This survey also showed farmers' risk management practices vary considerably and a significant proportion were unclear of the benefits of risk management (Figure 14).

One category of risk management was the use of biosecurity. Figure 15 shows the poultry sector had a high proportion of farms using biosecurity practices, while the more extensive grazing livestock sectors had relatively low proportions. The sample size was small, so the confidence limits are also variable, particularly for the pig sector, but the low responses to the use of biosecurity measures in the livestock sectors (with the exception of the poultry sector) are disappointing. We are aware that willingness and ability to implement risk mitigation measures may be influenced by the resources of a particular farm and the effect of regulation on smaller businesses in particular.

A proportion of farmers take out animal and plant health insurance (Figure 16 and 17). Insurance is expensive, and many farmers will simply not regard it as affordable. We understand that the big poultry units are the most likely to insure due to the risks around infectious diseases and note that as a consequence this may drive some good practice with regard to biosecurity practices in this industry.

Figure 13: Responses to Defra survey: Sources of business and technical advice



18. <https://www.gov.uk/government/collections/farm-business-survey>

19. Note that on a family-run farm this might reflect who completes the survey.

20. <https://www.gov.uk/government/collections/farm-business-survey>.

Figure 14: Responses to Defra survey:
Risk management practices

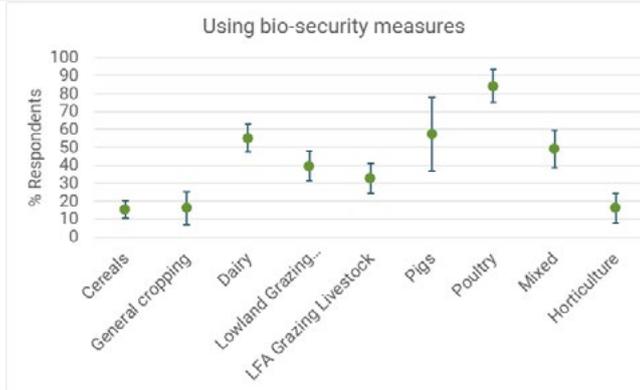
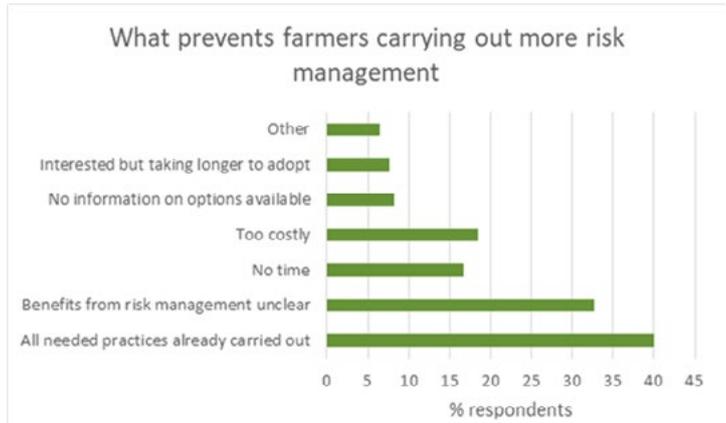


Figure 15: Responses to Defra survey:
Biosecurity measures

Figure 16: Responses to Defra survey:
Animal health insurance

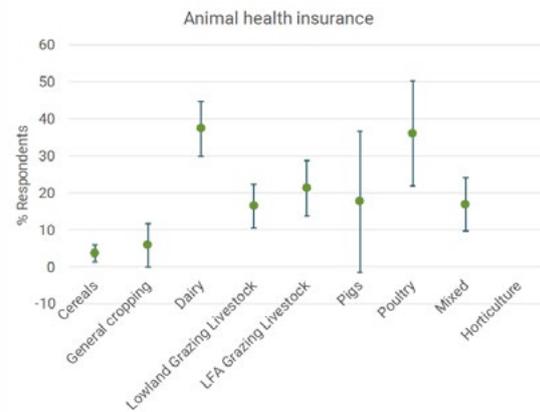


Figure 17: Responses to Defra survey:
Crop protection insurance

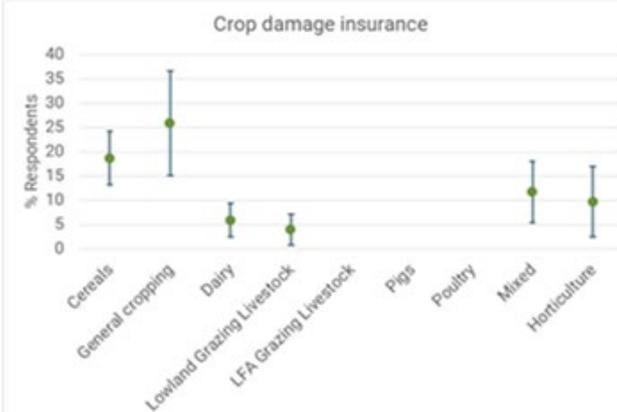
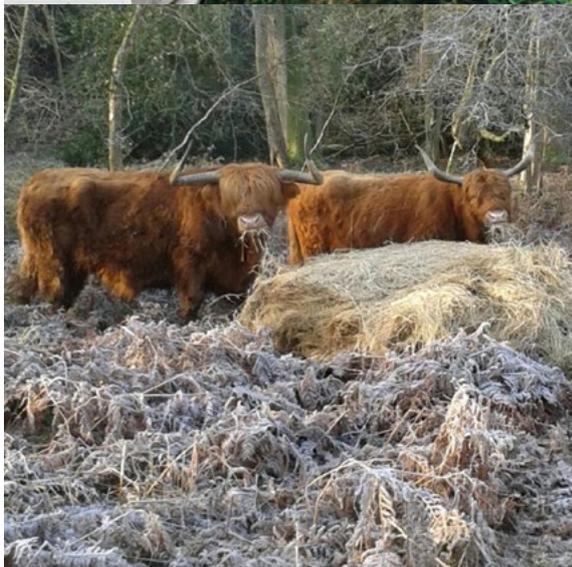


Figure 17: Responses to Defra survey:
Crop protection insurance



Plant and animal health

Plant health is key to farming profitability, with an estimated 5 to 20% loss in cereal productivity caused by pests and pathogens. The survey suggests the uptake of crop damage insurance is limited (Figure 17).

Changes in the use of neonicotinoid pesticides (due to their potential for harming the bee population) has shown how delicately balanced the ecosystems and farming are, with a trade-off between production and protection. Often this trade-off is difficult to assess until after the event, as impacts are gradual. The dependency of farming on pollinators such as bees is critical (pollinators are estimated to add £600 million per year to the value of UK crops through increased yield and quality), but populations have been in decline for nearly 40 years. Several factors such as disease, habitat loss, climate change and the use of pesticides are thought to have contributed, with no single predominant factor⁽²¹⁾.

Farmers also use chemicals to control plant growth (minimum tillage relies on glyphosate use prior to drilling) and disease. While the use of antimicrobials in animals is controlled and they are not used to promote growth, their use still contributes to the generation of antibiotic resistance strains and consequent long-term challenges for both human and animal health.

Poor animal health has a direct impact on farm incomes through increased mortality, abortion rates and poor growth rates. Replacing stock is usually the highest variable cost for livestock farmers, and veterinary services and medicines are also significant costs related to poor disease status. Estimates suggest the national cost of endemic diseases are significant (£50 million bovine viral diarrhoea, £100 million intestinal parasites of sheep, £180 million mastitis in cows).

21. <https://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN06656>

BOVINE TUBERCULOSIS



Bovine tuberculosis (TB) is a complex and difficult disease to control. The course of the disease is slow, taking months or years to kill an infected animal. The disease can spread from infected animals **before any clinical signs are evident.**

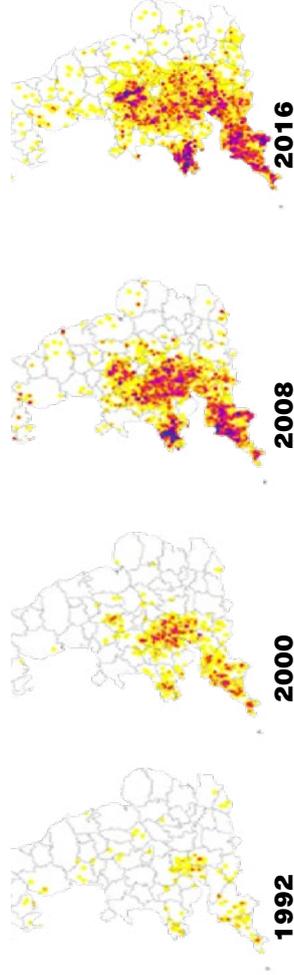
The implications of different (dairy) systems for bovine TB are complex. Intensive systems facilitate a reduction in the risk from wildlife and can reduce cattle-to-cattle transmission through, for example, pasteurising colostrum. On the other hand, grass-based extensive systems can reduce close cattle-to-cattle contact.

Deadweight on the sector

“The Review Panel are acutely aware of the burden this disease places on the welfare and well-being of farmers and their families, and the distress many people feel about badger culling. There are no easy answers to reducing disease levels and what is required is new drive and a concerted and concentrated effort by all sectors involved.”*

“Bovine TB incidences in England, definitely in cattle and possibly in badgers, are at best roughly stable.”

**Bovine TB Strategy Review (2018)*



Reactor density maps

Bovine TB was almost eradicated in the 1970/80s, but began to increase again in the 1990s. Hotspots remained in the West and South West.

Foot and mouth disease in 2001 had a marked effect on TB control when TB testing was suspended for a year and farms restocked without any pre- or post-movement testing.

Signs of the disease include:

- ☞ weakness
- ☞ loss of appetite
- ☞ weight-loss
- ☞ fluctuating fever
- ☞ intermittent hacking cough
- ☞ diarrhoea
- ☞ large prominent lymph nodes

Figure 18: Bovine tuberculosis

Bovine tuberculosis

Bovine tuberculosis is considered to be the most pressing animal health problem in England (Figure 18). There are no easy answers. The recently published Bovine Tuberculosis Strategy Review⁽²²⁾ has concluded that what is needed is a new drive, and a concerted and concentrated effort by all sectors involved.

The science suggests that a combination of measures could collectively make greater inroads. The recent review proposes a number of ways for the government to tackle the disease. In its view, we must always remember that this is a disease control campaign with a clear objective and to be successful, unfortunately, requires sacrifices.

One recognised and uncontroversial measure in the hands of cattle-keepers is good biosecurity, to separate cattle from badgers, cattle from other cattle on neighbouring holdings, and potentially infected from uninfected cattle. However, take up is dispiritingly low.

This may well be due to the large number of rules and regulations that are in place, because of the complexities and multiple consequences of the disease – epidemiological, economic and social. The rules can foster a philosophy of living with the disease, with farmers developing a fatalistic view about the risk of bovine TB infection⁽²³⁾.

To change requires a will on the part of the industry and the government, working with farmers' trusted advisers, vets in particular. The review sees many advantages of retaining high-level policy-making in Defra but devolving much of the disease control operations to a new body that would take over functions currently performed by the various bodies in the Defra group and by local authorities. The review argues that centralising functions in this way would be more efficient, avoid duplication and allow greater co-ordination and agility, and that it would be easier for the new body to work collaboratively with industry and other stakeholders, encouraging shared ownership of the problem. The government is considering the review's recommendations.

Bovine TB is a notifiable disease and exactly how it is monitored and controlled affects our ability

to trade. The complex statutory underpinning of surveillance and control, involving both national and European legislation, makes agile and adaptive management of the disease very difficult.

A very unfortunate consequence of the controversy around badger culling and the politicisation of the debate has been a deflection of focus from what can be done by the individual farmer and by the livestock industry to help control the disease. In particular, the poor take up of on-farm biosecurity measures and the extent of trading in often high-risk cattle is thought to severely hamper disease control measures.⁽²⁴⁾



22. <https://www.gov.uk/government/publications/a-strategy-for-achieving-bovine-tuberculosis-free-status-for-england-2018-review>

23. Maye, D., Enticott, G., Naylor, R., Illbery, B., & Kirwan, J., (2014) "Animal disease and narratives of nature: Farmers' reactions to the neoliberal governance of bovine Tuberculosis" *Journal of Rural Studies* 36 401-410.

24. Bovine TB Strategy Review (Defra 2018).

Environment and ecosystems

Farms are necessarily deeply connected with the environment and ecosystems. They are dependent on water, soil, air and pollinating insects for production, but they can affect the environment and ecosystems by drawing on these resources and depleting or degrading them.

Our soil, water, air quality, and the ecosystems that support wildlife and pollinators have, in many cases, suffered over time by farming practices that were once thought to be good or beneficial. The intention was to improve the national food security position, by introducing practices such as hedge removal to increase the size of fields. This enabled larger machinery to be used which, together with the use of fertilisers and pesticides, increased the scale and rate of production.

Soil

Soil is an essential natural resource and can be regarded as a living system with a rich biodiverse population of organisms. Its structure and content are key in sequestering and storing carbon (more than 95% of land carbon in the UK is stored in soils) and contributing to plant and tree health, nutrient cycling and water drainage and storage. But poor management of soil can



result in erosion, compaction and depletion of nutrients and organic matter.

Wind and water erode soil, particularly bare soil or soils exposed on slopes or other vulnerable areas (2.9 million tonnes of topsoil are estimated to be lost in this way each year in the UK).

Erosion in turn leads to reduced fertility and pollution in watercourses. In the UK, 36% of crop land is thought to be at risk of erosion.

Livestock and heavy machinery used on farms can compact soil, leading to poor drainage, increased flood risks and reduced crop yields. Depletion of soils' nutrients, structure and biodiversity can be the result of production and there have been estimates that some of the most productive land in East Anglia will be lost within 40 to 60 years.

The House of Commons Environmental Audit Committee urged for a national soil health monitoring scheme to be established, noting the crucial role of soil and that neglecting soil health could have dire consequences for food security, climate change, and public health⁽²⁵⁾.

Water

Water quality can be affected by poor land management in a number of ways. Soil and sediment enter water when rain and wind erode soil. Fertilizers, pesticides and slurry or other organic matter enter through run-off or through groundwater aquifers. Nutrients from fertilisers,

25. <https://publications.parliament.uk/pa/cm201617/cmselect/cmenvaud/180/180.pdf>

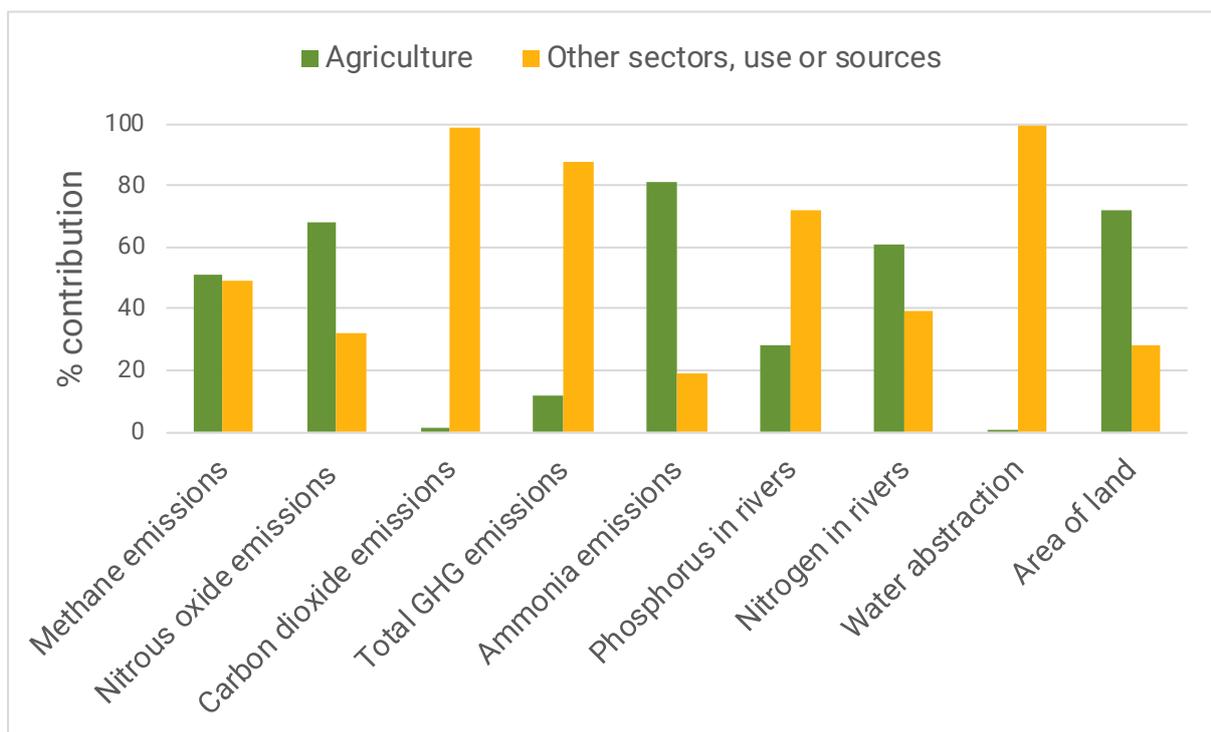


Figure 19: The contribution of agriculture to emissions and contamination of rivers

including nitrogen and phosphates, can cause harmful blooms of plant life that de-oxygenate rivers and lakes, impacting fish and invertebrate populations and causing ecological damage. Pesticides and ammonia can be toxic to many aquatic plants and animals.

In England in 2013, 78% of all surface and groundwater bodies failed to achieve good status with one third failing due to an agriculture or land management reason. More than 50% of nitrate, 25% of phosphate and 75% of sediment pollution comes from farming.

Good agricultural practice can improve things through careful management. Between 1985 and 2015 there was a 32% reduction in total nitrogen application and a 56% reduction in total mineral phosphate addition to soil in Great Britain. Zero tillage systems⁽²⁶⁾, planting of cover crops, management of hillside fields and watercourse margins, and reduction of compaction to retain water in upland catchments are some of the ways farmers can manage the effect of farming in their catchment area. There are 14,000 farmers, covering an area of 1.2 million hectares of land, actively engaged with catchment sensitive farming and 47,000 hectares of buffer

strips protecting water courses and features from agricultural damage.

Several water companies use catchment-based approaches to reduce water pollution. A good example is the Wessex Water Group who aim to reduce the amount of nitrogen entering the Poole Harbour catchment area and to protect drinking water sources by reducing agriculturally derived nitrate from the catchment. Within the target areas, they work with farmers to raise awareness of water quality issues, share results of water, soil, crop and manure testing carried out for farmers, and provide advice and information on ways to improve the efficient use of fertiliser and pesticides. In some cases, farmers may be compensated for adopting alternative practices such as growing cover crops to reduce leaching while locking up nutrients that can be utilised by subsequent crops.

Air

Farmland is estimated to contribute £182 million of air filtration benefits in the UK⁽²⁷⁾.

Agriculture is responsible for 83% of UK

26. Zero or minimum-tillage systems rely heavily on herbicides.
27. 2015 value at 2017 prices.

ammonia emissions (Figure 19) and a significant amount of greenhouse gas emission (methane and nitrous oxide), primarily from livestock farming and fertiliser use.

Environmental schemes

There are an estimated £4 billion worth of environmental benefits from farmland, forestry, woodland and trees per year. In 2017, the total area of land in higher-level or targeted agri-environment agreements in England was 1.4 million hectares.

Cost-benefit estimates show for each £1 of support put into an environmental scheme there are returns of £3.69 for countryside stewardship, £3.20 for forestry creation and £5.60 for forestry management.

Agri-environment schemes require land managers to implement environmentally beneficial management and to demonstrate good environmental practice on their land. The higher-level or targeted schemes promote environmental management that conserves wildlife, maintains and enhances landscape quality and character, protects the historic environment and natural resources, and promotes public access and understanding of the countryside. The entry-level type schemes aim to encourage large numbers of land managers to implement simple and effective environmental management on their land.

Challenges from a regulatory perspective

Variability, dynamics and uncertainty

There is significant variation in what constitutes a farm; size, scale, sector, combination of products and methods of production (extensive, intensive, organic and so on). How each of these is physically situated, the area of the country, the nature of the soil, the availability of water and the typical weather patterns all impact both the production system itself, and the effect that the production system has on the environment (soil, water and air) and associated ecosystems

in the area. We believe these systems are intertwined and need to be managed collectively, not as separate entities. Only the farmer or land manager can take the lead in this management.

Farming is an uncertain business, often with long production cycles, and operating in an unpredictable environment where there is significant external volatility in costs of inputs, prices for products and weather. These uncertainties will create pressures on farmers and land managers that are likely to influence their behaviour as they make decisions about the direction of their business and what they can afford to invest.

The purpose of regulation is to change behaviours – to support and influence people to make decisions and act in ways that would not necessarily be their normal first choice. To be effective, regulation must take account of all the variability, dynamics and uncertainties that operators face, as these are all drivers of behaviour. Clearly these factors are very different for different farmers and regulation must be able to adapt to this heterogeneity.

Responsibility, accountability and behaviours

The different types of business set up (from single owner-occupier to large conglomerate organisations) and the nature of farming practice where land is owned by one party but utilised for production or diversified activity by another, raises a regulatory challenge to ensure the responsibility and accountability falls where it should – on those able to decide plan and act. The different reasons for farming also need to be taken into consideration. The behaviours of those who are actively running a profitable business and managing their balance sheets will be driven by markets and associated demands, while different things will drive those who are focused primarily on lifestyle and the environment rather than profit. All will be affected by whether they are willing or unwilling, able or unable to respond to risks and opportunities that affect their holding. Regulators need to take this into account as it is an essential element in the choice of regulatory strategy.



Why we regulate

At its most basic, regulation is about changing behaviours. We regulate because we want to influence people to act in ways that they may not otherwise choose. Regulation is much more than the enforcement of a set of rules. As we explain in our next chapter, modern regulation involves using a wide range of interventions (including providing advice and incentives) to change behaviour, decisions and actions, and thereby achieve desired outcomes. Governments regulate where markets alone will not drive the right behaviours and deliver the best outcomes for society.

In regulating farming, we believe the government's overarching goals are to:

1. Safeguard, maintain and enhance plant and animal health and animal welfare;
2. Secure, maintain and enhance good management of farmed land and the natural environment;
3. Facilitate agricultural trade.

These goals are distinct from each other, but the things that are regulated to achieve these goals are all interconnected. Production systems, ecosystems and the non-living elements of the environment – the land, water and air – are interdependent. Regulating any one of these in isolation, without taking into account the other parts of the system and what might happen to them, is not an effective or efficient way of doing things. Regulating discretely but not holistically is unlikely to meet the collective goals.

REASONS GOVERNMENTS REGULATE

1. Public health could be at risk
2. Hazards or harms are not easily detectable or remedied
3. Collective action is needed to control a hazard or redress harm
4. To act as the competent authority to support international agreements

The economic and social impact of harm

Farms are complex working environments, with food production deeply integrated with the environment and ecosystems. They carry both local and national risks. Poor practice on farms or elsewhere in the production chain can lead to harms such as:

- pollution of watercourses, with consequences for water quality and ecosystems;
- an outbreak of exotic animal disease;
- erosion, compaction or degradation of soil;
- poor animal welfare; or
- spread of plant diseases.

Such harms are often desperately upsetting for individual farmers and landowners, and the wider public, and have significant impact locally, regionally and nationally. They can reduce productivity, restrict individual farmers' or the nation's ability to trade, and be extremely costly to remedy. Regulation has an enduring role to play in managing these risks, and in dealing with them effectively when they materialise, to limit social and economic cost.

All the farmers we have spoken to accept that

the importance of managing these risks means there is a compelling case for regulation. Some, however, regard compliance with the rules as optional, and few have been able to see that regulation could and should be much more supportive. They have very little experience of regulation as anything more than a set of rigid rules.

Understanding hazards and harm

Understanding the nature of harms and the challenges of harm reduction is key to developing an effective regulatory system.

Harms are the consequence of an incident where interaction with a hazard causes damage to health, welfare or, in the case of non-living things, structure or integrity. Hazards can be biological or chemical agents but equally they may be an activity (such as using heavy machinery which compacts soil, or the excessive use of nitrogen-based fertilisers). Risk is a

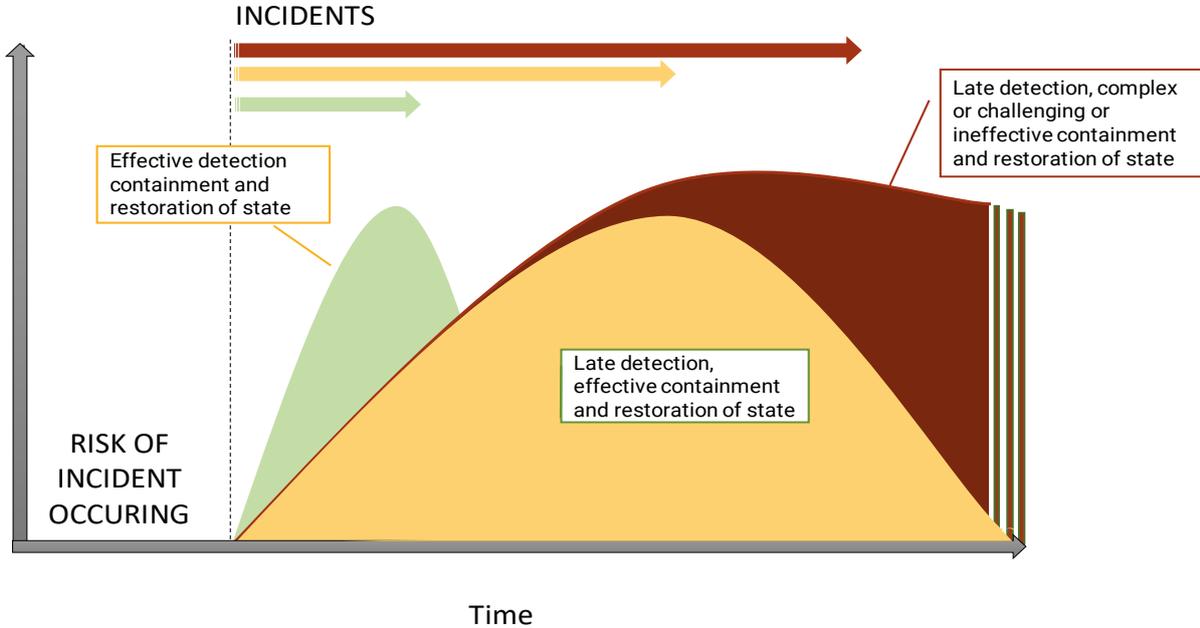
measure of the combined likelihood of an incident occurring and the degree of harm the hazard can cause.

The potential consequences of some incidents may be clear from previous experience of similar incidents with the same or similar hazards. Where incidents are likely to result in significant economic or health issues, the government puts contingency measures in place to ensure a rapid and effective response (for example contingency planning for an exotic disease outbreak⁽²⁸⁾).

However, not all incidents or indeed hazards are the same. Some are insidious, and the hazard may be difficult to detect, or the harm may not be understood for some time or until considerable harm has been done. In these cases, the underlying hazard may be diffusely spread, and containment becomes a significant long-term challenge such as bovine TB. Figure 20 illustrates these differences.

If the harm is not understood for some time and the hazard has created extensive but undetected damage over a period of time (for example

Figure 20: Profiles of emergence and remedy of different types of harms



28. <https://www.gov.uk/government/publications/contingency-plan-for-exotic-notifiable-diseases-of-animals-in-england>

damage to wildlife networks), then restoring things to how they should be can be a long-term challenge as well.

Prior to an incident that gives rise to harm, there is a period where behaviours, decisions and actions can influence the probability of the event happening. Good behaviours, decisions and actions would reduce the risk and poor ones would increase the risk.

Once a hazard emerges or an incident occurs, the most important thing is to recognise it, and the harm it may cause, as swiftly as possible. Where the hazard is well-characterised, this may be through an appropriate programme of surveillance, but some hazards remain undetected until an incident and harm is observed. Disease can be symptom-free, making it hard to detect. And sometimes, hard-to-see hazards accumulate into harm. In some instances of wildlife food source contamination, the harm is only apparent when the contaminant has accumulated in tissues over time.

Once an incident has occurred there are two things that must be done. Firstly, the prevention of further associated events, by containing or removing the hazard in the most appropriate way. Secondly, the situation must be restored, by stopping the continuing impact of the hazard and reversing the damage where possible.

The nature of hazards and associated harms is varied and complex where farming production systems, ecosystems and the environment interact. For example, at two extremes we have:

Rapidly spreading, exotic disease of animals or birds (such as avian influenza) with possible human health implications and a farming practice (such as removing hedgerows) with long term implications: the harm is only evident in hindsight, materialises over a very long period of time and is cumulative and widespread in its nature.

In the first case, the hazard and potential harm is recognised as a result of experience (often elsewhere, rather than in this country). It is possible to prepare for incidents, reduce risks and enable surveillance and containment measures to be effective and swift.

In the second case, the harm to ecosystems and wildlife networks is evident only after the passage of considerable time and indeed after the hazard (for example, the removal of hedgerows) is no longer prevalent. In these sorts

of circumstances, identifying the extent of the harm and reversing the damage is challenging and long-term.

In both cases it requires collective and concerted action to mitigate the harm. In the first

THE COST OF DEALING WITH HARMS

Bovine tuberculosis controls in England are estimated to cost the taxpayer £70m a year, with costs to farmers running to a further £50m

The cumulative cost of water pollution in England and Wales was estimated to be up to £1.3 billion per annum in 2010

The foot and mouth disease outbreak in 2007 cost the government an estimated £47m and the livestock industry an estimated £100m

The 2001 outbreak was much more debilitating and distressing, with over six million animals culled for disease control or welfare reasons and costs of several billion pounds.

scenario, containment measures are necessarily rule-based and do not take immediate account of individual situations, sometimes resulting in further indirect harm (for example where animal movements are stopped, creating welfare issues). In the second example incentivisation is needed, to drive changes in relevant behaviours, decisions and actions.

Preventative measures will always be different to actions taken once an incident has occurred. The goal prior to an incident is to reduce the risk by minimising the likelihood of the incident occurring, and therefore the degree of harm that would result should it occur. After an incident occurs, the goal is to control the hazard and extent of harm. Both may require regulation.

Different regulatory strategies are needed

dependent on the scenario. Some regulatory approaches are by their nature 'after the event'. So, an incident occurs, it is logged as a result of non-compliance and a penalty ensues.

The problem with this approach to regulation is that it does little to create the active engagement in hazard identification and risk management that is needed to prevent incidents in the first place. Farmers and landowners find themselves 'done to', rather than 'doing'.

To achieve a better partnership requires sufficient understanding on all sides, to enable identification of hazard and evaluate what actions would reduce the risk of an incident. Each farm is different, so this has to be in the context of the farm, its production cycles, the associated ecosystems and the non-living aspects of its environment.

We have set out in the first part of this report how varied the circumstances of individual farmers can be. We think it is so important to understand that this can affect how willing or able individuals are to make decisions and take actions that reduce the chance of risks materialising and causing harm, or to redress the harm once it has occurred.

Facilitating national and international trade

We have considered the role of regulation in dealing with harms. Our collective national ability to do that successfully is a critical aspect, underpinning trade with other countries. We also regulate to protect farming, public health and consumer choice through controls in internal markets at key points in the value chains in each sector.

International trade agreements

Our trade within and beyond the EU requires us to have national systems in place that give the countries we trade with confidence about the safety and quality of things we export. Equally, we need to have confidence about things brought into our country.

The key elements of such systems are tried and tested. They are centred around the ability to detect, contain and deal with things such as animal or plant disease, contaminants such as

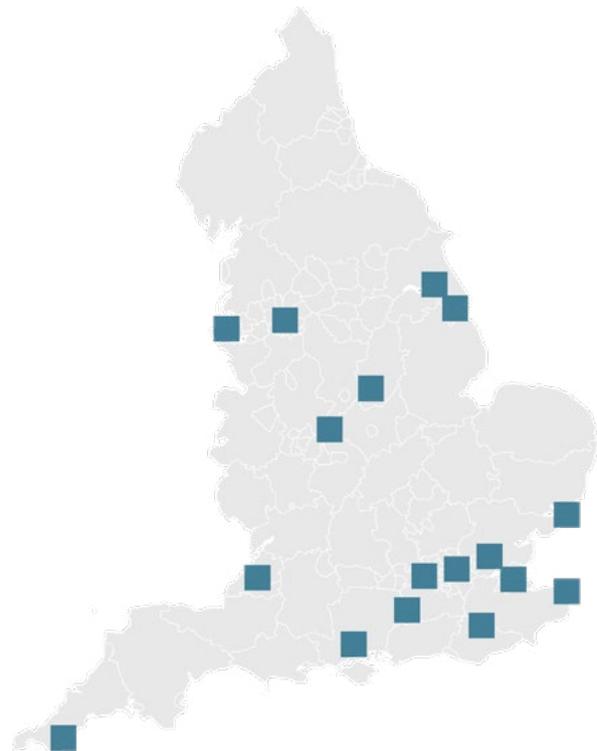


Figure 21: Border inspection posts

mycotoxins or undesirable levels of chemicals or antimicrobial agents.

These national systems include surveillance, testing and certification, movement controls and other containment such as quarantine, systems to identify and trace certain categories of plants, livestock, animal by-products, feed or seed.

For imports, these controls may start with testing and certification prior to importation. Veterinary checks for signs of disease are also conducted at border inspection posts (Figure 21), or in some situations at other sites where for example an animal may be quarantined.

When products are moved through a sequence of processing steps toward the consumer market, there are also requirements to register and, in some cases certify the capabilities of, those handling the material: animal by-product plants. There are over 7000 of these in England (Figure 22) and material will pass through this network of businesses as it progresses through different stages of processing. The regulation of these plants acts as both a containment control, by ensuring the facilities have the correct handling capabilities and also a tracing control,

Type of plant	Number
Intermediate activity / storage plant	443
Derived products storage plant	74
Incineration/co-incineration/combustion plants	900
Processing plants	60
Purposes outside of the food chain	1023
Biogas plants	96
Composting plants	52
Petfood plants	224
Specified users	1658
Collection centres	269
OF/SI plants	14
Other registered operators	2378
Total	7191

Figure 22: Animal by-product plants

should products have to be removed or stopped from entering the market.

Market certification – key control points

Another aspect of trade that is protected by regulation is the marketing of certain key inputs into agriculture. This aspect of regulation protects the industry from devastating effects of poor-quality or harmful products, by ensuring that appropriate testing takes place before the product is made available to farmers (for example seed, feed, fertiliser, pesticides).

The marketing of certain horticultural products is also subject to regulation, to ensure the country of origin is correctly shown and that similar quality standards have been applied.

This allows traders to have confidence to purchase products without them being seen.

The marketing of eggs is also regulated. This is in part for public and animal health reasons (allowing the tracing and control of infectious disease outbreaks) but also for grading and sourcing purposes, similar to horticultural produce.

Conclusion

The reasons why we regulate are interconnected and indivisible. Some hazards will have long legacies and damaging consequences for our environment and for biodiversity. The government has a new emphasis on restoring harms of the past, set out in its 25-year Environment Plan, its Health and Harmony 2018 policy statement, and its subsequent September 2018 policy statement. It is more possible to regulate to deliver these ambitions as we are released from a pan-EU approach.

To restore, as well as to protect from harms as the government intends, requires a greater breadth of regulatory approaches (including incentives), greater than we are used to or have been able to deploy whilst in the EU and through CAP. This requires a different, modern regulatory culture. We explore this in the next chapter.



The building blocks for effective regulation

Regulation is about changing behaviours. Since the 1980s, regulation in many sectors has moved steadily away from the approach based on deterrence⁽²⁹⁾, toward mechanisms that support changes in behaviour. Here we explore the building blocks and approaches to regulation, how these approaches differ and how choices can be made by the regulator.

Core elements of a regulatory system

The core elements of any regulatory system (Figure 23) comprise:

- the regulator;
- those people who are subject to regulation (in this case farmers and land managers);
- documented requirements setting out what must be done or achieved; and
- documented consequences that can flow when requirements are met or not met.

Farmers have responsibility in the context of their farm, but their farms are part of a bigger, complex and interactive system. The regulator has a responsibility to ensure that collectively farmers are also acting responsibly, so that goals are met across the system.

The regulator

Regulators can be regarded as the 'referees' of the systems they regulate. They operate in

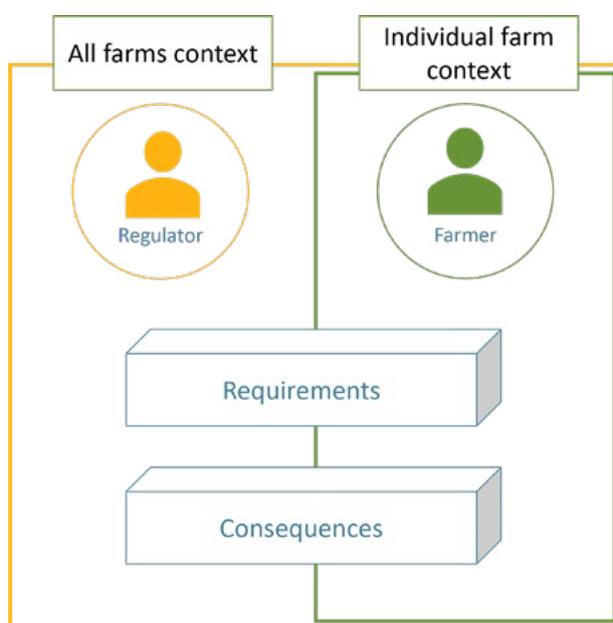


Figure 23 Core elements of a regulatory system

complex environments and must balance the wants and needs from different parties. It follows that they must behave and act objectively, impartially and consistently, without conflict of interest, bias or undue influence⁽³⁰⁾.

An Act of Parliament is needed when ministers are given wide-ranging powers to subsequently enact requirements that may have significant impact, without further recourse to parliament or public consultation. A good example of this is the legislation that underpins responses to exotic disease outbreaks, where ministers are enabled, with good reason, to determine courses of action and act rapidly.

29. Ethical business practice and regulation (2017) Hart Publishing.

30. https://read.oecd-ilibrary.org/governance/being-an-independent-regulator_9789264255401-en

The farmer or land manager

It is important that the regulator adequately understands those it regulates. In farming and land management this is a big task. Good regulation would take account of farming today, as we have described it in Chapter 1, and recognise that each farm and farmer is different: different location, different motivations and aspirations, different ways of farming and farming different things.

Effective regulation is about changing behaviours, decisions and actions, where there is a need to do so, to reduce the risk of harm or to remedy a harm. To change, farmers and land managers need to be aware of the need to change, be motivated to do so, understand what it is they must do and be able to do it.

Finding the right ways to get people to change when they need to is a challenge facing all modern regulators. Over the last 20 years, regulatory thinking has matured and moved away from a simple, deterrent approach to regulation, as it has been shown not to deliver as effectively as other approaches. The threat of increased penalties does little to increase compliance and many regulators have moved to a supportive and persuasive approach in recent years⁽³¹⁾, because it has been more effective overall.

People can be persuaded to change by incentives, and we look at that more closely below. However, incentives should not be the starting point for motivating farmers. Instead, the regulator should start with the building of awareness, engaging farmers and their representatives in setting standards and promoting peer pressure to meet these standards.

Requirements

Requirements are the point where the regulator and farmer must have common understanding. The purpose of the requirements is twofold:

- to establish a standard that the farmer must meet – what they must do or what they must achieve;
- to establish a standard against which a regulator can determine whether someone is compliant with the law or not

– did they do or achieve what is set out in the standard;

The standard becomes the common reference point for both farmer and regulator. The main thing is that the standards need to make sense, otherwise there is little chance that they will result in the desired behaviours, decisions or actions.

Well-designed standards are transparent, that is, they are understandable to those who must use them. They are accessible, that is, those subject to a standard find them easy to use and are able to apply them to their situation. They are also congruent: there is a golden thread, a clear relationship between the standard and the underlying policy objective to prevent, manage or remedy a harm.

Finally, standards should be enduring. This does not mean that they should not change, but changes must be for good reason and the farmer should not be subject to constantly shifting expectations.

There is a hierarchy of how and where standards can be set out, reflecting the hierarchy of legislation (Figure 24) and the degree to which Parliament has demanded scrutiny of the detail.

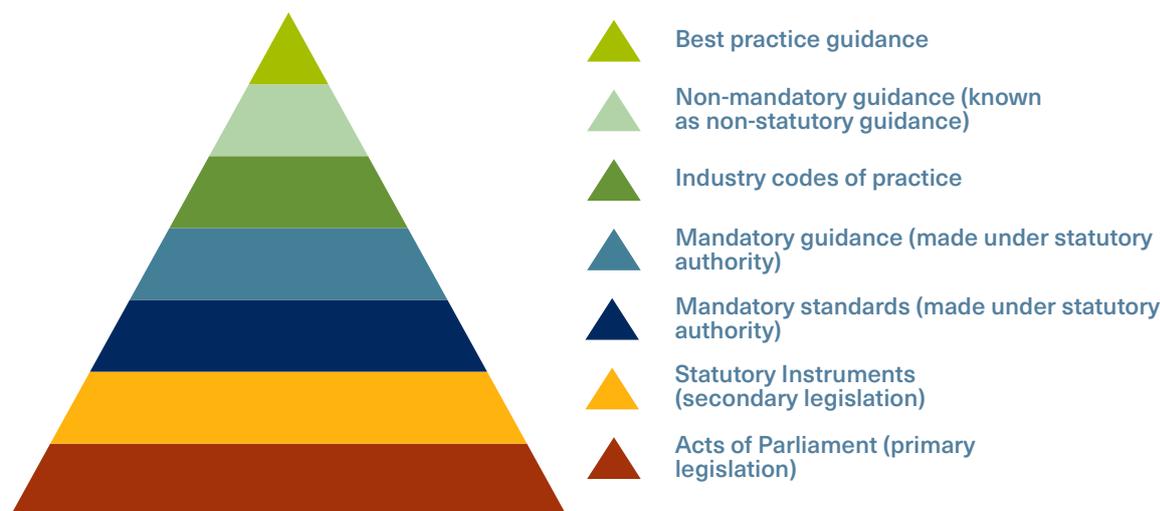
Guidance is often needed where standards are set in legal instruments, to make them more understandable, while still keeping true to the legal intent. This guidance is often called 'statutory guidance'. It becomes the standard in day-to-day dealings between the regulator and those who are regulated. Both the regulator and farmers need to be clear about the legal status of guidance and differentiate that which supports and informs farmers (known as 'non-statutory guidance'), and that which sets out things that must be done or achieved. How the standards are framed depends on the regulatory approach, which we discuss below.

Not all regulatory standards are set out in legal instruments. Some regulators are empowered to set mandatory requirements themselves, under delegated statutory authority. To do so they are expected to consult widely, and the best standards are always developed in consultation with those who must use them.

Industry standards, such as some of the farm assurance standards, are standards that the industry sets for itself. They are not used by

31. Ethical business practice and regulation (2017) Hart Publishing.

Figure 24: Hierarchy of legislation and standards



regulators to assess compliance, but in some regulatory approaches that can play a part through earned recognition⁽³²⁾.

Best practice standards are just that. They set out what is thought to be best practice. Regulators can produce best practice standards, and other interested and sometimes specialist organisations or associations do so as well.

Negative consequences – enforcement action and penalties

It is unrealistic to expect all farmers to be willing to do the things that are needed to meet relevant standards. When farmers are able to do the right things, but are simply unwilling, there must be consequences. Otherwise it is seen as unfair by those who are doing the right thing for their sector, the environment and dependent ecosystems.

These consequences can vary but should be proportionate to the situation. These are collectively referred to as enforcement actions and regulators are required to set out their enforcement policy⁽³³⁾, making it clear how and when each option will be used. The first objective is to bring the individual's behaviour, decisions and actions back into line with the standard. That is not to say that punitive sanctions should never be imposed, but they

need to be justified, as we discuss later.

Enforcement activity is often wrongly seen as the primary or only function of a regulator and is often conflated with monitoring. But high levels of enforcement should send signals of failure in the regulatory approach – the hazard or harm may have become a reality, it has not been prevented. Successful regulation should not result in significant levels of enforcement action. Instead, it should result in compliance, making formal enforcement steps unnecessary.

Positive consequences – incentives

There are situations where it is appropriate for regulators to incentivise the right behaviours, decisions and actions.

This includes situations where to reduce the risk of, or to remedy, a harm, changes are needed that are not the first course of action for the farmer. Other situations might call for actions that disproportionately burden the farmer in terms of time or productivity.

These situations can be local to a particular farm. Alternatively, they may relate to complex challenges in the geographical area the farm is in. The hazard may not have originated within the farmer's holding, but the harm may be widespread. By taking action, often as part of

32. Earned recognition is when regulation takes into account an individual's strong record of compliance, to reduce the burden of regulation on that individual.

33. <https://www.gov.uk/government/publications/regulators-code>

INCENTIVE OPTIONS

- Access to expert advice
- Grants or guaranteed loans
- Subsidies (opportunity payments)
- Reduced burden of oversight
- Compensation
- Contracts for infrastructure projects
- Contracts for other work
- Planning services
- Testing services (for example soil)
- Recognition

Figure 25: Incentive options

a collective approach to a problem, there is an opportunity to reduce the risks from a hazard or begin to remedy the harm.

To motivate farmers to take action in these situations some form of incentive may be necessary. Incentives can take many forms (Figure 25).

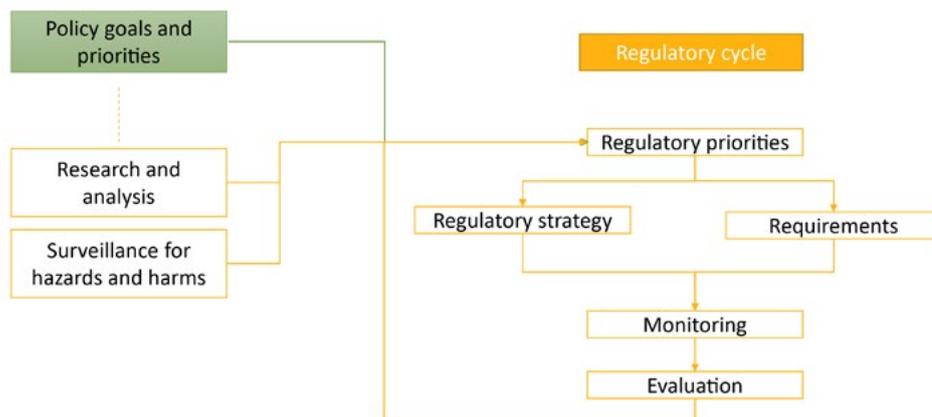
Other mechanisms

Rating systems are used by some regulators to drive compliance and raise standards. The Care Quality Commission rates care providers, hospitals and GPs. Ofsted rates schools.

Rating systems can play both ways. They can be an incentive for some, but not others. Research suggests they are most effective in emerging markets and where people are generally operating below the bar, but can get above it if they were sufficiently motivated to do so⁽³⁴⁾⁽³⁵⁾. They are particularly suited to situations where the consumer must make a choice.

Care needs to be taken in designing and using rating systems to ensure they do not drive perverse behaviours. Rating systems can become unfair or lead to the wrong outcomes, especially if consequences flow. Individual ratings must be derived consistently and with sufficiently validity to be fair to all involved.

Figure 26: Regulatory cycle to check effectiveness of approach and priorities



34. <https://www.nuffieldtrust.org.uk/research/rating-providers-for-quality-a-policy-worth-pursuing>

35. <https://www.thebritishacademy.ac.uk/publications/measuring-success-league-tables-public-sector>

Effective regulation

Good regulators check the effectiveness of the regulatory approach and make changes where needed (Figure 26). They take account of evidence and evaluation, and check for external changes in policy or other factors. Here, market changes, disease outbreaks or new threats can affect the effectiveness of regulation.

The government's goals and priorities

Public funding for regulation is provided in the context of achieving overarching priorities and goals of the government, just as with other publicly funded services. The regulator needs to be an active player in the setting of priorities and goals, although strategic responsibility and final decision-making will rest with ministers. The role of the regulator is to provide even-handed regulatory analysis, discourage poor policy proposals and encourage good policy proposals. There are no quick solutions to difficult problems and the regulator can provide a long-term approach with the stability needed to effect change ⁽³⁶⁾.

Regulators then play their full part in delivering the government's priorities and goals on the ground through their regulatory strategy, and operational delivery. The most effective regulatory strategies and delivery arrangements are well-matched to the context of regulation.

In farming for example, there is a significant seasonal factor to take into account.

Regulatory strategy

The regulatory strategy describes how a regulator goes about things. The regulatory standards the farmer must meet should be as stable as possible, but regulatory strategy is necessarily more fluid. It must adapt to changes in other, non-regulatory, drivers that affect the farmers decisions and actions. This responsiveness can include both long and short-term approaches.

Regulators use an assessment of risks and opportunities to help determine regulatory strategy and priorities. This is normally done at a system level (all farms) and an entity level (individual farms and how they compare). The objective is twofold: to help prioritise areas for active regulation (and consequence resource-planning for the regulator), and to promote priorities for individuals, geographic areas or sectors of the regulated community.

The former helps determine the regulator's focus. The latter should support the regulated community in making the best decisions for themselves, their industry and the environment and ecosystems they manage.

The level of risk is a combination of the harm that a particular hazard can cause, combined

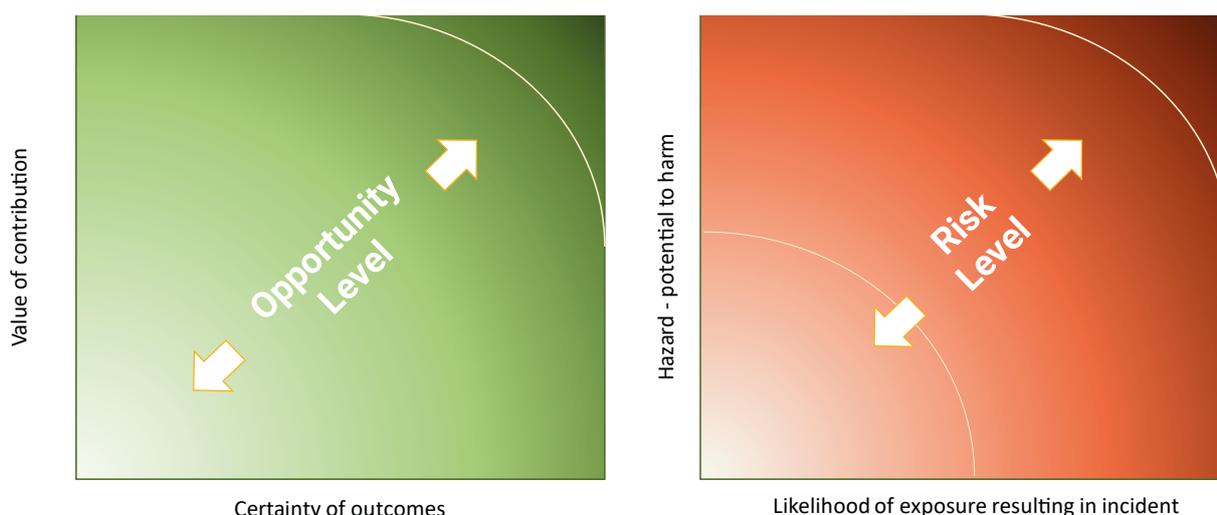


Figure 27: Evaluating risk and opportunity

36. <https://www.oecd.org/gov/regulatory-policy/44848493.pdf>

with the likelihood that exposure to the hazard will result in an incident. The level of opportunity is a combination of the anticipated contribution to remedying the harm and the certainty of outcomes (Figure 27). Both require contextual judgements to be made. They are by no means absolute. Instead, judgements need to be pragmatic and well-informed.

A regulator will take a view on how the behaviours, decisions and actions of an individual affect the likelihood or severity of an incident. For example, two farms that carry the same inherent risks because of production type, scale and geographic constraint, may carry very different levels of actual risk, if one farmer adopts practices that mitigate those risks and the other farmer does not.

Risk and opportunity are not the only factors used to inform regulatory strategy. For example, simply basing your regulatory approach on risk is not enough to make the approach valid. Other factors include the likelihood of success and the cost or burden to both farmer and regulator, and whether alternative approaches (such as using technology or artificial intelligence) might help reduce the burden on both the regulator and those regulated.

Monitoring

Monitoring refers to how the regulator assesses whether individuals are compliant with the standards that are relevant to them, or else whether they are moving in the right or wrong direction. Note, this is not monitoring for hazards or harms, which is a separate function we discuss later.

Monitoring is usually done by a combination of review (for example a remote review of evidence), inspection (detailed on-the-ground check and sampling evidence) and, where necessary, investigation (following an incident) to understand causes and collect evidence.

Modern regulators use a combination of monitoring approaches. These may include random sampling, or sampling based on risk and opportunity profiles, and they may also take a thematic approach and focus on one subject that is relevant to some or all of those they regulate.

The purpose of regulation is not to catch people out if they are non-compliant. The purpose is to drive compliance in the first place – to

make those who are regulated understand and be responsible for acting in a way that either reduces the risk of harm or remedies harm. When formal enforcement action is needed, regulation has failed to drive the right behaviours.

A key purpose of monitoring is to check the effectiveness of the standards and the regulatory strategy, but it is seldom regarded in this way and there is a common, and unfortunate, misconception that regulation equates to enforcement.

“Regulation can involve not just direct legal intervention but also more subtle manipulation of incentives and the creation of opportunity structures.”

Neil Gunningham and Peter Grabosky, Smart Regulation: Designing Environmental Policy (1998)

"Regulation is perhaps better conceived as about maximising opportunities, not merely minimising risks, in the conduct of regulated actors."

Neil Gunningham, Robert A Kagan and Dorothy Thornton, 'Social License and Environmental Protection: Why Businesses Go Beyond Compliance' (2004)

Evaluation

Monitoring provides some of the evidence to support evaluation of the effectiveness of the regulatory strategy and standards, but other evidence may be needed from research, surveys or other sampling and analytical approaches. Good regulation needs to be strategic and evidence-based. Regulators must make sure their regulatory strategies and approaches are fit for purpose. They inevitably have to adapt in response to changes in the world they are regulating. Regulation has to be dynamic to be successful. In complex systems, as one thing changes it will impact another, and treating regulation as if it were just about turning a handle will not be effective over time.

Surveillance for hazards and harm

Regulation of farms must include surveillance for system-wide hazards that are within the scope of the standards (for example diseases of plants or animals) and monitoring and evaluation in changes in the levels of harm (for example with soil erosion) where regulation seeks to halt or redress the harm.

This is not the same function as monitoring of compliance but is sometimes confused with it, as it often requires an on-farm presence.

Regulatory approaches and how they compare

The regulatory approach will determine how the regulator interacts with individuals regulated, how the standards are framed and how compliance is assessed. There are many different ways of describing things, but in practice there are three basic approaches (Figures 28 and 29), as we set out in our interim report. They are dependent on the way in which standards are framed. The approaches can be:

- Rule-based: sets out what must be done and usually very prescriptive;
- Outcome-based: sets out what must be achieved but not specifying how it is to be achieved; or
- Management-based: sets out a requirement for the development of a management plan (this must be done) and a requirement to follow that plan (most applications of management-based regulation require this, otherwise the plan may not be implemented).

To confuse matters, management-based approaches can also be hybridised with outcome-based approaches, to provide for an effective regulatory approach overall. In these cases, the plans are required to focus on high-level target outcomes, but also the measurement of intermediate steps that would show progress toward the target outcome. Hybrid approaches like this can even prescribe a limited number of options or methods that can be used, and this is useful sometimes to drive up the certainty of outcome and increase the prospects of success.

Both outcome-based and management-based approaches are more flexible than rule-based approaches. Here, they would require farmers to take more responsibility for ensuring their actions are consistent with the objectives to reduce risks or remedy harms. The main point, however, is that regulators should select the right approach at a general and specific level, to ensure they use the right one for the right problem.

Choosing the right approach

There are some helpful considerations in deciding the right approach to take.

Both outcome-based and management-based approaches are seen as useful where there is a significant level of heterogeneity in what is being regulated, and where development of rigid standards that assume 'one size fits all' creates difficulties.⁽³⁷⁾⁽³⁸⁾ This is clearly the case for farming.

Monitoring of outcome-based approaches relies on some form of measurement, usually through key indicators, which can be problematic both to determine and to measure, unless there is considerable experience and certainty of what is likely to happen as a result of a given course of action.

Management-based approaches can vary from a minimal requirement to simply develop a plan, to more specific requirements to develop a plan according to various specific criteria as set out by the regulator, or even to submit plans to the regulator for approval.

Monitoring of management-based approaches involves the regulator assessing whether adequate plans and systems have been developed and are being used. Monitoring may or may not involve the assessment of the outcomes of those plans or systems (although to assess the adequacy of a plan or a process, some view of its likely fitness to achieve the desired outcomes must be taken). This management-based approach leaves room for innovation, both in determining the best course of action but also the best way to demonstrate the outcome.

37. https://read.oecd-ilibrary.org/governance/risk-and-regulatory-policy_9789264082939-en#page161

38. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/714185/regulation-goals-rules-based-approaches.pdf

CHARACTERISTICS OF DIFFERENT REGULATORY APPROACHES

Rules-based

also called prescriptive, direct, technology based, command and control

- Rules are precisely drafted and include detailed specification of regulated actions
- Rules cause problems due to the one-size fits all assumption
- Rules stifle innovation
- Compliance is relatively easy to demonstrate and record, but it can promote a tick-box culture in regulators
- Has a role where very tight control is needed (e.g. disease control in emergencies)
- Does little to get the individual to think about the risks and opportunities or the practices they might change

Outcomes-based

also called goals based, principles-based

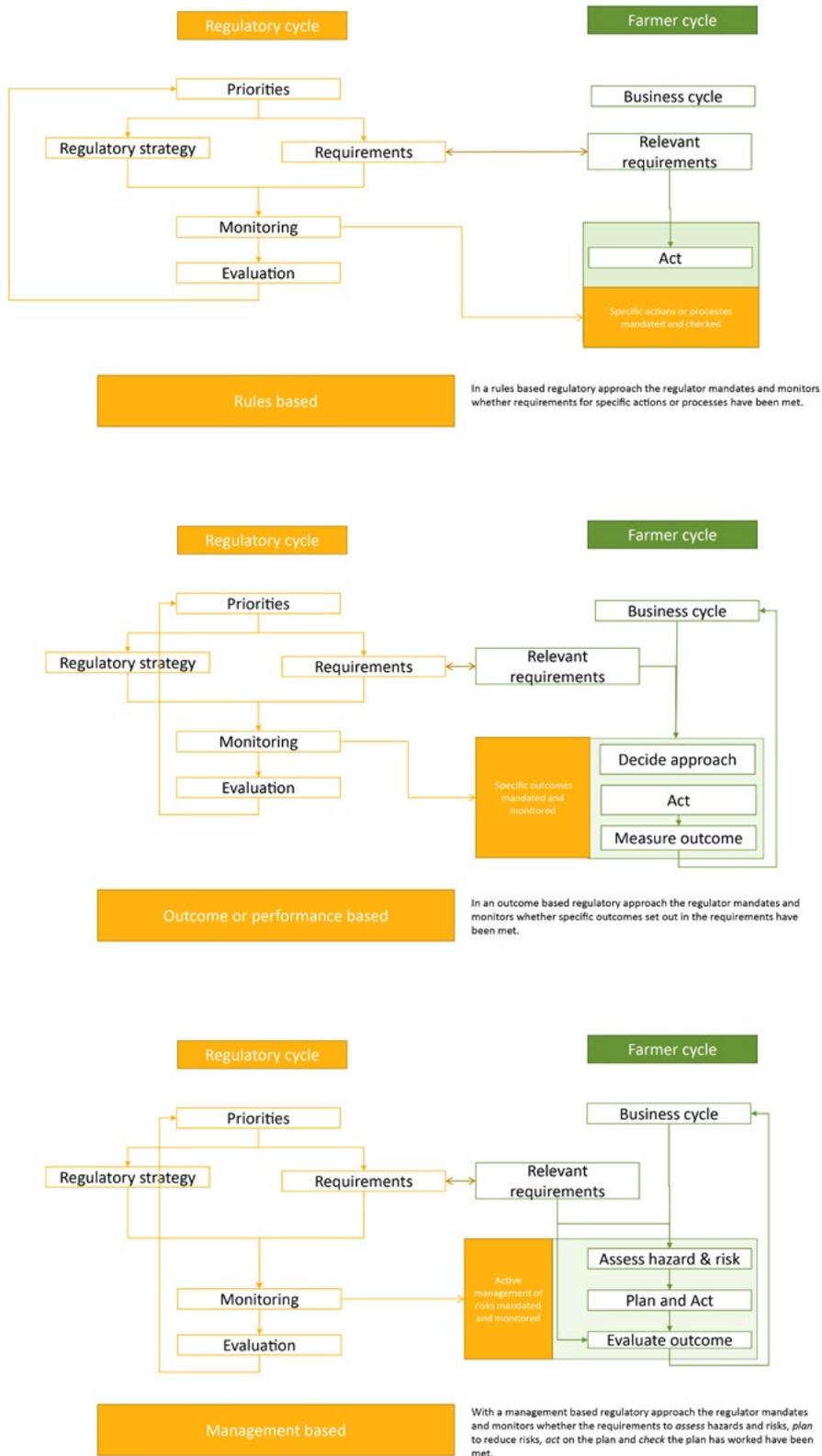
- Outcomes are usually high level
- Flexible - does not prescribe how individuals are to achieve specific outcomes
- Relies on and engages individuals, in making judgements and decisions
- Fosters innovation
- Difficult to assess compliance where measures are not obvious

Management-based

also called enforced self-regulation; process-based

- Requirement for a plan, usually based on some form of assessment of risk or opportunity
- May require plan to be followed (to avoid chance of planning becoming the end goal)
- Flexible - does not prescribe how an individual is to achieve specific outcomes
- Relies on and engages individuals in making judgements and decisions
- Fosters innovation
- Regulators monitor the plan, and can monitor the quality of the plan and require evidence that the plan is being pursued
- Can be coupled with outcomes and other specifications or constraints

Figure 29: Comparison of different regulatory approaches



Management-based regulation focuses attention on understanding the underlying risks, to complete an assessment and plan. This can be useful where there might otherwise be doubt whether enough attention to the underlying risks and whether adequate assessment would take place.

When compared with outcome-based approaches, management-based approaches give the regulator a clearer idea early on of the willingness of those regulated to participate. Requiring a plan (as in a management-based approach) also enables the regulator to see any obvious inadequacies in the actions planned. Those inadequacies might not be apparent until much later, under an outcome-based approach.

Forms of management-based regulation have been employed in a range of areas from food safety and environmental regulation, to occupational health and safety, mine safety and railway regulation⁽³⁹⁾⁽⁴⁰⁾.

We can see roles for each of these three types of regulation for farming.

Rule-based regulation with its prescriptive standards is necessary in situations where a high degree of control is required, for example national or regional cessation of specified animal movements in an exotic disease outbreak. This type of action can and does create cases of hardship where individual situations do not outweigh the greater good.

Outcome-based regulation has a place, given so much heterogeneity within farming. This approach can be particularly useful for well understood scenarios with tried and tested approaches to outcomes being achieved.

Management-based regulation can be used to reduce the risk of harms, dealing with harms when they occur or in achieving public good. It could be at the heart of regulating incentivised actions in the future. It has benefits where outcomes are less certain or where it takes significant time to demonstrate outcomes. It can be coupled with both rule-based and outcome-based regulation to ensure the best balance for the situation.

Regulating across the spectrum

Ideally these strategies should be selected to ensure they impose the most minimal and least burdensome intervention necessary to achieve the desired outcome, at the lowest cost to the public purse.

In our interim report we talked about the need to understand regulation as a spectrum of approaches (Figure 30). At one end of the spectrum, there are serious harms (such as exotic animal disease) that need firm measures to regulate. At the other, there are things desirable to promote through incentives and in other ways (for example, by providing access to specialist advice). Mid-spectrum, there are areas (such as pollution control) where flexible and adaptive regulation can drive improvement. The mid-spectrum is wide.

We argue that to regulate well, the regulator must recognise where things are on the spectrum and regulate accordingly. We believe it is possible to regulate across the spectrum by careful selection of the right regulatory



39. Coglianese C, and D. Lazer 2003. "Management-Based Regulation: Prescribing Private Management to Achieve Public Goals." *Law & Society Review*. 37:691-730.

40. Gunningham, N. and D. Sinclair, 2009. "Organizational Trust and the Limits of Management-Based Regulation." *Law & Society Review*. 43: 865-899.

Figure 30: The spectrum of regulation

Spectrum of regulation



approach.

Rule-based and outcome-based regulation need to be carefully balanced. They can be supplemented by management-based regulation to improve confidence in the delivery of the right outcomes, but only when and where needed.

When there is evidence that there is too much focus on rules, to the detriment of intended outcomes, then outcome-based regulation should be considered. If there are concerns about the capability to deliver outcomes, difficulties in demonstrating outcomes, or a

lengthy investment of time or money before outcomes are measurable, then management-based regulation also has a significant role to play.

Finally, it is important to recognise the interdependencies of the things that are being regulated, the production cycles, the environment and the dependent ecosystems. At farm level these are not separate things and regulation must take account of the full integrated picture, otherwise there is a real possibility of making one thing better while making something else worse in the long term.

Design principles

To aid us in both evaluating current regulation and in making recommendations about future regulatory systems and approaches, we have developed a set of design principles and honed these as the review has progressed. We believe it could be helpful to the government, as it considers the best regulatory arrangements in future.

The principles are drawn from our diagnostic work, and our understanding of what good, modern regulation looks like. They also take into account the government's aims for the farming sector, the indications we have of how the government wants regulation to change, and

the particular challenges we think the sector will face, during and after EU exit.

We set out a detailed rationale for each of the design principles in Annex 2 and set out the principles themselves in Figure 31. We go on to use these principles to evaluate current regulation of farming and identify what needs to change.

Figure 31: Design principles

Regulation should:	Aim
1. Build confidence	The system provides/promotes parliamentary, public, industry and international confidence in the standards achieved by those regulated.
2. Be more straightforward	The regulatory system is simplified, standardised and accessible.
3. Be clear about what is expected, and why	The regulatory standards are well-designed, and pitched appropriately; take account of competing objectives, and are supported by industry, professional experts, policy makers and the regulator.
4. Reflect mature regulatory thinking	The regulatory system is aligned with the Hampton, Macrory and Better Regulation principles ensuring the system and delivery are transparent, fair and justifiable.
5. Reflect a sophisticated and balanced view of regulation	The regulatory system takes into account: the nature of the farm and the interconnection of environment, production systems and ecosystems; the nature of associated risks and opportunities; the operation and achievements of the farm; and enables appropriate interventions to drive changes in activity or behaviour where needed
6. Be adaptive and fast moving	The regulatory system and standards can adapt and change in good time when needed and utilise feedback loops to ensure that the system adapts to: deregulate where appropriate; reset minimum requirements where higher standards are desirable; correct standards if they are not achieving the desired outcomes; modify, to take account of different objectives or when new requirements or incentives are indicated.
7. Regulate where necessary	The regulatory system aligns with and builds on initiatives driven by the market and does not seek to duplicate or discount these unless there is a need to counterbalance to achieve a policy objective for the greater public good

What we found

We set out our initial findings in an interim report⁽⁴¹⁾. Here we set out key findings covering four aspects of the current regulatory system:

- a. the governance and delivery of regulation;
- b. how we regulate;
- c. what is achieved; and
- d. the culture of regulation.

The design principles set out in Chapter 3 show the system characteristics we think best fit for farming regulation. We use them here to evaluate what we have found.

The governance and delivery of regulation

Delivery of farming regulation in England is the responsibility of Defra, five Defra bodies and local authorities. Each of these bodies is responsible for aspects of farming and land management oversight.

The Environment Agency is concerned with water, soil and air pollution and the protection of the environment. Natural England (NE) promotes conservation, overlapping with the Forestry Commission (FC) to some degree. The Animal and Plant Health Agency (APHA) and the FC regulate for plant and tree health and APHA (alongside local authorities) regulates animal

health and welfare. Countryside stewardship is delivered by NE, the FC (England) and the RPA.

The RPA manages almost all the government's financial payments to farmers and imposes financial penalties. It inspects for compliance with some of the regulatory requirements imposed by the other bodies.

Each body is funded differently. Latest details of staff numbers are shown in Figure 32. The size of each organisation differs significantly, reflecting the differences in the scope of their remit. Each body has its own field force.

The remits and constitution of these organisations are set out in Figure 33. The five Defra bodies each have different regulatory powers available to them, leading them to operate and regulate differently. There is no one regulatory strategy for the group.

Defra retains policy responsibilities for agriculture overall in England. It liaises with the devolved administrations to ensure alignment across UK and with the EU. As we outlined in our interim report, Defra and ministers retain an operational role and a good deal of operational control. Regulation is not independent of the government, and this leads to difficulties. We return to this in Chapter 5.

The Environment Agency is most clearly an established regulator. It has a wide remit that extends well beyond farms, with onerous responsibilities to regulate industry and waste,

Figure 32: Staff numbers of Defra oversight bodies

Agency	Headcount (FTE*)
Animal and Plant Health Agency	2,618
Environment Agency	11,241
Forestry Commission	1,495
Natural England	1,740
Rural Payments Agency	1,551

*Full time equivalent

41. <https://www.gov.uk/government/publications/farm-inspection-and-regulation-review>

Figure 33: Remit and constitution of oversight bodies

Body	Status	Remit
Animal and Plant Health Agency (APHA)	Executive Agency	<p>This body is responsible for:</p> <ul style="list-style-type: none"> identifying and controlling endemic and exotic diseases and pests in animals, plants and bees, and surveillance of new and emerging pests and diseases; scientific research in areas such as bacterial, viral, prion and parasitic diseases and vaccines, and food safety; and acting as an international reference laboratory for many farm animal diseases; facilitating international trade in animals, products of animal origin, and plants; protecting endangered wildlife through licensing and registration; managing a programme of apiary (bee) inspections, diagnostics, research and development, and training and advice; regulating the safe disposal of animal by-products to reduce the risk of potentially dangerous substances entering the food chain
Environment Agency (EA)	NDPB	<p>This body's main aim (as defined in the Environment Act 1995) is to protect or enhance the environment, contributing towards the objective of achieving sustainable development through its role as:</p> <ul style="list-style-type: none"> an environmental regulator; an environmental operator; a monitor and advisor of the state of the environment; a landowner and manager; a technical advisor on the development of environmental policy; a promoter of scientific research in support of these roles; a category one responder dealing with incidents and emergencies
Rural Payments Agency (RPA)	Executive Agency	<p>This body is the agency for the EU's Common Agricultural Policy schemes in England. It makes payments to farmers, traders and land owners. It also makes payments on behalf of Natural England, and manages over 40 schemes with the aim of helping to ensure we have a healthy rural economy and strong rural communities.</p>
Natural England (NE)	NDPB	<p>This body's general purpose (under the Natural Environment and Rural Communities Act 2006) is to ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development.</p>
Forestry Commission	NMD established under Royal Charter	<p>This body describes its three objectives as:</p> <ul style="list-style-type: none"> protecting our trees, woods and forests from increasing threats such as pests, diseases and climate change; improving our woodland assets, making them more resilient to those threats and increasing their contribution to economic growth, people's lives and nature; expanding our woodland resources to increase their economic, social and environmental value
Local Authorities	County councils, Unitary Authorities and Metropolitan Boroughs.	<p>Local authorities are responsible for a range of statutory duties under animal health and welfare legislation (in particular, the Animal Health Act 1981 and Europe wide legislation made under the European Communities Act 1972).</p>

CO-ORDINATING INSPECTIONS

When an individual Defra group body has several reasons for visiting a farm, then combined visits sometimes occur. However, co-ordination across the Defra group is not straightforward.

Apart from logistical and data-sharing considerations, issues of inspector skills and knowledge arise. The agencies have mapped all field work activity undertaken by the Defra group in the Greater Manchester, Merseyside and Cheshire area over a three-month period, to see the complete picture for one geographical area.

Crossovers stand out, with field staff from Defra agencies undertaking activities within striking distance of each other, unknowingly. Based on the assumption that any inspector could do or help with any visit, it suggests that travel time alone could reduce significantly, were it possible to co-ordinate or combine visits. However we are aware that specialist skills are needed for certain visits.

There have been some initiatives to reduce farm visits, by placing reliance on farm assurance scheme checks. This is known in the industry as 'earned recognition'. For example, a scheme set up with the British Egg Industry Council has removed the need for about 450 visits. Notably, dairy farms who are not assured by the Red Tractor farm assurance scheme are subject to dairy hygiene inspections every two years, whereas those assured by the Red Tractor are inspected once every ten years. One in four livestock farms are subject to feed hygiene inspection each year, but the annual frequency reduces to 2% for those who are Red Tractor assured. We discuss later how earned recognition could develop.

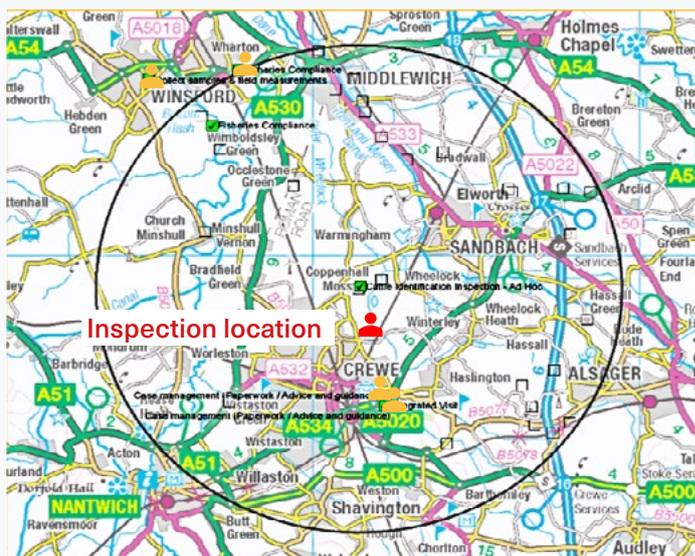


Figure 34: Co-ordinating inspections

The data shows the staff member travelled for 2 hours to undertake a 30 minute inspection.

There were 4 other activities undertaken by different people within a radius of just over 5 miles that day.

Could someone else have undertaken the task to avoid the need for the travel?

If there was flexibility when the activity was undertaken could the other activities have been carried out by fewer people?

COMMON AGRICULTURAL POLICY (CAP) SCHEMES

Historically CAP provided income support to farmers by supporting the prices they were paid for produce. This system came under great criticism, as it encouraged over- production, resulting in butter mountains and milk lakes[1]. Over time, CAP has been reformed. There are now two main CAP payment streams: direct income support (Pillar 1) and rural development (Pillar 2).

The Basic Payment Scheme (BPS) is the main scheme for direct payments to farmers. The BPS payment is one of three compulsory direct payments under CAP pillar 1, and by far the largest component. Pillar 1 payments come from the EU and are administered by national governments. The Rural Payment Agency makes payments to farmers in England. BPS is based on the amount of land farmed with a minimum claim size and a per hectare reduction of 5% on amounts of basic payments above €50,000.

Greening is the second Pillar 1 component. It rewards agricultural practices beneficial for the climate and the environment. A farmer claiming direct payments under the BPS must comply with the greening practices (or equivalent practices) on all their eligible hectares. There are three greening practices: crop diversification, maintenance of permanent grassland, and ecological focus areas. A farmer who complies receives a greening payment in addition to their BPS payment.

Young Farmer Payment is the third Pillar 1 component. To encourage generational renewal young farmers (aged under 40) can also apply for a top-up payment worth up to 25% of their BPS payment, up to a maximum ceiling.

Pillar 2 is co-financed from member state governments. Each member state or region implements its rural development strategy through a Rural Development Programme (RDP). These provide a range of support measures, including annual agri-environment payments to farmers who voluntarily take part in agri-environment schemes. UK devolved administrations each have their own RDPs.

Countryside Stewardship is an environmental land management scheme under the RDP for England. It provides funding for claimants to make environmental improvements. If a farmer is part of a scheme, they must comply with set terms and condition and the compulsory elements of the Countryside Stewardship manual which includes cross compliance.

Cross compliance conditions require beneficiaries of a range of CAP payments to meet certain standards on public animal and plant health, environment, climate change, landscape retention and animal welfare. Cross compliance has two components: Good Agricultural and Environmental Conditions, relating (currently) to water quality, soil cover, erosion, organic matter and landscape feature protection, and Statutory Management Requirements, relating to the environment, biodiversity, food safety, public, animal and plant health and animal welfare.

Rules and checks are set out in European cross compliance legislation determining how the beneficiaries must meet and the way in which member states must check beneficiaries comply with those rules. This is mainly by on-farm inspections but may include administrative controls. Where non-compliances are found, the legislation has rules for applying penalties to the CAP payments claimed by the beneficiary in the year in which the non-compliance was found. It also provides for warnings instead of penalties for minor non-compliances.

Cross compliance penalties are determined by first assessing whether the breach resulted from negligence or intent, then the extent, severity and permanence are assessed by inspectors using guidance designed to achieve a consistent application of the rules. The assessment is converted into a percentage penalty for a given permutation of assessment options, with greater reduction for a breach repeated within a three-year period.

and to manage risks of flooding.

Most of the other bodies do not describe themselves as regulators, although many of their functions would fall within the OECD's definition of a regulator and they are all subject to the Regulators' Code⁽⁴²⁾. The RPA holds the ring on cross-compliance checks and financial penalties. As we discuss below, this is a key element of the current regulatory approach. RPA acts on behalf of other Defra bodies where their requirements have been tied into the cross compliance standards.

Each organisation's information management needs are different. They draw on different data sets, and run largely separate information systems. Inevitably, farmers are subject to disparate registration requirements, repeated requests for basic information, and overlapping inspections or surveillance visits from each agency. There is no one base dataset for farms. Instead they are categorised in different ways for each organisation. We are not able to say definitively how many farms and smallholdings there are.

The Environment Agency allows applications for licences and exemptions from businesses. It deals with business beyond farming, and so some of its forms are unduly complex for farmers. RPA and AHPA systems are to some extent aligned but the Environment Agency does not always classify its information so that farming data can be extracted easily. All the bodies struggle to identify the person responsible on the ground: there is no one dataset that provides the relevant information, and the complexity of farming arrangements means that in practice, several parties may be involved.

Following independent reviews⁽⁴³⁾⁽⁴⁴⁾, Defra bodies have collaborated to improve their arrangements for working together. There have been some successes: inspection volumes have reduced by a modest amount; an anticipated 23% of APHA's inspectors will be enabled with handsets to enable electronic recording of data on farms, and new risk models have been trialled. Efforts to join up data and analysis across the group have been largely frustrated because of immovable system constraints. Moreover, there is a limit to what can be done when each body is funded and constituted differently.

Overall, it is proving hard to generate efficiencies or reduce the regulatory burden (Figure 34). What is more, the current arrangements do not enable visibility of the full picture farm by farm or allow for regulation based on a holistic view of risk.

Farmers are left dealing with staff from each agency, with each agency working differently. They are frustrated at having to repeat the most basic information about them and their farm in different formats, to agencies of the same department. This undermines Defra's authority as a whole.

How we regulate

There is no overarching regulatory strategy for farming in Defra. Each of the five Defra bodies has a different set of regulatory powers available to them and which they utilise in different ways.

The differences in constitution, remit and regulatory approach across the Defra group are embedded in and, (from the farmer's perspective) exacerbated by different ways of working for each body. Differing information requirements, appetite for risk, language used and organisation culture inevitably mean the system overall often appears incoherent and inconsistent to farmers.

The influence of CAP and cross compliance

For many years, agriculture strategy and public policy have largely been shaped by CAP (Figure 35). Cross compliance has become the major driver of the approach to enforcement. It is often seen as unfair.

Penalties can be disproportionate to the breach. Penalties applied as a percentage reduction of direct payments may well be larger than a financial penalty would be for the same breach under national legislation. The system does not allow enough scope for farmers to remedy the breach. Instead it leaps too often to a penalty, without differentiating between purposeful and accidental non-compliance.

While cross compliance conditions are at least straightforward to administer, the rules must be

42. <https://www.gov.uk/government/publications/regulators-code>

43. <https://www.gov.uk/government/publications/independent-farming-regulation-task-force-report>

44. <https://www.nao.org.uk/report/streamlining-farm-oversight/>

LOCAL AUTHORITIES

Animal health and welfare is a devolved function for local government. Local authorities (LAs) are defined as the statutory enforcing authority. They bring prosecutions for serious offences. They also tend to be the first port of call for individual welfare complaints. A voluntary framework encourages good practice. 'On farm' work is a small proportion of the animal health and welfare work presently delivered by LAs. They also have responsibilities for transported and illegally landed animals, and protection throughout the food chain (where responsibilities for regulation and enforcement cross other government departments).

The current mandatory information returned to government covers expenditure, prosecutions and incidences of disease in imported animals. Returns for 2016/17 show 103 prosecutions for England, with the majority relating to on-farm welfare. Regrettably, there is little other current, valid information available. Government lifted many of its previous data return requirements in 2011.

A survey of all LAs took place in 2014. From those that responded, it was clear the loss of ring-fencing and a reduction in overall LA funding had led to a shift away from dedicated animal health officers. LAs continued to carry out farm inspections (primarily for FSA-funded feed and food hygiene enforcement) but about half reported a reduction of between 25% and 75%. LAs had largely moved from proactive to reactive work. Almost six in ten said resource was not a factor when considering enforcement but the remainder said otherwise (including a significant number of the larger LAs). Resource applied to animal health and welfare had reduced by 45% in the preceding three years. Some LAs have since made difficult decisions to cut back further.

The 2014 report concluded that there were significant inconsistencies in enforcement across England, leading to a degree of 'postcode lottery'. Despite the work of the National Animal Health and Welfare Panel, communication and partnership between LAs and APHA was often reported as being relatively poor. This was due in part to resource constraints, but it was also clear that priorities were not always aligned.

Some functions covered by trading standards are now funded by central government and co-ordinated by National Trading Standards (NTS). No similar provision for governance or co-ordination exists for animal health and welfare. While the 2017 National Strategic Assessment (produced by the National Trading Standards Board) includes animal health and welfare, this is not funded as part of the NTS work. It is reported as a low priority and low- risk, while identifying an increase in welfare issues. Three regions across England and Wales do identify animal health and welfare as a threat, though in its annual report for 2017/18, NTS noted that local authority farm visits have fallen by a further estimated 23% over the past three years.

Figure 36: Local authorities

enforced mechanistically. This undermines trust and confidence in the fairness of the system.

Importantly, cross-compliance does not influence farmers who are not eligible for, or who do not claim subsidy. The significant number of smaller farms are overlooked.

Regulatory approaches

The RPA approach is driven by CAP and cross compliance requirements. It is necessarily rule-based.

The Environment Agency has a more balanced regulatory approach overall. This includes on occasion a management-based or hybrid approach. Most farmers associate a wide range of licences, permits and exemptions with the Environment Agency. Based on risk, controlled activities are allocated to different tiers of control (exemptions, standard permits and bespoke permits). Permits are only used where exemptions will not produce the outcomes needed.

Natural England's approach is generally to encourage compliance with laws that protect wildlife and the natural environment⁽⁴⁵⁾. They issue some licences and have powers to take both civil and criminal enforcement action when necessary, but in practice they do very little enforcement.

Animal and Plant Health Agency has substantial powers to undertake surveillance and investigations, and access to wider powers (through Defra) to address disease outbreaks. The evolution of these powers over many years and through many different statutory orders has led to variation so that powers of entry, for example, critical for disease control purposes, are cast differently according to their legislative source. This sometimes causes practical difficulties on the ground.

APHA appears to lack a sufficient breadth of enforcement powers. APHA has relied on some cross compliance measures, covering welfare and bovine TB testing which we are told are useful. This is however, another example of disaggregation of accountabilities, as cross

compliance falls under the jurisdiction of the RPA, and it is the RPA who make choices around targeting and inspection, inspecting against a fixed framework.

APHA's lack of civil sanction and intervention powers is particularly striking. It has few options outside advice, warnings and notices. In the absence of more flexible civil enforcement powers, APHA remains reliant on cross compliance, and on local authority enforcement in more serious cases. Local authority referrals then become dependent on local authority priorities (Figure 36).

Investigations to support criminal prosecutions have to be conducted to support a different standard of proof than would be required to support civil sanctions. This is costly and requires significant expertise. It is important that a consistent approach is taken with such cases, yet local authorities necessarily differ in their appetite and arrangements for this work. In many cases, sensible outcomes could be achieved more quickly and efficiently using a wider range of intervention powers rather than prosecution. In our view, these enforcement arrangements are increasingly unworkable.

Standards

In our interim report⁽⁴⁶⁾ we identified 182 regulatory instruments⁽⁴⁷⁾ (Acts of Parliament, statutory orders, regulations and codes of practice) that set standards for farming and land management (see Annex 3). Many of these are legal documents that are not set out in accessible language for farmers. To address this there has been a proliferation of guidance over the years.

We see that established guidance has been reviewed and streamlined by Defra and its agencies following the recommendations of recent reviews⁽⁴⁸⁾⁽⁴⁹⁾. Nowadays, the guidance that is available is often well-written. There is still so much of it, however, with guidance often embedded within a permit, licence or other document. By and large it is difficult for individual farmers to know what is applicable or relevant to their own particular farms. Of course, if you do

45. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/389634/compliance-enforcement-position.pdf

46. <https://www.gov.uk/government/publications/farm-inspection-and-regulation-review>

47. Now resolved to 172 instruments, Annex 3.

48. <https://www.gov.uk/government/publications/independent-farming-regulation-task-force-report>

49. <https://www.nao.org.uk/report/streamlining-farm-oversight/>

FARM ASSURANCE

Of the prevailing market initiatives, farm assurance schemes are the most pertinent. They generally aim to give consumers and retailers confidence that food has been produced to particular standards. Membership is voluntary, although many retailers make certification through an assurance scheme a requirement for their suppliers.

Generally, assurance schemes are run as product certification schemes that are accredited by the United Kingdom Accreditation Service (UKAS). These schemes use regular independent inspections to check that members are meeting specific standards. Logos or marques on consumer products indicate that a particular product is from a farm-assured farm.

There are a number of farm assurance schemes in operation across various farming sectors. The schemes differ in the farm-related activities they cover. Each has a similar business model, with charges dependent on the nature of the farm and the elements of the scheme for which each participating farmer wishes to be certified.

Separately, the large supermarket companies each associate with particular farm assurance schemes, with Red Tractor a major player. Some have, or are developing, their own retailer schemes, with some of those focused on particular products such as milk.

All but one farm assurance scheme sub-contracts compliance inspection to any one of three certification bodies in England. We understand that NSF International plays a leading role, conducting over 30,000 inspections annually on UK farms. These bodies charge farmers directly for carrying out inspection.

Red Tractor certification is required as a minimum by most big supermarkets. Membership is virtually essential for farmers selling to the supermarket chains. Other farm assurance schemes have fewer members, but generally go beyond Red Tractor standards in one way or another. RSPCA Assured emphasises animal welfare. LEAF has the broadest focus, and considers the whole farm.

There is very little farm-specific information shared between farm assurance schemes and the Defra group. Farm assurance schemes understandably regard their information as confidential. They may say when a farm has been removed from an assurance scheme, but not why.

Figure 37: Farm assurance schemes

not know it exists, you cannot easily find it.

The GOV.UK site has a licence-finder facility which enables users to search for links to relevant licences, permits, registration requirements or exemptions. This facility provides a significant volume of information for farmers, but the links do not all map to an appropriate page with further instructions, and there are significant gaps (for example pig herd registration). Moreover, unless you know where to look, then even finding the license-finder itself is difficult.

There are other cases where the guidance is challenging. The BPS rules document for 2018 is 127 pages long⁽⁵⁰⁾ and there have been four updates to it so far in 2018. The cross compliance document is 84 pages and is revised annually⁽⁵¹⁾.

We believe that the lack of accessible and targeted information (be it guidance, standards or about opportunities to seek support for improvement) means that some farmers turn first to the trade press or farming organisations for information and advice. These organisations often flag changes emerging from Defra.

What is achieved

It is not known for certain how many farms there are. We cannot say at any one time who is responsible for each stretch of land. We cannot identify with any certainty how compliant farmers are with core regulatory requirements. We cannot gauge the total burden of regulation.

In other areas of endeavour, oversight bodies periodically produce a wide-reaching report to show how things are overall in the field. These reports can show more than just the amount of regulatory compliance. They can show emerging trends or issues, for example. Defra runs periodic farm surveys, and each body produces an annual report and accounts, but there is no one regular assessment across farming of how things are.

During the review, we have seen that poor

or insufficient slurry storage is an emerging issue. Older tanks are breaking down. We are aware that there will be other emerging issues, and positive trends as well, but these are not systematically quantified or evaluated across farming as a whole. It is more usual in other significant fields of endeavour such as health, care, and education, to be transparent about these matters. Identifying and stating the issues enables regulators to consider and take action.

The culture of regulation

We have no valid measure of the extent to which our regulatory system promotes confidence overall. However, two independent reviews⁽⁵²⁾ in the last decade have concluded that our regulatory arrangements do not deliver sufficient value for money to the taxpayer, and need significant reform. Farmers and now the government call for changes to the regulatory culture.

Farmer and land managers tell us they are aware of their differing organisational cultures across the Defra group. The most frustration arises in relation to inspections linked to payments. This includes inspections to check eligibility and compliance with the BPS rules, and requirements contained under greening, cross compliance and the countryside stewardship schemes.

These inspections generally involve measuring fields, boundaries, crop types and buffer strips. Using inspection to undertake measurement is expensive and time consuming, but necessary to meet our obligations under CAP. New technologies are being used to avoid physical measurement to some extent, although they have proven tricky to implement given the precision of measurement necessary. In any event, CAP requires a proportion of inspections on farm.

Farmers are suspicious about how and why they are picked for inspection. Myths abound. They also tell us that they sometimes have to

50. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/705756/BPS_2018_scheme_rules_v5.0.pdf

51. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/668684/Cross_Compliance_2018_guide_v1.0.pdf

52. <https://www.nao.org.uk/report/streamlining-farm-oversight/> and <https://www.gov.uk/government/publications/independent-farming-regulation-task-force-report>

wait a long time to receive the outcomes of RPA inspections. They do not necessarily find the outcomes, when they arrive, to be very useful to them. We appreciate delays may relate to systems issues within RPA, but that does not make them more tolerable to farmers, when payments are at stake.

We conclude that CAP-related inspections have been essential in maintaining international confidence that we stick to CAP rules, but they have seriously undermined farmers' confidence in regulation.

When we look further into concerns about culture, we see that they often stem back to fundamental differences in the remit, structure and regulatory approach of the Defra group bodies. As things stand it would be very hard to change culture materially.

Conclusion

Our regulatory approach and culture have been influenced by CAP in ways not commonly understood by those not involved in farming. Regulation for the sector is excessively rule-bound, with little discretion or judgement allowed. Some of the rules are pernickety and over-precise, making regulation look foolish.

Farmers put up with it grudgingly. Enough farmers have told us that they see the need for regulation, but it could be so much better. After over 40 years of regulating as we do, many farmers are resigned to the way things are. The main thing that irritates is inspection, with a common call for more reliance on farm assurance.

The fact that oversight of farming is dispersed across the Defra group makes it inefficient, and much less effective than it could be. Specialist knowledge and skills are needed in the field, and one inspector cannot do all, but separate field forces make little sense.

Enforcement is disjointed, and not effective enough in addressing the big issues. To bring people into compliance often requires an enabling approach: the provision of guidance and advice, and other incentives.

Concerns about regulatory culture are difficult to address without systemic change.



What should change

Previous reviews of the way the sector is regulated have called for change in the regulatory culture. The government wants that change as well. But we think it impossible to change the regulatory culture in the ways called for without systemic change.

In Chapter 4 we reviewed how we regulate now, by reference to the design principles we put forward in Chapter 3. In this chapter we consider what should change, to regulate as the design principles suggest. Our proposals are inter-related.

When taken together, they outline a quite different way of regulating, so that regulation is no longer just a set of mandatory rules. Instead it becomes much more supportive. Working alongside the industry, it flexes its muscles only when it needs to.

In our view, regulating in the way we propose will change the regulatory culture, and build confidence and trust. Over time, it is capable of turning farming around in the way that the government and many farmers wish.

We **RECOMMEND** that the design principles we propose and the mature regulatory approaches we describe here should underpin the regulatory system.

Building confidence

The regulatory system should provide and promote public, industry, parliamentary and international confidence⁵³. At the heart of it all, the farmer must trust the regulator to regulate fairly and for the right reasons; the regulator must trust the vast majority of farmers to be open, honest and to do at least what is absolutely required, and the consumer must be able to trust the regulator, the farmer and the food produced here. Effective regulatory systems are characterised by trust.

In our view, the constitutional arrangements for regulating farm and land management should change, to provide a good grounding for greater confidence and trust.

OECD BEST PRACTICE GUIDELINES

The OECD Best Practice Principles on the Governance of Regulators defines regulators as: “entities authorised by statute to use legal tools to achieve policy objectives, imposing obligations or burdens through functions such as licensing, permitting, accrediting, approvals, inspection and enforcement.

“A regulator can use other complementary tools such as information campaigns, to achieve the policy objectives, **but it is the exercise of control through legal powers that makes the integrity of their decision making processes, and thus their governance, very important**”.

Independent regulation

As we outlined earlier, the roles and responsibilities of Defra’s arms-length bodies are intertwined, but the government (through the Secretary of State and Defra) retains a significant amount of operational control over regulation.

Regulatory systems differ across the world, with some countries preferring direct government

53. Design Principle 1, Annex 2.

regulation. Responsibility for formal regulatory arrangements ultimately rests with governments, but the UK has a strong tradition of establishing legally independent national bodies to regulate and deliver policy⁵⁴.

We propose that the regulation of farming and land management should be independent of the government, but with the government (Defra) retaining responsibility for agricultural strategy and public policy. We set out here what we think are compelling arguments for the independent regulation of farming and land management, before going on to explain what that would mean in practice.

Regulators must balance the wants and needs of the government, those they regulate, consumers and the wider public, and the competing elements of their own (usually statutory) objectives, in the public interest. In doing so, they must behave and act objectively, impartially and consistently, without conflict of interest or bias – in other words, independently.

Regulatory decisions and functions should be conducted with the utmost integrity, so that people have confidence in the regulatory regime. Independent regulators have sufficient autonomy to exercise their regulatory functions free from undue interference or influence. This is important, most especially when many expert and professional decisions need to be made consistently, but where a degree of discretion (but not absolute discretion) should be exercised to reflect the circumstances, as we will argue here for farming and land management.

The Organisation for Economic Cooperation and Development (OECD)⁵⁵ advises that establishing an independent regulator can provide greater confidence that decisions are impartial, and send an important message to those regulated about the commitment of the government to objective and transparent administration and enforcement of regulation.

Independence in decision-making is also important for stability in uncertain times and beyond, engendering trust and making sector investment a safer bet⁵⁶. Farming is by nature an uncertain business, because of currency fluctuations, weather patterns and other influences. Times are uncertain for the sector and will be for some time as we transition from

direct payments, and as markets change in ways we cannot fully predict.

There are other benefits. Independent regulators can develop unparalleled and joined-up data, information, knowledge and expertise about the industry they regulate. They can develop enviable research and analysis capabilities, working with the industry and others to fill evidence gaps and keep up with trends and developments in the sector. And with the right legislative framework, they can be inherently adaptive and agile, and free to deploy a range of regulatory approaches (including the provision of advice and incentives) to suit the situation. We think these benefits are particularly pertinent for farming and land management.

In the context of bovine TB there is a belief amongst environmental NGOs that government is unduly influenced by lobbying by the farming industry, while the industry complains of the reverse. Though government would still set the goals for disease control, its day-to-day implementation by (an independent) regulator would be immune from this real or perceived interference.'

Bovine TB Strategy Review,

October 2018

It is usual for the government to retain responsibility for strategy and public policy, even when regulation is fully independent. We think there are strong arguments for the government retaining strategy and public policy responsibilities here, and for the long-term strategic goals or objectives of the regulator to align with, and potentially deliver, national priorities as set by the government. To work well, this will require a sophisticated, principle-based relationship between the government and the regulator, as we outline below.

54. Regulation, Enforcement and Governance in Environmental Law (2010) Hart.

55. OECD is a leading authority on economic organisation, with 36 member countries.

56. The Governance of Regulators (2014) OECD.

A simple characterisation of government's relationship with an independent regulator is that the government steers and the regulator rows. Ministers set strategic direction and regulators should then be free to work within their statutory framework, determine the operational approach, and get on with things. This is an oversimplification of course, but it provides a starting point. Regulators are not just free to row or governments free to steer. Instead, they are in the same ship with the same destinations in sight, but with clear roles and responsibilities, so we get there safely and surely.

'We see many advantages in retaining high-level policy-making in Defra but devolving much of the disease control operations to one new body that would take over functions currently performed by APHA, Natural England and Local Authorities.'

***Bovine TB Strategy Review,**
October 2018*

The government is required to make strategic choices and decisions, as it has in a long-term strategy for the environment⁵⁷, and as it will in deciding the future strategy for bovine TB.

To enable the government to make the best strategic decisions, regulators should advise the government on strategic issues and choices. Informed by their detailed understanding of the broader context, emerging issues and what is likely to work or not work, they exert wise influence while always respecting the government's responsibility for strategy and public policy.

To be effective overall requires close working between the regulator and the government, with the regulator given the operational freedom to determine the best operational approach, and to respond to circumstances on the ground.

The respective roles and responsibilities of the government, an independent regulator and other relevant bodies should be clear. The government generally states its policy requirements and

goals for each independent regulator and outlines current policies and objectives relevant to the regulator together with any expectations on how the regulator should conduct its operations.

This statement is typically published in a yearly remit letter or direction, with statutory status. In addition, ministers can reserve (in legislation) specific additional controls, and we see the scope for that here. This may typically be in the form of a power to require or prevent certain actions, for example in relation to wildlife culling.

We **RECOMMEND** that farm and land management regulation be independent of the government.

A new, independent regulator

Left alone, the Defra configuration arrangements will severely inhibit the simplification of regulatory arrangements for England. In our view, there is a compelling case for a single farm and land management regulator: farming and land management are deeply intertwined and inseparable from the environment and ecosystems.

Some methods of food production can have a negative effect on the environment, wildlife, biodiversity and soil quality, over time – especially if production in any one place is increased beyond the natural capacity of the land. Conversely, protecting rare species by providing suitable habitat may inhibit food production. Improving soil quality can mean substantial changes to farm practice and immediate profitability for some farms. The cost of enhancing animal welfare standards beyond those established internationally could be prohibitive in some sectors, and detrimental to trade.

These tensions are played out at farm level, and the regulator needs to know how they are being resolved on the ground. It needs a full understanding of the behavioural motivations of farmers and land managers, and the systemic pressures and interdependencies that exist. It must also understand, place by place, the environmental, animal and plant health and animal welfare hazards, risks and opportunities, as these things are so inter-related.

The regulator also needs a good grasp of the

57. <https://www.gov.uk/government/publications/25-year-environment-plan>

outcomes required for each locality, and the natural, social or human capital assets that individual farmers and land managers have in their grasp. It is then best placed to work alongside farmers and land managers to balance competing but interdependent objectives and to lever change where needed. Regulators create the most value when they can see the full picture and work for the best outcomes overall, by talking a holistic, well-informed and well-balanced view.

Within England, the Environment Agency is responsible for:

- regulating major industry and waste;
- treatment of contaminated land;
- water quality and resources;
- fisheries;
- inland river, estuary and harbour navigations;
- conservation and ecology.

It is also responsible for managing the risk of flooding from main rivers, reservoirs, estuaries and the sea.

It is very challenging to gain this level of insight and to use it well when responsibility is disaggregated across a good handful of bodies, as it is now. Effective information-sharing protocols have proved difficult to establish and sustain. Even when they are in place, the different bodies necessarily have different, sometimes competing, sometimes overlapping objectives.

No one agency can be said to have the full picture in relation to what is going on at any

specific farm, and no one agency is best placed to be able to properly reconcile competing priorities, at a farm level, in the context of overarching government policy and the public interest.

To create a new regulator would mean significant changes for the Defra group and the department itself. Those changes would need to be carefully thought out, and the transition managed skilfully as well. But it if the government decides to create a new regulator, and to regulate in the ways we suggest, then some existing agencies may ultimately fall away altogether.

This will be a complex transition and it raises uncertainties for staff, when many will already be change-weary. We have considered whether as an alternative, an existing body should grow to become the regulator. In our view, a new body is required for several reasons.

There is real value in the regulation of farming and land management being a stand-alone activity – the sole function of the body regulating. Dedicated regulatory expertise and organisational competence, as well as valuable industry knowledge and expertise is built in that way, and relationships with the industry established. Priorities can be set more readily, for farming and land management.

The new regulator should exist in its own right, and be focused on farming and land management. It will need to work closely with the Environment Agency, but we advise it should be a separate body.

Regulation strategists recognise the need for a substantial rethink of Britain's regulatory frameworks in the wake of EU exit, and that existing agencies are constrained by the inherent limitations of their established roles, remits and ways of doing things. Existing agencies are critically dependent on where they have been as well as where they might be going.⁽⁵⁸⁾ It may well be more difficult for an existing Defra group body to think afresh, or to build new relationships with farmers and land managers where necessary.

The regulator we propose will need a wide range of statutory powers, counterbalanced with clear accountabilities and well-developed governance arrangements. Legislation will be required, and that of itself suggests a new body.

The Rural Payments Agency must continue to

58. <http://www.lse.ac.uk/accounting/Assets/CARR/documents/R-R/2017-Winter/171215-riskregulation-08.pdf>

make payments to farmers and land managers for a good while yet, with individual Basic Payment entitlements reducing on a sliding scale over time. It is a challenging and complex job. It will be important as well that the government retains capability and readiness in the Animal and Plant Health Agency for exotic animal disease, while the transition to new regulatory arrangements take place. As the Defra group reconfigures, both disease readiness and the farm payment function must be maintained.

For these reasons, we do not think it appropriate to extend the remit of any existing body in the Defra group, to embrace farming and land management regulation as we envisage it.

Most of all, we think a new, independent regulator is necessary to signal to farmers and land managers a commitment to doing things differently in future, so that they can begin to trust that things will actually be different.

We suggest the Environment Agency should retain its national remit in relation to air pollutants, water quality and resources, and set (with the government) overarching strategies and goals for those matters, together with national standards and measures. As a matter of principle, however, the new regulator should be Defra's farm presence and the first point of contact for all farmers and land managers, unless for some circumstances it is agreed differently as between the regulator and the Environment Agency.

We understand that the government intends to end cross-compliance, and parliament will wish to be satisfied that sufficiently comprehensive and reliable regulatory arrangements take its place in good time. In any event, the sooner the regulator exists, even in shadow form, the sooner regulation can begin to evolve in desirable ways.

We **RECOMMEND** that the government creates a new regulator for farming and land management as soon as possible, and that the government considers establishing the new regulator under shadow arrangements, pending legislation.

We **RECOMMEND** that Defra reviews the Defra group configuration.

Statement of purpose

Independent regulators must be clear about what they are there to do, and what lies outside their remit as well. We explored earlier the reasons why we regulate farming and land management. The known hazards and risks of harm and their potential economic and social impact are enduring, and need to be regulated for. Put simply, we should regulate to change what farmers and land managers do, and do not do, where change is needed.

Regulators also give effect to the government policy. As we leave the EU, the government is expecting more on all fronts from farmers and land managers. We see a greater and much more purposeful emphasis on the environment and ecosystems, alongside the prospect of new initiatives in animal health and plant health and animal welfare⁽⁵⁹⁾. With a clear recognition of the importance of food production⁽⁶⁰⁾, the government wishes to support farmers to produce more home-grown, healthy produce produced to high environmental and animal welfare standards.

Clarity is usually provided by a statement of purpose for the regulator, set in statute or other binding governance documentation. A statement of purpose sets out the rationale for the regulator. It delineates and at the same time, bounds its role and remit, and signals UK's Parliament's broad expectations of the regulator. A well-drafted statement of purpose acts as a strategic compass, allowing regulators to determine priorities, reconcile conflicting aims and expectations, and shape their regulatory approach.

With EU exit, and the government's new ambitions for agriculture, we surmised in our interim report that the stated purpose of a new regulator for farming and land management should be to:

- safeguard, maintain and enhance plant and animal health and animal welfare;
- secure, maintain and enhance good management of farmed land and the natural environment; and
- facilitate agricultural trade.

We **RECOMMEND** that this statement of purpose. In our view, it would steer the regulator

59. <https://www.gov.uk/government/consultations/the-future-for-food-farming-and-the-environment>

60. <https://www.gov.uk/government/publications/the-future-for-food-farming-and-the-environment-policy-statement-2018>

to deliver the government's ambitions, redress legacy issues of the past, and at the same time be responsive to the legitimate needs of farmers and land managers farming responsibly and trading their goods. It would enable the supportive approach the government wishes to see. Regulation that is joined up and that includes incentivisation could support farmers to farm in a responsible way overall, rather than leading them in different directions.

Funding

The amount and source of funding shapes a regulator, and how it operates. Funding processes should be transparent, efficient and as simple as possible. Where cost recovery is required, the regulator should not be at risk of setting unnecessary or inefficient administrative burdens of compliance costs on those it regulates⁶¹.

The amount of overall public funding for any regulator is a matter of public policy, and so is the extent to which those regulated should contribute to the costs of regulation. Funding and sources are specified by the government. The government also sets financial controls, and usually specifies whether levy, fee or charge levels need to be specifically approved by ministers or parliament⁶².

Across all regulators, it seems that slightly more than half of regulatory spend is publicly funded, with levies, fees and charges covering the rest⁶³. However, there is considerable variation between regulators (and within the Defra group), in the extent to which they recover costs.

There are differences as well in the cost recovery mechanisms in play. More recently established UK regulators are more likely to impose a general levy rather than rely predominantly on charges to recover a proportion of their running costs.

The Care Quality Commission imposes a graduated levy for example, as does the Gambling Commission. Across the Defra group, arrangements differ. APHA has a small commercial arm (AHPA Commercial). Permit, license and certification charges are common

In 2012, the National Audit Office estimated the cost to a farm of complying with regulations was on average around a tenth of its net profit. The NAO estimated that, during 2011/12, nine separate government bodies made at least 114,000 visits to English farms.

More than half of these were to carry out disease surveillance and testing (at a cost of £28 million) and 30 % to check for farmers' compliance (at a cost of £19 million). The total cost of this front line oversight activity in 2011/12 was £47 million.

across the group. None are funded by levy.

Where charges are known to be the best way to control risky things, or to make for a fairer funding system overall, they can be appropriate. Charges will probably be appropriate for some things here, but in the main, a graduated levy is a more straightforward and attractive way to recover costs overall. It also allows more readily for modern-day regulation, of the sort we propose later. We suggest this is a central consideration.

Over time, funding arrangements should be as fair as possible to all regulated, as well as to the public purse. These things are difficult to achieve if the regulator is straight-jacketed into specific, granular funding mechanisms from day one, when so much is uncertain. In our view, a carefully considered balance should be struck, to best suit the government's aims for the regulator, while keeping finding mechanisms as straightforward and fair as possible.

Levy schemes are often graduated, with higher levies for those who represent a higher risk. In this way, levies can be more acceptable to the industry as whole, as cross-subsidy is reduced. Regulators that levy tend to consult

61. The Governance of Regulators (2014) OECD.

62. Subject to the restrictions set out in its management statement or financial memorandum. See relevant Cabinet Office guidance on ALB governance and accountability (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/609903/PU2077_code_of_practice_2017.pdf).

63. Regulatory Futures Review (January 2017) Cabinet Office.

on the detailed arrangements⁶⁴. To be as fair as possible the approach to levies should strike the right balance, as between a universal, sectoral levy or risk-based approach. They consult as well on any proposal to impose or change any charges.

We recommend later that farmers and land managers should be able to access holistic farm advice, either from the regulator or its accredited agents. We note that Defra already funds a national network⁶⁵ of qualified, independent advisers to provide advice to farmers. We believe it will be important that enough farmers and land managers seek advice, and act on it, to make a difference. Graduated levy arrangements could allow for the provision of this important advice to those the regulator most needs to reach.

Accountability and transparency

All regulators should be accountable for their efficiency and effectiveness, while remaining independent of the decisions they take⁶⁶. This is necessary, to instil confidence.

The Defra bodies covered by this review each produce a corporate plan, and an annual report and accounts, but vary in the extent to which they otherwise set out how they do things. Regulators should be accountable and transparent about how they regulate. Transparency does not of itself build confidence, but it is an essential prerequisite.

Respected regulators make public the key tenets of how they operate, and abide by the policies they publish. They publish the standards (the regulatory requirements that must be adhered to) and their regulatory strategy or strategies, showing how they check and promote compliance with standards.

They should also publish an enforcement strategy, to show what they do to bring about compliance and sanction if necessary, and a fining strategy, to show how the size of a fine is decided (should there be fining powers). Some publish a record of the formal enforcement actions they take.

The public is rightly concerned to know not just

how regulators operate, but how they use their discretionary authority⁶⁷. Wise regulators want to know themselves that individuals think they are treated fairly, and develop ways for people to object to any decision seen as unfair.

They publish a complaints procedure, and some have formal appeals procedures as well, including (in some cases) final reference to an independent tribunal, so that people can be confident they have just avenues of redress.

Should the government accept the recommendations of this review and regulate in the way we propose, there is a strong case for appeals against consequential decisions

OECD GUIDANCE ON REGULATORY POLICY

1. The expectations for each regulator should be clearly outlined by the appropriate oversight body. These expectations should be published within the relevant agency's corporate plan.
2. Regulators should report to ministers or legislative oversight committees on all major measures and decisions on a regular basis and as requested.
3. Governments and/or the legislator should monitor and review periodically that the system of regulation is working as intended under the legislation. In order to facilitate such reviews, the regulator should develop a comprehensive and meaningful set of performance measures.

64. See for example, the consultation relating to Gambling Commission charges (<https://www.gamblingcommission.gov.uk/PDF/consultations/Proposals-for-Gambling-Commission-fees-from-April-2017-consultation-response-2016.pdf>).

65. Farming Advice Service (<https://www.gov.uk/government/groups/farming-advice-service#who-we-are>).

66. Reducing administrative burdens: effective inspection and enforcement (2005) Hampton, P.

67. 'Accountability in the Regulatory State', Lodge, M., Stirton, L., 2010. The Oxford Handbook of Regulation

of the regulator to be referred to the First Tier Tribunal (General Regulatory Chamber)⁽⁶⁸⁾. In that way, regulatory decision-making would be fully transparent and accountable, correcting current deficiencies in the system.

Regulatory powers need to be offset by strong governance controls and accountabilities, for balance and assurance. They commonly include requirements, for example, for independent internal audit of the regulator, and a requirement for it to maintain a finance and audit committee. These wider checks and balances required for accountability are usually set out in a framework agreement with the relevant government department. We would expect such controls to be in place here, and for the detail to be published.

The Care Quality Commission publishes an annual assessment of health and social care in England. The report looks at the trends, provides examples of good and outstanding care, and highlights where care needs to improve.

Ofsted's annual report examines the quality of schools, early years, children's social care and further education and skills providers.

Independent regulators also generally publish their internal governance arrangements, in a governance framework. They publish details of senior staff salaries and expenses, any procurement contracts entered into, and details of their own performance against agreed targets. Again, we would expect that discipline here.

In our view, the new regulator should adopt best accountability and transparency practice, to engender trust and confidence.

Regulators usually set out their annual expenditure and the extent to which they have

delivered their plans, in an annual report. Independent regulators in key sectors such as education and health⁽⁶⁹⁾ also tend to report more comprehensively on the sector they regulate, to take stock, and make clear and transparent to ministers and the public how things are. Reports like this can show most clearly, whether or not public money is being well spent overall, and whether regulation is being effective. They can signal where policies, priorities or approaches need to change, and demonstrate successes as well.

The Chief Veterinary Officer last reported in such a way in 2008. Nowadays, Natural England reports on how the public use the natural environment. The Environment Agency produces regular reports covering air quality and water resources and quality, but these reports do not relate solely or directly to farming or cover all that we expect from farming. There is no periodic, comprehensive stocktake report.

The government has new and wider expectations of farming and land management. There are legacy issues such as reduced biodiversity, longstanding issues including bovine TB and emerging issues such as poor slurry storage, to address in any event. We think it important to take stock – periodically and holistically – of positive trends, and to identify where things need to improve.

We **RECOMMEND** that the government should require the regulator to report periodically and comprehensively on the extent to which the government's stated priorities are being met. The regulator should develop, in consultation with the government and the sector, measures that enable farmers, land managers and the regulator to jointly track progress and areas of concern, and to help farmers and land managers make key day-to-day business decisions.

We suggest that generally, a five-year reporting cycle would be appropriate, to take a meaningful view.

68. One of 7 chambers of the First-tier Tribunal responsible for handling appeals against decisions made by government regulatory bodies in cases relating to a range of areas such as charities, food or postal services.

69. The latest Care Quality Commission State of Care report (<https://www.cqc.org.uk/publications/major-report/state-care>).

The field force

It is virtually impossible to deploy the Defra field force (inspectors) efficiently as well as effectively while they are spread across the Defra group.

The Environment Agency must retain the large majority of its field staff to suit its future remit, but otherwise one consolidated field force under the authority of the new regulator will be the most efficient and effective arrangement. It will also be the most straightforward arrangement for farmers and land managers. The regulator's field force should be Defra's default farm presence, in our view.

That is not to say that every inspector can do everything. Should our recommendations be accepted, there will be a greater need for general agricultural knowledge, supplemented by specialist knowledge and expertise. It will be essential to keep abreast of developments – for example, newly designed farrowing crates for pigs, and the growth and nature of precision farming. To regulate well, the regulator will need skilled and knowledgeable staff in the field, and back at base.

Those representing the regulator in the field will need good interpersonal skills and be able to form trusting and constructive relationships with farmers and land managers. There is an opportunity for the regulator to develop a field force strategy that would provide progression opportunities and at the same time, provide staff with the essential training and development to be able to regulate well.

One regulator with one field force should be able to better deploy staff and be much more able to develop its footprint so that individuals are available at a local level, to build effective relationships with farmers and land managers. Some field force staff are already home-based, and we see the potential and benefit of that.

The regulator should be organised so that it is able to deliver services (including advice) at a local level, in our view. This should be efficient, but also effective: the regulator will need to understand matters at a local as well as sectoral level.

We **RECOMMEND** that the government should retain sufficient field staff with the Environment Agency to enable it to deliver its future remit, but otherwise consolidate and create one field force under the auspices of the new regulator.

The role of local authorities

Given the delivery difficulties we have described in chapter four, we consider responsibilities should change. The regulatory system should respond consistently to animal welfare complaints, and oversight should not reduce because of local resource pressures. We deal later with how enforcement needs to change considerably. For now, we argue it is not acceptable or fair for enforcement to depend on where you live.

We appreciate that there is a cadre of capable and dedicated local authority animal health and welfare staff, albeit numbers are most likely reducing. Whilst recognising and applauding their good work, the primary responsibility for the regulation of animal health and welfare on farms should be moved from local authorities to the new regulator, in our view. A co-ordinated national regulatory strategy for animal health and welfare cannot be implemented now without centralised responsibility and authority.

We **RECOMMEND** the regulator should be empowered to commission regulatory activities (such as the first response to welfare complaints) from individual local authorities or other suitable bodies, but should do so only where that would be effective as well as efficient. In that way, local authorities that retain animal health and welfare competence and capability may play a role, in line with the regulator's priorities and expectations.

We **RECOMMEND** that the government reviews local authority statutory obligations relating to the health and welfare of farmed animals, in the light of the new regulator's remit. Local authorities have much wider responsibilities than just animal health and welfare on farms of course. They will wish to continue to investigate and prosecute within their own areas. And local authorities will continue to play an important and valued role locally, in exotic disease outbreaks and other emergency situations.

International confidence

To facilitate international trade, it is essential that we maintain international confidence in our compliance with standards for farming and land management. We outlined in chapter two the key elements of the systems we have for that now.

These national systems include surveillance,

testing and certification, movement controls and other containment such as quarantine, and systems to identify and trace certain categories of plants, livestock, animal by-products, feed or seed. Such controls do need to continue, albeit some of the processes could be more efficient than at present. In our view, it is in everybody's interests that the regulator should be required to have regard to national and international trade considerations in setting standards and in regulating for compliance.

Upon leaving the EU, key responsibilities will be repatriated to the UK. It will be important to ensure coherent agricultural strategy and public policy within the UK, while respecting devolution fully. We appreciate this may require enhanced liaison arrangements within the UK.

There is an opportunity to think afresh about the detail of some standards derived from the EU, however. Some relate to probity, and the use of public money. We expect those to broadly fall away, as we leave the EU, but the government will wish to develop other mechanisms to ensure probity, and account for public money used to support the sector, as it delivers benefits to the environment and ecosystems.

Other EU-derived standards cover not just what is expected of farmers and land managers, but also how compliance should be checked and regulated. This is most unusual, in a regulatory sense. Standards do not normally extend to that. Such standards can constrain the development of a holistic, proportionate and effective regulatory strategy overall, and that should be avoided if at all possible.

We appreciate this is not straightforward, if England commits to a common rule book rather than the broader notion of equivalence. It is nevertheless worth ensuring that the regulator could work assiduously over time, with Defra and others, to straighten out standards and common rule book provisions, to enable efficient and effective regulation in England.

Most national regulators are required by statute⁽⁷⁰⁾ to have regard to the desirability of economic growth. They should do this by applying an understanding of the business environment, their business community and individual businesses that they regulate and the impact of their activities on businesses to

ensure that they are acting where needed, and in a proportionate manner⁽⁷¹⁾. Some Defra group bodies are already covered by these provisions. In our view, an independent regulator of farm and land management should be made subject to this statutory duty.

Defra has tried and tested arrangements for the management and control of emergencies, such as exotic animal disease outbreaks⁽⁷²⁾. Under those arrangements, the Chief Veterinary Officer of the government leads a co-ordinated response, with the chief executive of APHA responsible for implementing the government's dynamic disease control policy on the ground.

These arrangements are proven, and we do not recommend any immediate change while Defra re-configures, should the government decide to create a new regulator. It will be important that the nation's emergency management capability is given due consideration and is consistently maintained during any transition.

We **RECOMMEND** that the government ensures, so far as possible, that regulatory requirements agree with trade partners, are not unduly constricting, and allow for effective regulatory approaches in England.

We **RECOMMEND** the government develops its UK-wide agricultural strategy liaison arrangements, as responsibility and authority is repatriated from the EU to England and the devolved administrations.

70. Deregulation Act 2015, the Enterprise Act 2016 and the Economic Growth (Regulatory Functions) Order 2017.

71. Growth duty: statutory guidance'; Department for Business, Energy and Skills, March 2017.

72. <https://www.gov.uk/government/publications/contingency-plan-for-exotic-notifiable-diseases-of-animals-in-england>

More straightforward regulation

The government wishes to see greater simplification at the heart of agricultural regulation⁽⁷³⁾. It has already taken steps to simplify countryside stewardship. It has stated its intention (during the agricultural transition period) to simplify cross compliance, and remove or reduce current ineffective greening requirements, before moving to a new regulatory regime. In the medium term, it aims to replace cross compliance, greening and countryside stewardship with a new Environmental Land Management scheme.

In our view, the regulatory system itself should be simplified, standardised and made more accessible to farmers and land managers⁽⁷⁴⁾. We deal here with how the regulatory system can be more straightforward and less labyrinthine than it is now.

Registration

Regulators need to know who or what they are regulating, and generally do so by requiring those regulated to register with them. We think registration an essential pre-requisite for almost all regulation.

There can be significant benefits to registration for the farmer, if it enables the regulator to channel the requirements and guidance relevant to the farmer. The complexity and volume of the current requirements and guidance make this highly desirable. To find out only what you should be doing on your farm is difficult at the moment and may well account for some non-compliance.

Current registration requirements are complex. They should be simplified, standardised, and rationalised down to two basic and linked requirements.

Land registration has been the bane of the Basic Payment Scheme, in large part because precise land parcel measurements must be provided by farmers and land owners regularly. These are then sometimes measured and checked on site by inspectors. We do not propose that continues

any longer than necessary.

We consider that all land utilised for farming⁽⁷⁵⁾ should have a registered 'keeper'. This draws on experience from systems that have stood the test of time, such as vehicle, customs warehouse and livestock keeper systems. As with these systems, a registered keeper system will allow different models of business to flow, while clearly placing the onus of responsibility at any point in time for the maintenance of the land and associated environment with an individual.

Land-keeper status can rest with an individual who owns the land or with another who leases or otherwise uses it. As a matter of principle, land-keeper status originates with and should stay with the owner of the land, unless he purposefully transfers it for a period (for example by a specific provision within a lease). Where land is leased for a notable period, as with long-term tenancy agreements, land-keeper status should transfer to the leaseholder.

We suggest the land registered by a land keeper should be described by reference to the Ordnance Survey(OS) grid. It is England's foremost and most commonly understood map reference system, and a description of land by OS grid references will be accurate enough for the regulator's purposes.

We hope that the value of land-keeper registration is accepted by farmers and land managers, most especially as it enables simplification and the removal of other registration requirements. In our view, land-keeper registration starts the relationship between the regulator and the individual.

Land-keeper registration should be a statutory requirement, with proportionate consequences for any land-keepers stubbornly choosing not to register. A fixed penalty may be appropriate, and we cannot envisage it would be right for any form of environmental or other incentive payment to be made in relation to land without a registered keeper.

We think that arrangements for registration of keepers of animals and the use of CPH for monitoring movements of animals should remain. These are critical to understanding the epidemiological risks in relation to exposure and

73. <https://www.gov.uk/government/consultations/the-future-for-food-farming-and-the-environment>

74. Design principle 2, Annex 2.

75. All land used for agricultural production and/or all land that draws down any form of environmental incentive payment.

transmission of contagious animal diseases⁽⁷⁶⁾. This system can and should be aligned with the system for land-keeper registration.

Registration (both of land and animal keepers) should gather sufficient information to begin to inform the regulator of the relevant risks and opportunities that are relevant to the farm. This preliminary view enables the targeting of advice, guidance and legal requirements – the first step in promoting compliance.

Registration processes can be so much slicker when they are digital, rather than paper-based. Many but by no means all farmers and land managers have IT connectivity and use modern technologies. In our view, the regulator should incentivise farmers' use of modern technology in their registration and other dealings with the regulator, while making proper provision for those who do not use it. Other public services, such as the DVLA and the Office of the Public Guardian do so.

Currently, minimum number requirements for the registration of farmed animals and poultry differ. We think there is a good case for registration requirements to better match prevailing disease or welfare risks, while always remaining proportionate. Risks may change over time, and the regulator should keep registration requirements under review and informed by evidence.

Most immediately, we advocate the removal of the lower bird number limit for registration of poultry, because of the risk of exotic disease and the operational need to reach all poultry owners when an outbreak occurs. The registration of horses and South American camelids should also be considered, in the light of the evidence of prevailing disease or welfare risks.

We **RECOMMEND** that the government legislates to rationalise farm and land registration requirements and to allow for a single land-keepers' register, to be held by the regulator.

We **RECOMMEND** that the current requirements for registering land parcels are carefully assessed and simplified as soon as possible.

We **RECOMMEND** that the government should simplify and standardise animal registration. All poultry should be registered, given exotic disease risks, and the government should consider whether South American camelids and horses should be registered, for endemic disease control or welfare reasons.

Risk-based approaches

Regulators use comprehensive risk assessment to concentrate resources on the areas that need them most⁽⁷⁷⁾. It keeps the cost and burden of regulation down. Of the approaches developed by regulators, the most ubiquitous is what is known as the entity-risk approach.

Risk assessment of this nature usually starts with an initial consideration and assessment of the risks for each individual who is registered. A poultry flock presents different risks when compared to a farm with cereals and no other product, for example. The regulator groups or categorises everyone in a manageable way, according to risk, to help the regulator focus on the riskiest enterprises. This sort of risk assessment has its place, to make regulation manageable and deliverable at a sensible cost.

Lessons (good and bad) can be gleaned from across the Defra group. When last reported publicly, there were at least 25 risk-based models in use⁽⁷⁸⁾. In some models, it seemed a high level of confidence in the competence of the farmer could not outweigh inherent hazard (for example because of the size of the farm) and yet this cannot be right. The size and scale of an enterprise does not automatically correlate directly to overall risk.

In our view, risk assessment and categorisation need to be kept relatively simple for farming and land management – otherwise it rather defeats the object. Overly-complex risk-based systems are inevitably troublesome, in our experience. The regulator should develop one core entity risk model. It should be no more complex than necessary to do the job. It would be wise for the regulator to consult the sector, to get to a good overall model.

76. County Parish Herd (CPH) numbers are used to identify where animals are kept. They may correspond to a land parcel or set of land parcels and so can be cross-referenced to the land keeper, or they may refer to a building. It is common practice for livestock to be grazed on premises not owned by the keeper of the animals. Indeed, some keepers of animals own no land at all. The CPH system provides a map layer above that of the land-keeper. Sometimes there will be overlap in keepers, but not always.

77. Hampton principle one (<https://publications.parliament.uk/pa/cm201213/cmselect/cmspeak/1069/106911.htm>).

78. Streamlining Farm Oversight (2012) NAO (<https://www.nao.org.uk/report/streamlining-farm-oversight/>)

We see the chance to simplify risk assessment and categorisation. Should those registering be required to provide basic information (to be agreed with the sector) then initial risk categorisation can happen at that stage.

Exploiting technology

Currently, farmers and land managers give similar information to several bodies in the Defra group, and repeat information periodically to the Rural Payments Agency (RPA). They also give information to farm assurance scheme auditors. We return to farm assurance later in this report. Over time, the requirement for individuals to repeat information to the payment authority (currently RPA) will dissipate, as we move away from CAP.

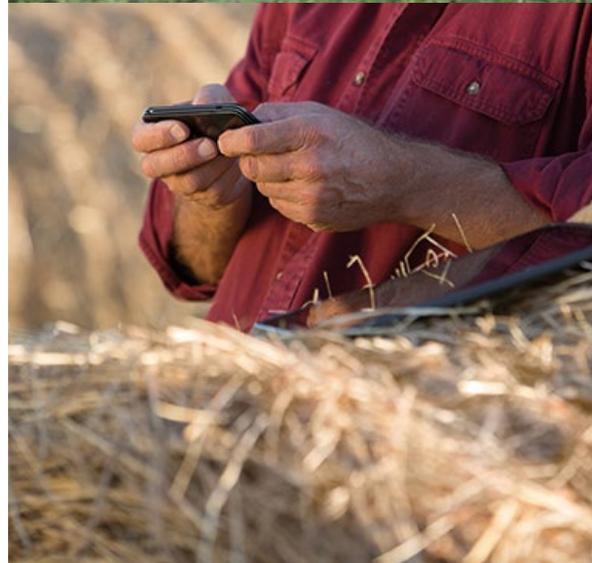
Business should not have to give unnecessary information, nor give the same piece of information twice⁽⁷⁹⁾. There is a rare opportunity to simplify and rationalise systems now, to meet this aim.

We have already suggested that registration systems are rationalised. In our view, the regulator should be the holder of data and information for each land and animal keeper, and should use one entity-based⁽⁸⁰⁾ information system from the start. Registration details should form the basis of each entity record, with the land-keeper under an obligation to update the regulator with key changes over time. All relevant regulatory activity and progress can be recorded at entity level, to build a rich picture, farm by farm.

The regulator's entity-based system should be compatible with the Livestock Information System, to enable data transfer. It is early enough in the Livestock Information System development to allow for this, and to recognise a move to land-keeper registration based on Ordnance Survey grid referencing.

Checking compliance against requirements has been done traditionally through inspection, with inspectors or other staff visiting farms or other land. In recent times the Defra group has begun using modern technologies to supplement and sometimes replace traditional on-foot inspection.

The Forestry Commission uses aerial photography to spot tree disease in densely



79. Hampton principle four (<https://publications.parliament.uk/pa/cm201213/cmselect/cmspeak/1069/106911.htm>).

80. Entity-based systems could store data and information farm by farm.

forested areas where otherwise, detection would be extremely difficult. The RPA uses geospatial data and systems, radar images, machine learning and earth observation systems routinely to check compliance, target inspection and supplement physical inspections on farms. The Environment Agency uses satellite imagery and mobile device technology to tackle diffuse pollution from agriculture. Nevertheless, on-foot inspection is still undertaken, often because of CAP requirements.

We think the balance between 'on-foot' and remote surveillance should change. CAP requirements that inevitably limit the use of such technologies now will fall away. As technology develops and becomes yet more affordable, opportunities increase. In our view, although robust surveillance to meet international trade and animal disease detection and control requirements must be maintained, the regulator will be able to rely notably more on modern technologies in its day-to-day work.

Defra's 'Magic'⁽⁸¹⁾ mapping application already provides significant geographic information about the natural environment across England. Drone technology is developing all the time, with costs reducing as well. The UK Space Agency's 'Space for Smarter Government Programme' is set to provide free images and radar data to public services, to benefit public sector delivery.

These sorts of technologies hold so much potential for the new regulator, when combined with land-keeper registration using OS grid references that enable simple over-mapping. They can be used to reduce on-farm inspections for compliance and to modernise surveillance, but they have other potential uses as well.

For example, the regulator will no doubt want to focus on specific issues, to make the biggest difference where it can. It will also want to work with others to conduct research and analysis, to fill any evidence gaps. Remote technologies will make evaluating issues and conducting research more efficient and effective for the regulator, and less burdensome for individual farmers and land managers.

New technologies can make the regulator more efficient. High-resolution satellite imagery gives free and ready access to remote or rural locations, for example, and could reduce the

need for lengthy journeys. New technologies can also help to set priorities. The regulator can get a view of the extent of an issue (for example, pigs not registered, or poor slurry management) in any one area, or more widely. Risks can be identified early and sufficiently comprehensively, so that the regulator can target the highest risks as a priority.

Before leaving the subject of modern technologies, we should mention that commercial organisations are already using field sensors and connectivity to provide geospatial big data (satellite data, soil data, yield information, crop analysis and so on) for farming. Increasingly, farmers are precision farming.

There is an opportunity for the regulator to work with the farming sectors to best harness these developments, for the overall good. For example, blockchains have great potential, with the caveat that those using them will wish to be sure that data and information is used ethically.

Whatever the use of technology, it is important that the standards and the regulatory requirements that should be adhered to are clear and understandable. We deal with that next.

Being clear about what is expected, and why

We propose that regulatory standards – the requirements that farmers and land managers must adhere to – should be well-designed, and pitched appropriately, take account of competing objectives, and be supported by industry, professional experts, policy makers and the regulator⁽⁸²⁾. We explain what we mean in more detail below.

Responsibility for standards

Currently, the government states the high-level, binding obligations (primary standards) on farmers and land managers in Acts of Parliament and other legal statements, known collectively as regulatory instruments. There are many.

Regulatory instruments serve a legal purpose for all regulators, but they are not usually couched in ways that are helpful to those

81. <https://magic.defra.gov.uk/>

82. Design principle 3, Annex 2.

subject to them. Regulators deal with that by translating and transposing them into a coherent set of standards. That is routine business, for regulators.

Some regulators⁽⁸³⁾ also have statutory authority to set primary standards. Their own enabling legislation provides for that. Others are empowered to set primary standards under delegated authority from ministers. We explained earlier that the government generally specifies the extent of the regulator's delegated authority. It may delegate a general authority to set primary standards, but then require or prevent certain actions.

Exotic animal disease outbreaks have significant social and economic consequences. It is right that the government specifies the levers of control (the standards that will come into play when an outbreak occurs). Given the importance of the environment and ecosystems, there may be other situations in which the same argument applies.

On the other hand, it makes sense for the regulator to be empowered to set day-to-day standards. It can develop competence in the art of standard-setting, as we outline below. Regulators with day-to-day responsibility for standards, and who are able to this well can be most effective at delivering the government's aims for the industry they regulate. We think this regulatory authority will be necessary and helpful as the challenges and opportunities for farming and land management develop over time.

We suggest the new regulator is empowered to set and review standards. Parliament will wish to consider and determine whether the regulator is empowered to set standards by statute or else under delegated authority.

Clear standards

Standards set out what is required, or what is mandatory. In our view, regulators should ensure that standards are well-designed and well-pitched.

Well-designed standards are transparent, that is, understandable to those who must live by them. They are also accessible, that is, those subject to a standard ought to be able to apply it to their

The Agriculture and Horticulture Development Board's TB hub sets out clear guidance on bovine tuberculosis:

No movements of cattle onto a TB-restricted holding are permitted prior to completion of the first short interval test.

The reason for this is that in many cases, the true extent and severity of a new TB breakdown will not become apparent until completion of the first short interval test.

Therefore, the risk for any incoming cattle cannot be fully assessed until the results of this test are available to APHA.

This makes the standard transparent, accessible and congruent, as it should be.

situation. And they are congruent, that is, there is a golden thread, a clear relationship between the standard and the underlying policy objective⁽⁸⁴⁾. That is what is needed, for farming and land management.

The regulator must be able to influence originating regulatory instruments – the common rule book, for example, or any other basis for trading – to make sure that well-designed standards can be derived that allow for the development of effective or efficient regulatory approaches.

Standards should be well-pitched. Standards can focus on the outcomes or outputs of an activity, or else specify how the output is to be achieved⁽⁸⁵⁾. Well-pitched standards are not definitive about how something must be done unless they have good reason to be. Mature regulators guard against that – otherwise an individual who knows the desired outcome and sees how they could deliver it can be frustrated by a specific requirement that is excessively

83. For example, the Solicitors' Regulation Authority, Ofqual, The Gambling Commission, and the Charity Commission.

84. Diver, C. (1983) The Optimal Precision of Administrative Rules, Yale Law Journal, 93: 65-109.

85. Baldwin and Cave, 1999: Understanding Regulation: Theory, Strategy and Practice 119-20 Oxford University Press.

onerous or does not fit their situation.

In an ideal world, standards are outcome-focused, and generally allow for variation or choice about how the outcome is achieved, to suit different contexts. In the real world, however, it is sometimes necessary to say how or when something must be done, and there is sometimes an overriding need for prescription, as in the control of cattle movement from restricted holdings. A careful and considered balance should be struck.

Relevant standards

Each individual needs to know what they must do – the mandatory requirements – and why they must do it. They need to know what is relevant to them. Regulators do this by setting out standards, usually in a set of guidance, and the regulator should do that here.

As a minimum and a priority, the regulator should ensure that well-drafted and well-pitched standards are set out in what is known as ‘guidance made under statutory authority’ (see Figure 24, Chapter 3). It is not generally acceptable for individuals to depart from statutory guidance.

Individuals also benefit from knowing more about what they might or could do, as responsible farmers and land owners. More general guidance (known as non-statutory guidance) can show more effective or efficient ways of meeting the standards or doing better still. It is not mandatory to follow non-statutory guidance, but the guidance should be of interest and value to responsible farmers and land managers.

Non-statutory guidance should cover the nature of the hazard and the harm exposure can cause, explain how some hazards are difficult to identify or control, what signs to look for and the different ways to reduce risks. It could cover, for example, enhanced biosecurity for poultry-keeping, or management of one aspect or another of soil health. The regulator should develop non-statutory guidance, in our view.

Currently, guidance is plentiful but fragmented⁽⁸⁶⁾. Most appears to be statutory, although it may not always be clear what is statutory or non-statutory

– what is essential and what is desirable. Most of all, why something is necessary is not often explained. The regulator should be charged with reviewing and de-commissioning legacy guidance over time.

Statutory and non-statutory guidance should be clearly differentiated, but it should also be made readily available in one place. Rather than standards and guidance being disaggregated and discrete, we advise that the regulator should structure and electronically enable statutory and non-statutory guidance, to allow for tailored views.

Defra group bodies’ websites are hosted on GOV.UK, whereas some independent regulators have their own websites⁽⁸⁷⁾. An easily navigable online presence is essential, in our view. The regulator must be able to provide complex and rich information in a structured and tailored way, to those regulated. Individuals should be able to see readily all the requirements and guidance applicable to them and their situation, and not those irrelevant to them.

We see there is an opportunity to do this right from the start. Those registering as land or animal keepers with the regulator could be given just the guidance relevant to them and their situation, alongside any general permissions (such as for general movement of livestock). They should also be signposted to other sources of information. They could then be notified by the regulator of any changes in standards or guidance relevant to them, over time and in ways they choose (electronically or by post). In this way, a different and more supportive and responsive relationship could begin.

The regulator will not be the only source of guidance or advice. We return to that later, when discussing how the regulator can best work with others.

Developing standards

A common approach to development of standards is for independent regulators to bring together the relevant expertise from industry sectors, policy, professional or technical experts for views and advice. By doing this, they are more likely to develop well-designed and well-pitched standards, while being objective and

86. Streamlining Farm Oversight (2012) NAO (<https://www.nao.org.uk/report/streamlining-farm-oversight/>)

87. For example The Gambling Commission (<https://www.gamblingcommission.gov.uk/>) and the Care Quality Commission (<https://cqc.org.uk>).

impartial throughout. The regulator holds the ring. In technical terms, this forms what is known as 'dialogic accountability' for the standards, superior to legislative setting of detailed standards⁽⁸⁸⁾. Put more plainly, the greater the sense of shared ownership and understanding, the more likely it is that standards will be recognised as credible and necessary, and this will promote compliance.

In our experience, when standards are developed in this way, the risk that standards will create unintended consequences is reduced. The way the standards are structured and expressed is more likely to work, if they explain why the standard is needed, and what it is there for. We think this approach holds promise for farming and land management, and we believe respected experts and professional bodies relevant to the sector will be willing to take part.

Once standards are set, it is then for the regulator to monitor, and work with the industry to hone and adapt standards, and re-set standards if necessary. Stability in standards is desirable, but equally it is right to introduce new requirements quickly if necessary. We think that is going to be essential, for trade purposes and as national and international market conditions develop.

Reviewing standards

Even with the most care, standards can prove ineffectual in practice, or else have unanticipated adverse consequences of one kind or another. They can become out-stripped by time. They may no longer be relevant, because things have changed.

This happens with all regulation: the system that is being regulated changes and the regulatory system has to adapt. The regulator should be under a duty to keep standards under review.

The regulator should work with Defra and the industry to identify and strip out unnecessary, outdated or unhelpful requirements, one way or the other, while always protecting and facilitating trade.

Standards embedded in legislation or statutory instruments can be removed through primary or secondary legislation. This is no small task.

88. Brauthwaite, J. & Braithwaite, V. (1995). 'The Politics of Legalism: Rules versus Standards in Nursing Home Regulation', *Social and Legal Studies*, 4: 307-41.

89. Design principle 4, Annex 2.

WHAT IS REGULATION

A specific set of commands – the promulgation of a binding set of rules to be applied by a body devoted to this purpose

Deliberate state influence – a broader concept which covers all state actions that are designed to influence business or social behaviour (thus also encapsulating economic incentives, contractual powers, deployment of resources, franchises or the supply of information).

All forms of social or economic influence – all mechanisms affecting behaviour, whether state based or from other sources (such as markets).

Baldwin et al 2010

In the meantime, the regulator can agree a sensible order of priorities with the government. This would serve to limit the regulator's focus on requirements that may no longer be fit for purpose. Given the volumes of legacy standards here, we think a pragmatic approach will be required.

We **RECOMMEND** that the regulator be empowered to set standards.

Reflect mature regulatory thinking⁽⁸⁹⁾

Since we joined the EU more than four decades ago, regulatory thinking in other sectors and in other parts of the world has developed. We can benefit from that. The approaches

RIGHT APPROACH TO THE RIGHT ISSUE

The General Data Protection Regulation (GDPR) is an ambitious, complex and strict regulation designed to harmonise data protection law across the EU, and transform the way in which personal data is collected, shared and used globally.

The Information Commissioner's Office is responsible for delivery in the UK. It favours the carrot to the stick and prevention over punishment. It emphasises encouragement, engagement and education. This includes raising public awareness and supporting and guiding organisations.

Nevertheless, proportionate and effective sanctions have their place. They intend to take action against the most audacious offenders.

Rapidly changing technology creates new risks. They are planning ahead – for example, with a two-year post-doctoral appointment to investigate and research the impact of AI on data privacy. They have proposed a regulatory sandbox to enable organisations to develop innovative products and services. They have recognised the synergies between legal requirements and data ethics and are engaging actively in the debate, recognising that even if a practice is legal, it may not be right.

This regulator has identified a problem, understood its causes, transparently developed a multi-strand strategy, and tactically and purposefully aims to use the full gamut of its powers to drive systematic behavioural change, at scale.

to independence, funding, registration, risk and standard-setting already discussed, reflect developed regulatory thinking and understanding.

To change in the way we need to though, we must think more fundamentally about what regulation is, and how it can work. It can be much more supportive than now, but still able to exert robust control when it needs to.

We think it essential at this juncture, that Defra recognises that contemporary regulation is so much more than a set of rules, referred to by some as 'the regulatory baseline'. That misses most of the point and all of the opportunity of regulation, in the modern day. For regulation to become much more effective and deliver the government's enduring and new aspirations for agriculture, and for the regulatory culture to change, requires a seismic shift from that view.

When we joined the EU, regulation was in its infancy. It was more often a set of rules, then. It could be described at that time as the exertion of public authority through a system of rules and laws in which the regulator ensures technical compliance by the regulated. Rule-based approaches on their own are now recognised as too crude, too enforcement-focused, and likely to miss critical emerging risks.

Regulation has since matured beyond a set of rules. By the 1990s it was thought of as "sustained and focused control exercised by a public agency over activities that are socially valued"⁽⁹⁰⁾. In a broad sense, that still holds true. Two decades later, regulation was well-articulated as a more sophisticated and nuanced concept still, as a specific set of commands, deliberate state influence and all forms of social or economic influence⁽⁹¹⁾.

90. G. Majone, 'The rise of the regulatory state in Europe' (1994) 17 *West European Politics* 77, 81; P. Selznick, *Focusing Organizational Research on Regulation, Regulatory Policy and the Social Sciences*, edited by Roger Noll. Berkeley: University of California Press, 1995

91. *The Oxford Handbook of Regulation*, R. Baldwin, M. Cave, M. Lodge, Oxford University Press, 2010

In recent years, risk-based approaches to regulation have become commonplace. These approaches can focus on those who seem to present most risk, as we described earlier. Alternatively, they can focus on more systemic risks and issues, rather than the regulator expending resources on ensuring compliance to laws or rules where no real harm is being done – sometimes pejoratively described as ‘tick-box’ regulation.

More recently still, regulation is sometimes conceptualised as rule-based, outcome-based or management-based, with hybrid outcome/management-based approaches in use as well. We outlined these important concepts earlier, in chapter three.

In short, regulation has evolved in recent decades, and shifted from a focus on illegality into a more agile approach aimed at minimising harms⁽⁹²⁾. The point is that not everything that is illegal is harmful, and many things that are legal can cause harm⁽⁹³⁾.

Rule-based approaches have their place. But we argue that reducing the risk of harms also requires distinctive patterns of operational and organisational behaviour, to pick important problems as they develop, and fix them in whatever ways are necessary. This applies not just to the ‘major event’ harms but also to the cumulative, insidious harms that mount up over time and are not quickly reversed, such as soil erosion.

A regulator needs to be able to apply the right approach to the right issue. We argue that in practice, a variety of approaches are needed to achieve the purposes of farm regulation. The way we regulate in the modern day should be able to pick important problems and fix them⁽⁹⁴⁾. To do that requires regulatory approaches well beyond a rule book, or so-called regulatory baseline.

We describe, below, the regulatory approaches we advise would best suit farming and land management today, starting with those situations where a rule-based approach does still fit.

Rule-based approaches

Reducing the risk of serious harms (such as foot and mouth disease) and managing the situation when risks materialise requires a robust rule-based approach, what we term red light regulation – regulation without compromise. That is obvious, and we believe well-accepted by the sector. Rule-based approaches are still well-suited to such serious harms.

Rule-based approaches are also necessary to support international trade. They will likely continue to be so once we leave the EU. That means for example, that we will have to continue to apply tracing and identification controls. Although it is one of the most complained-of elements of regulation now, we must continue with laborious livestock identification checks, pending the introduction of the Livestock Information Service.

Bovine TB controls are predominantly rule-based, and again they need to continue. Nearly 45% of all visits to farms by the Defra group are for bovine TB surveillance or control. The government is considering the recent review of bovine TB strategy and intends to respond next summer, but it is already clear that bovine TB testing and other rule-based approaches will continue.

We conduct other surveillance, for example for endemic and exotic disease. These requirements are generally related to international trade requirements, but in any event, disease surveillance is necessary and should continue.

Currently, farmers and land managers have to apply for a licence or permit, or register for an exemption to undertake some activities, as a matter of rule. Some of these relate to animal movements. Many relate to how we regulate to manage environmental risks. We see scope to rationalise some licensing and registration requirements, should we move to land-keeper and animal-keeper registration, and have funding arrangements for the regulator de-linked from licensing charges. Registration schemes can facilitate the use of general and special conditions which could replace some piecemeal

92. *The Regulatory Craft: Controlling Risks, Solving Problems, and Managing Compliance*, Sparrow, M. K., 2011 Brookings Institution Press.

93. *The Character of Harms*, Malcolm K. Sparrow, Cambridge University Press 2008.

94. *The Regulatory Craft: Controlling Risks, Solving Problems, and Managing Compliance*, Sparrow, M. K., 2011 Brookings Institution Press.

licensing.

There will remain a case for some licensing requirements (or special conditions) in circumstances where licensing is known to work to manage harm, where it is considered the approach most likely to work, and the fairest approach. For those cases, the regulator should develop efficient, technology-enabled arrangements for the administration of licensing.

THE ISSUE-BASED APPROACH TO RISK

1. Select an issue
2. Quantify and evaluate: how bad is it, how is it bad, why is it bad, and is there any good practice
3. Deal with the issue, by carefully considering and then applying the right regulatory approach

Guidance should be simplified and tailored for farmers so that it is easier for them to understand what licences, permits or exemptions they need and how to apply for them.

Issue-based approaches

Issue-based approaches are not solely focused on technical compliance and enforcement. Rather, the regulator is more purpose-driven and agile, exercising choice about the issues to focus on and then employing a range of approaches to address harms, to make the most difference with the resources at its disposal. Sparrow calls this the 'craft of regulation'⁹⁵.

We have seen the industry play a leading role in

issue-based approaches, for example in relation to reducing antibiotic usage⁹⁶. There, actions included better animal husbandry, improving housing, herd/flock health management, vaccination and disease eradication.

An issue-based approach has enormous potential in farming, and especially when the industry is fully engaged. Working alongside the industry, this approach would come into its own in delivering the government's aim to tackle endemic disease, for example. There, regulatory authority may be required for some actions. For other actions, the sector itself can drive change. We advise much greater use of it than we see at present, in the regulation of farm and land management.

Systematic evaluation of data and information can help regulators to identify issues and prioritise from those well-matched to an issue-based approach. It is not possible for the Defra group to collectively and systematically bring together data on levels of non-compliance or use it to evaluate associated risks. It cannot routinely view all its data from inspections easily, to evaluate rates of non-compliance, identify common problems or risks in farming practice, identify trends, or prioritise action⁹⁷. One independent regulator will be in a better position, over time.

Most issues of likely concern in the sector are not quantified currently, but some are not readily quantifiable anyway. Some do not relate to compliance *per se*, but risks to the industry. For those sorts of issues and for emerging issues, thematic inspection can be useful.

Thematic inspection methodologies are designed individually around each issue. They usually involve a mix that can include a literature review, a review and collation of any available data or management information, a survey, interviews with experts and others with experience of the issue, and the inspection of a representative sample of cases, premises or whatever (depending on the issue). The right methodologies enable the regulator to understand, for any selected issue, what is going on, and why, in a sufficiently valid way.

The next step is for the regulator to improve

95. The Regulatory Craft: Controlling Risks, Solving Problems, and Managing Compliance, Sparrow, M. K., 2011 Brookings Institution Press.

96. O'Neill Review into Antibiotic Resistance 2017 <http://researchbriefings.files.parliament.uk/documents/CDP-2017-0074/CDP-2017-0074.pdf>.

97. Streamlining Farm Oversight (2012) NAO (<https://www.nao.org.uk/report/streamlining-farm-oversight/>)

matters where they need to improve, by working out first of all how best to do it. Here, the regulator needs to reflect wisely, work with the farming sector, and do the right combination of things to make the most possible difference.

Management-based approaches

We mentioned earlier that both outcome-based and management-based approaches are more flexible than rule-based approaches. We said that hybrids of outcome and management-based approaches can best suit some circumstances.

We see that in farm assurance, LEAF adopts this approach. Members have access to an online self-assessment tool, to enable farmers to monitor performance and identify strengths and weaknesses. LEAF standards go on to require members to management-plan. Members should develop their own plan for soil health, for example.

The Environment Agency is using just such a hybrid approach to manage manure, fertiliser and soil to prevent run-off, erosion and leaching. It is targeted at those operating in nitrate-vulnerable zones. It applies to those receiving public funds through Basic Payment or Countryside or Environment Stewardship schemes.

Importantly, it requires farmers to assess for themselves the risk of run-off on their farm. The agency provides guidance on how to do that. It requires farmers to plan each application of manure or fertiliser to their land, plan how much to use, and – for cultivated agricultural land – to plan using the results of soil tests. The agency gives advice.

It checks compliance through inspection and in other ways, but of course there is a limit to its inspection capacity. Whenever it finds non-compliance, it works with farmers to identify the changes the farmer needs to make, and the timescale for making those changes. The agency might then follow up with another visit to the farm or a request for evidence, and it may take formal enforcement action, including prosecution.

This approach falls short of requiring a written plan from the farmer, but otherwise it is the classic management-based approach we described earlier.

In our view, management-based approaches are

DREEM (THE REGULATORY CYCLE):

Detecting: Obtaining information (via intelligence) and subsequently evidence about undesirable and/or non-compliant behaviour.

Responding: Developing strategies, policies, rules (including standards, guidance, codes of practice), and tools (including appropriate operational approaches) to address the problems identified.

Enforcing & Enabling: Applying the strategies and policies and using the operational approaches to address identified issues.

Evaluating: Measuring the success or failure of the regulatory strategy in addressing the specific issue.

Modifying: Adapting to reflect the outcome of the evaluation and the changing environment; resetting regulatory strategy and when necessary standards.

particularly well-suited to managing some of the hazards of farming and dealing with some of the harms. They are also appropriate when farmers are to receive significant amounts of public money, by way of opportunity costs⁹⁸.

Management-based approaches require a framework to be set out by the regulator, just as the Environment Agency has developed to manage manure, fertiliser and soil run-off⁹⁹. They generally require a plan, except for the most inconsequential matters. The best management-based approaches tailor oversight of delivery of the plan, based on a reasonable assessment of risk and consequences.

Oversight needs to take account of the nature of the outcome as well as the risk. Put simply, if large amounts of public money are to go to someone with a poor record of compliance, then close oversight would be the norm. If the outcome only comes to fruition over time, then oversight must suit: tree planting and growth could be surveyed remotely and periodically, for example.

We return to the issue of incentives and opportunity costs later, but note for now the potential of management-based approaches.

Regulatory action and enforcement

The government accepts that parts of the current enforcement system impose disproportionate penalties. Farmers generally agree¹⁰⁰. The government also thinks that the current system provides insufficient scope for farmers to remedy under-performance. It wants a new, fairer enforcement system, while maintaining a robust approach.

As with other aspects of regulation, thinking on enforcement has developed considerably since we joined the EU. Effective regulators have a mature understanding of how to promote and secure compliance and how best to change the behaviours of those they regulate, without resorting to formal enforcement action. They have a well-developed sense of the range of approaches needed for effective enforcement.

Here, we propose approaches to enforcement that we believe will be fair and effective for farming and land management. We consider that regulation could be much more effective in enabling and enforcing requirements, albeit what we propose raises questions of public policy that we detail later.

Enabling and enforcing

When it comes to an individual's non-compliance with a regulatory requirement, we find it helpful to think in terms of a range of options, with the regulator using the best tools to suit the situation. This will usually start by giving advice, clarifying requirements and giving an individual who is willing to comply, the chance to comply. Sometimes, it is right to jump straight to firmer action, but that should happen only if the circumstances justify it.

THE RANGE OF OPTIONS TO ENABLE AND ENFORCE

- Advice
- The opportunity to comply
- Incentives to comply
- Fixed penalty
- Direction to comply/binding undertaking
- Other financial penalty (fine)
- Suspension/withdrawal of conditions/licenses/permits
- Direction to cease business
- Criminal prosecution

98. For example, under the proposed Environmental Land Management Scheme.

99. The framework can be found at: <https://www.gov.uk/guidance/rules-for-farmers-and-land-managers-to-prevent-water-pollution>

100. National Farmers' Union review (2015) reported farmers' fear of financial penalties that could be imposed (primarily by the RPA) through cross compliance, and that they thought financial penalties through single farm payment were disproportionate, especially for tagging breaches.

Where an individual chooses not to comply with a straightforward requirement, or where compliance by all with a simple requirement is not negotiable, a fixed penalty fine may be appropriate. Failure to register as a land-keeper or failure to register animals might fit into this category.

Where risks are not being managed well enough on farm, or rules are being purposefully disregarded, directions to comply, binding undertakings and general and specific permissions (conditions) and licence withdrawal are all potential options for the regulator.

Serious and purposeful breaches are not thought to be the norm in the sector, but a small proportion of land and animal-keepers are known to disregard requirements persistently, to the detriment of the land or animal welfare, or animal or plant health. For serious or persistent breaches, more punitive action is likely to be necessary, and that option should be open to the regulator.

For those producing food, the most immediate and sobering action may be to prevent access to market: to require cessation of business until the regulator is willing to lift that restriction. Where an individual is farm-assured, protocols between the regulator and the farm assurance scheme could come into play, to suspend access to market.

A heavy fine may be appropriate when important requirements are purposefully and blatantly disregarded. The established regulatory view⁽¹⁰¹⁾ is that sanction regimes should ensure that no economic gains are made from non-compliance. Expanding on that principle, one can see that the extent of any profit made through non-compliance is an entirely legitimate consideration, when deciding whether to fine and when setting a fine.

We have considered the relevance of the 'Polluter Pays' principle. We do not advocate a purist application of it. In our view, it would not be fair or even achievable, in most circumstances.

Good regulatory theory⁽¹⁰²⁾ does suggest that a sanction should be proportionate to the nature of the offence and the harm caused, but that is not the same as full recompense for

damage. Instead, the damage caused by an incident and the cost of restoration are relevant considerations in setting any fine that may be applied.

The underlying sentiment of the principle could underpin public policy, however, should the government decide that individuals who choose to be non-compliant with a core regulatory requirement should not be automatically able to apply for opportunity funds⁽¹⁰³⁾, without first

THE POLLUTER PAYS PRINCIPLE

The Polluter Pays principle is a cost allocation or non-subsidisation principle, intended to guide governments in addressing domestic pollution, with the notion of internalising costs of pollution prevention.

Outside of this context, it is a more abstract principle.

As applied by environmentalists, the principle means that polluters (and countries) who do not pay for the costs of their domestic pollution (i.e. those who do not internalise these costs) should be liable for trade penalties.

As applied by trade liberalisers, the principle means that polluters (and countries) should pay for the costs of domestic pollution as dictated by national policies.

dealing with harms sufficiently well.

Using the criminal law without careful thought devalues it, but in the most egregious cases, criminal proceedings will be the appropriate

101. R. Macrory, Regulatory justice: Making Sanctions Effective, 2006, Cabinet Office, London.

102. Regulatory Justice: Making Sanctions Effective, November 2006.

103. The main source of opportunity funds in future will be Environment Land Management schemes.

regulatory response. For criminal proceedings to succeed in a conviction, proper and skilled investigation and prosecution are required. In our view, that augurs towards a central investigation and prosecution function. That is most sensibly placed in the regulator, the body with the most direct interest in getting that right.

Ultimately, regulators should be able to select the right action or combination of actions. By way of example, on at least one occasion the Environment Agency has accepted an undertaking but also issued a fine, to signal to the public and those regulated, the seriousness of the non-compliance.

Enforcement regimes must be subject to proper governance by regulators, as we described earlier. The burden of proof for enforcement should be with the regulator in all cases⁽¹⁰⁴⁾, civil or criminal, and there should be an appeal route with an independent element – for example, reference to a tribunal.

In Annex 1, we set out the enforcement and other powers we expect in a farming regulator, and the rationale. With a comprehensive suite of powers and the ability to exercise them correctly, regulators do not generally have to resort to formal enforcement. They find softer approaches work, but it is important to have real powers in the back pocket.

One of the softer approaches is incentivisation. Incentives can enable compliance. The right incentive may be the best or the only way a farmer can manage an immediate hazard and prevent harm, and we turn to incentives next.

A sophisticated and balanced view of regulation

The regulatory system should take into account the nature of the farm or land and the interconnection of environment, production systems and ecosystems, the nature of associated risks and opportunities, and the operation and achievements of the farm. It should enable appropriate interventions to drive changes in activity or behaviour where needed⁽¹⁰⁵⁾.

In our view, regulation should enable

INCENTIVE OPTIONS

- Access to expert advice
- Grants or guaranteed loans
- Subsidies (opportunity payments)
- Reduced burden of oversight
- Compensation
- Contracts for infrastructure projects
- Contracts for other work
- Planning services
- Testing services (for example soil)
- Recognition

compliance, with resort to formal enforcement only when necessary. Incentives have an important part to play. We identified a range of incentives, in describing regulation in Chapter 3. We discuss those that we think are particularly relevant here, starting with access to expert advice.

The provision of advice

Regulators should provide authoritative, accessible advice, easily and cheaply⁽¹⁰⁶⁾. There is no 'in principle' obstacle, to regulators providing helpful advice. Quite the opposite. Indeed, if the new regulator's stated purpose includes enhancing plant and animal health and animal welfare and the good management of farmed land, as we propose, advice has an important role to play.

Advice differs from written guidance. Guidance explains what the farmer must do or else could consider doing. Advice helps farmers to choose the right thing to do, the right priorities and the right way forward.

Some farmers and land managers already buy specialist advice from agronomists, animal nutritionists and other experts. Some cannot afford such advice readily, and some say they

104. Macrory, oral evidence to the Environmental Audit Committee, December 2017.

105. Design principle 5, Annex 2.

106. Hampton principle 6 <https://publications.parliament.uk/pa/cm201213/cmselect/cmspeak/1069/106911.htm>.

are reluctant or unwilling to pay⁽¹⁰⁷⁾. Some resort to other and sometimes more convenient or trusted sources of advice: the vet, or a farming neighbour for example.

We cannot know for certain, but we assume a good amount of paid-for advice relates to productivity and profitability. These are both important and often immediate matters for farmers. We estimate that only a small minority of farmers benefit from more wide-ranging advice. This might be provided by an adviser employed by a processor⁽¹⁰⁸⁾, or else from a voluntary organisation⁽¹⁰⁹⁾ providing more rounded, holistic advice to farmers. This advice is sometimes provided in workshops, or else on a one-to-one basis.

Defra inspectors are not generally regarded as sources of advice by farmers at the moment, although there are exceptions. Some staff at the Animal Health and Plant Agency are seen to provide valued advice to poultry and bee keepers, for example.

Defra inspectors are prevented from giving advice for the most part, because it is not their job to do so. It does differ across the Defra group, but for some, the organisation's role does not allow for it. In any event the advice will usually be specific, rather than advice taking the whole farm or land and business into account.

Together, these arrangements leave some farmers that may be most in need of advice without it. Many farm alone, or with little hired help. Farming is generally a complex and demanding job, requiring an exceptionally wide range of skills. It is not easy for some farmers to do all that needs to be done on the farm and at the same time keep abreast of developments. Ideally they need to take stock periodically, with the benefit of good advice.

We are told that increasingly, farmers are farming in ways which would not be their first choice and that they do so primarily because of market and price pressures. It is not possible to be definitive, but we are confident that the large majority of farmers wish to farm responsibly. In our view, they should be able to get advice that enables them to take a considered and informed view of their farm, and to weigh up things in the round. The government's aims for farming and land management would more likely be met, were

such advice routinely available.

To take a considered and informed view, a farmer needs a good overview of the farm: areas where things could be better on the one hand, and the assets and potential of the farm on the other. Each farmer or land manager would benefit from being able to see how his farm, land or business stacks up against his own ambitions and the expectations of the government for agriculture, and how it compares to the more general situation locally and nationally. The regulator should be able to provide that comparative view.

At the same time, farmers and land managers need to know what financial or other assistance they may be able to get, to improve their enterprise, and to meet the government's aims

A large proportion of farmers (43%) do not have plans to make significant changes over the next 3 years. The lower occurrence of planned change compared to reported past change may indicate that farm business alterations are often undertaken opportunistically rather than as part of a long-term business strategy. However, it is also possible that current concerns about the economic state of the farming sector are making farmers cautious about planning future investments.

SIP Project 2

as well. Farmers need to know the whole picture, to make good decisions overall. It will be wise to provide farmers with holistic, whole-farm advice and do that in the context of individual farms.

Advice should enable the farmer to see the risks of harm, and the opportunities for enhancement for his farm and his ways of farming. The farmer must get a clear sense of anything that must be done and what they might consider doing, and

107. Defra Farm Business Survey 2018.

108. Under Waitrose Farm Assurance arrangements, 11 producers provide advice to the farmers supplying to them.

109. For example, under arrangements sponsored by The Prince's Trust.

Slurry And Manure

RISK Many tanks were installed or improved when SSAFO (Silage, Slurry and Agricultural Fuel Oil) Regulations were introduced in 1991 with financial support. These stores had to be built with a minimum lifespan of 20 years, with good maintenance. Many stores built before 1991 have remained exempt from SSAFO, regardless of capacity, condition or maintenance. Most herds have expanded since 1991 but tanks have had little or no maintenance, or increase in capacity, so the risks are increasing.

Stores



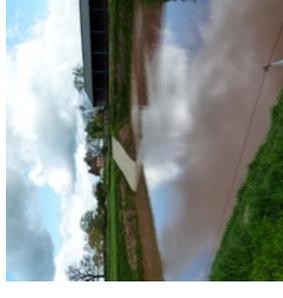
Tanks



Heaps



Lagoons



GOOD

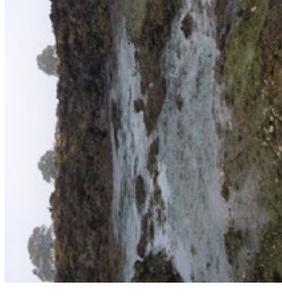
BAD



Yard storage over-loaded and coming to end of life



Burst slurry tank



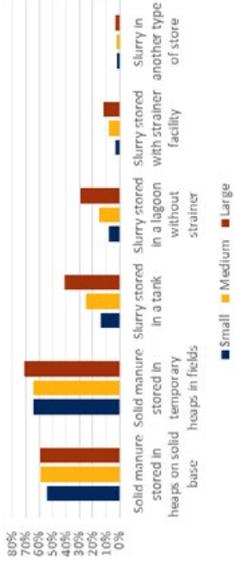
Field heap with significant run off problems



Very old slurry lagoon - pre 1991 so SSAFO exempt

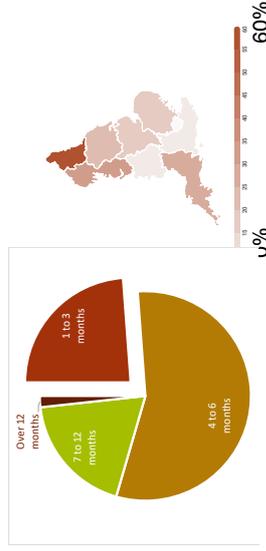
If an installation was built before March 1991, or a contract for construction was entered into before March 1991 and completed before September 1991, it is exempt from the rules for new stores. But if a farmer makes substantial changes (this usually means structural alterations, rather than minor repairs), increases capacity or relocates the store, it is no longer exempt from the more stringent rules for new stores.

Proportion of livestock holdings with slurry and manure storage facilities by type of facility and size of farm

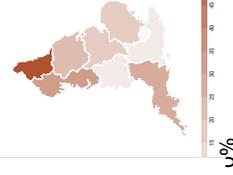


Major investment required by livestock farmers: a slurry store usually costs between £5,000 and £100,000 but it can cost as much as £300,000

Failure of containment and control features accounted for 71% of dairy and 69% of arable pollution incidents in 2015



RISK Over 20% of livestock farms say they have less than three months storage capacity. This is worst in the north east of England (62% livestock farms)



what financial or other help might be available. It must help individual farmers set priorities. It should help bring each farmer into compliance with important regulatory requirements. It should also enable the farmer to make good decisions that are likely to align with the government's overall aims for farming.

We recommended earlier that the regulator should develop, in consultation with the government and the sector, measures that enable the farmer and regulator to jointly keep track of progress, and support the farmer in setting priorities. We see the difficulties in measurement of agriculture. We accept that some measures might be proxy or crude and some may not apply in some areas and for some farms. Nevertheless, agreed measures could help farmers identify a benchmark, and any advice report would be more useful were it able to include them.

Catchment-sensitive farming projects target farmers in catchments where diffuse pollution has caused rivers and lakes to fail their water quality objectives. Farmers are able to get advice and incentives (including dedicated grants). Farmers who participate are visited and advised, and they receive a helpful report for their farm, showing its strengths and weakness and how it could improve. In our view, this approach could be adopted more widely and beyond specified catchment areas, with reports taking a holistic view of a whole farm.

Whether advice is free or charged for is a policy decision for the government. Levy arrangements could allow for it. In our view, public investment in whole-farm advice at this juncture would pay dividends. The government's aims for agriculture and the environment would be more likely to be met.

We **RECOMMEND** that the regulator be given responsibility for ensuring that holistic advice is available to farmers and land managers where needed, including on-farm advice. Advice could be provided by the regulator or by advisors (including, potentially, voluntary organisations) accredited by the regulator, in our view, although it will always be important for the regulator to keep up with what happens on farms and in the sector. That is hard to do unless its staff get out on farm and speak meaningfully with farmers often enough.

Grants or guaranteed loans

As a starting point, the government may take the view that public funding (by way of grants or loans) should not be directed to correct non-compliance unless non-compliance is widespread, there is no real prospect of the industry addressing it, and no other effective regulatory approach.

Some immediate hazards and harms are sometimes left unaddressed at individual farm level. They may require investment in infrastructure that the farmer is unable or reluctant to make, given the economics of the farm. We see a widespread and growing problem of this nature, in relation to poor or inadequate slurry storage.

Grants or guaranteed loans to help with those costs, or to help with other agreed priority infrastructure projects (such as fencing land grazed by livestock and abutting a water course) could tackle big harms not otherwise likely to be addressed. Were these financial incentives available, the regulator could apply an enforcing and enabling approach when needed: a direction to comply, to stop harms, and an invitation to apply for a financial incentive, if conditions are met.

We **RECOMMEND** the government considers grants or guaranteed loans to redress poor or inadequate slurry storage. It should also consider whether there is a case for other infrastructure projects to be given priority and incentivisation. The regulator should advise the government of the harms that can be addressed realistically only through financial incentives, and the scale of the problem.

Subsidies and opportunity payments

Subsidies are available now with the Basic Payment Scheme under CAP Pillar 1. Opportunity payments⁽¹¹⁰⁾ such as Countryside Stewardship, Countryside Productivity Schemes and the RDPE Growth Programme are available under CAP Pillar 2.

As CAP payments are phased out, financial incentives will become increasingly important, for two reasons. Firstly, many of the government's fresh aims for agriculture are best

110. Payments that enable the farmer to take the opportunity to improve the environment or ecosystems, for example.

WIDESPREAD, BUT HARD TO SPOT AT THE TIME

Farmers were actively encouraged and incentivised to remove hedgerows in the past.

This removal of nesting sites and food sources for birds was a hazard. With insufficient corrective action, the bird population has been depleted – the harm.

The opportunity is to put hedges and food sources back, re-establishing wildlife habitats

suited to incentivisation regulation. Secondly, the income from financial incentives will be essential for farmers otherwise unable to balance the books. Financial incentives will be extremely powerful in driving behaviours.

The government intends to introduce new types of opportunity payments, through an Environmental Land Management scheme. It plans to pilot options, before introducing the scheme in 2022.

Technically, most opportunities for farmers and land managers to enhance the environment and ecosystems are in fact opportunities, to redress harms that have happened because hazards and associated risks of harms were not previously understood.

Sometimes those harms have been widespread, but hard to spot for a long time. Sometimes the hazard itself has been created unknowingly by European or UK government strategy, incentives or other encouragement.

The government will wish to decide whether individuals who choose or are found to be non-compliant with a core regulatory requirement should be eligible to apply for opportunity funding⁽¹¹¹⁾.

As a matter of principle, public funding should

be well-targeted, to make the optimum positive difference overall. That is as important for grants and loans as it is for opportunity payments. At the same time, we want those not complying with the rules to be brought into compliance, so that hazards are managed well enough. We suggest it is possible to achieve both with an integrated and intelligent regulatory approach, farm by farm. We return to this later.

Reduced regulatory burden

We anticipate that the regulatory burden will reduce for all, should our recommendations be implemented. It will reduce further, should the regulator develop its information systems as we suggest, and should it exploit remote technologies to the full.

The risk-based approaches we described earlier are designed to enable the regulator to target resources. They inevitably mean that enterprises categorised as low-risk are less burdened by compliance checks (inspections). There is an important caveat: visits to farms will still be necessary to support international trade, to deliver bovine TB controls and to conduct other surveillance, for example for endemic and exotic disease.

Some of the most frustrating aspects of regulation can be eased with better use of good technology, and the burden reduced. The Livestock Information System should transform livestock identification and movement controls, removing the need to gather livestock for checking.

Permits (including exemptions), license and certification procedures can be cumbersome at the moment and are ripe in some cases for redesign. We see that the Environment Agency uses permitting and exemptions successfully in situations where ongoing control is needed over potentially harmful activity. Permitting is an important tool, where the activity is a risky one and the regulator is unable to be sure otherwise of sufficient control.

With the right information systems, there is an opportunity (subject to any residual EU-driven provisions) for the new regulator to move from licensing or exemptions to a framework of special and general conditions. There is also potential to harmonise the current exemptions

111. The Environmental Land Management scheme will be the biggest source of opportunity funding, in future.

regime within the new regulator's register. Such frameworks allow the regulator to authorise activities according to risk, and to suspend or remove permissions quickly if needs be. It is a smoother, less burdensome, less costly and more nimble approach.

We deal later with the prospect of earned recognition arrangements.

Joining things up

If our proposals for the way we regulate are accepted and implemented, then regulation will become more seamless for farmers and land managers.

The Environment Agency will still be working assiduously to ensure water quality and resources and air quality, and to protect inland rivers and estuaries. The Rural Payments Agency will be fully occupied making CAP payments that reduce on a sliding scale. But for many, the new regulator will become the regulator they deal with day to day. Visits, inspections, guidance and advice will all come from that regulator. Responsible farmers should be able to develop a constructive and beneficial relationship with that regulator, and *vice versa*, if regulation develops as we suggest.

The new regulator will become the main repository of information and performance data for farms. As we have said already, those regulated should not have to provide the same information twice. Newly designed information systems can form the backbone of regulation. Overlayered by sophisticated mapping and remote surveillance imagery, these systems can portray farming as a whole, in an unprecedented way.

This will be a big regulator, because that is what is needed, but it need not be 'Big Brother'. Instead, it can organise itself to work well at a local level, place by place, so that it is accessible to farmers. It should be able to get out to markets, shows and other places where farmers gather. It should regularly get out on farm to give advice, consolidate its presence and develop its relationships with farmers.

With piloting still to run, the detail of how the Environment Land Management scheme will be delivered and run is not decided. We have suggested earlier that a management-based approach has appeal. In any event, delivering the scheme will require visits to farms, and advice at farm level as well. As the regulator will be the main repository of farm information, and as it will be out on farm, and giving advice, there is an obvious opportunity for efficient arrangements, should the regulator hold responsibility for incentives and opportunity funding.

We think the efficiency arguments are persuasive in themselves, but a yet more compelling argument is that to regulate effectively and deliver the government's enduring and new aims for farming and land management, the regulator needs all the right levers to change behaviours where needed, and to enable as well as to enforce.

To regulate well, the regulator needs to be able to identify the priorities nationally, locally and ultimately on each farm. It needs to influence individual farm priorities, in constructive relationships that take into account the context of the farm, its sector and locality.

The regulator will be most effective if it is able to apply the whole spectrum of regulation, from rule-based regulation through to incentive-based

"Regulation can involve not just direct legal intervention but also more subtle manipulation of incentives and the creation of opportunity structures."

Neil Gunningham and Peter Grabosky, Smart Regulation: Designing Environmental Policy (1998)

"Regulation is perhaps better conceived as about maximising opportunities, not merely minimising risks, in the conduct of regulated actors."

Neil Gunningham, Robert A Kagan and Dorothy Thornton, 'Social License and Environmental Protection: Why Businesses Go Beyond Compliance' (2004)

regulation, as we have described.

We have set out the various regulatory approaches that we think should be used by the regulator, and where they might fit. Rule-based regulation, also known as red-light regulation, will continue to be necessary at one end of the spectrum. It is essential in exotic disease outbreaks and has its place in the control of endemic disease and welfare as well.

Many of the government's aims for agriculture are much more likely to be achieved, however, by developing more supportive approaches than farmers are used to, to encourage the right priorities and actions, farm by farm. Reversing longstanding harms is generally done by employing regulatory techniques at the incentive end of the spectrum. It is suited to management-based and hybrid approaches.

In our view, the financial incentives available to farmers and land managers should relate to sensible priorities for each farm or stretch of land, in the context of that farm, land or business and of the government's aims for farming and land management generally and locally. Priorities are logically derived from a good understanding of the risks and opportunities for that farm and land, aided by holistic advice.

The priorities for an individual farm may be as obvious and essential as making sure slurry is stored safely, or else better biosecurity to manage the risk of an endemic disease. They may be longer-term, relating for example to improving the quality of soil or the quality and diversity of pasture, or else the protection of rare species or promoting a greater diversity of species. They could cover all these things, or more. The essential point is that they are best viewed in one way, and at farm level, rather than from different viewpoints or from a distance.

We have suggested the government will wish to decide, as an important matter of public policy, whether individuals who choose or are found to be non-compliant with a core regulatory requirement should be eligible to apply for opportunity funding⁽¹¹²⁾. The question is whether a farmer should receive public funds to begin to reverse widespread and longstanding harms and build on opportunities on the farm, without first addressing any regulatory non-compliance on that farm. However that is decided, we fear a

disjoint should responsibilities for incentives and opportunity funding lie elsewhere rather than with the regulator.

Without that responsibility, the regulator will be notably less effective. It will not be able to resort to a sufficient range of interventions and use the full spectrum of regulation. It will be less authoritative with farmers. Instead, farmers will look in two directions: to the source of financial incentives, and then to the regulator. Regulation of the sector needs to be joined up and be delivered through one overall regulatory strategy, in our view.

We **RECOMMEND** that the government vests responsibility for incentives-based regulation (including Environment Land Management scheme incentives) with the regulator, so that regulation is efficient, effective, joined up and seamless for farmers and land managers.

Adaptive and fast-moving

The regulatory system and standards should be able to adapt and change in good time when needed. It should utilise feedback loops to ensure that the system adapts, to: deregulate where appropriate; reset minimum requirements where higher standards are desirable; correct standards if they are not achieving the desired outcomes; and modify, to take account of different objectives or when new requirements or incentives are indicated⁽¹¹³⁾.

We have identified earlier the ways in which standards can remain well-pitched, well-drafted, and apposite. With those arrangements in place, standards should develop responsively. The regulator should see whether standards are actually working. The regulator should work with the industry to identify any defunct standards, and where standards need to be honed, to work better. Feedback from farm visits and relationships with sectoral bodies and sometimes experts will each have a part to play.

The regulator should be required to get feedback from those subject to the standards, and other stakeholders, for example by periodic survey and through focus groups and industry representatives. Wise regulators and inspectorates survey stakeholders to see how well they are regulating, and publish and act on

112. Environmental Land Management schemes will be the biggest source of opportunity funding, in future.

113. Design principle 6, Annex 2.

the results.

We have suggested ways in which the regulator should regulate in order to be effective. It should be free to choose the right approaches to suit any situation at any one time and have the freedom to use them sensitively. Independent regulation with the right governance and accountability arrangements can provide for that.

To be adaptive and fast-moving, regulators need to be empowered. No two farms are the same and no two farming sectors are the same. In our view the regulator will benefit from a broad range of powers – for example, powers to undertake research, investigate complaints and conduct investigations, monitor compliance and give advice.

The regulator should be empowered to develop and adopt partnership and co-operative approaches. There have long been calls for greater partnership with the sector, and a more co-operative approach to its regulation. Experience has shown that such approaches are much more likely to succeed in reducing or eradicating endemic problems.

Regulatory powers are commonly set out in legislation, and some must be, because of their nature.

We **RECOMMEND** the government legislates for the range of powers proposed in Annex 1.

Regulate where necessary

The regulatory system should align with and build on initiatives driven by the market. It should not seek to duplicate or discount these unless there is a need to counterbalance to achieve a policy objective for the greater public good⁽¹¹⁴⁾. So far as possible, the regulator should work with the sector and with the market, to best achieve the government's aims for the sector.

We have indicated throughout this report the benefits of working with the sector. We see a great opportunity for the regulator and the sector to develop issue-based approaches and management-based approaches, as the most effective way to deal with some pervasive issues.

Working with the sector, the regulator can make sure that standards are well-pitched and well-drafted, that guidance makes sense, and that farmers can be signposted to other excellent sources of guidance and advice.

When it comes to working with the market, the regulator must develop a good understanding of it, and identify the right opportunities. Good working relationships with key producers and retailers should pay dividends. The most immediate consideration however, is the place of farm assurance schemes in any earned recognition strategy.

Under earned recognition arrangements, the burden of regulation is reduced for those who have a strong record of reliability and adherence to standards. The Macdonald review⁽¹¹⁵⁾ urged the government to establish a system of earned recognition, to enable regulators to reward good practice with less frequent inspection.

Many farmers we have spoken to have pressed for this as well. They have suggested that their good record with a farm assurance scheme (or schemes) should lead to less inspection by the regulator.

Defra's Farm Regulation Task Force has worked assiduously to develop earned recognition arrangements, with some success⁽¹¹⁶⁾. The Food Standards Agency has also earned recognition arrangements that rely on farm assurance records, and we see no reason why that should not continue.

114. Design Principle 7, Annex 2.

115. <https://www.gov.uk/government/publications/independent-farming-regulation-task-force-report>

116. Farming Regulation Taskforce Implementation Earned Recognition Plan 2013 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/236270/pb14026-earned-recognition-plan-130830.pdf.

Other farmers have pressed instead for rationalisation of the farm assurance schemes themselves, given the number of schemes, the cost of membership and a growing array of standards. That is not within the remit of this review.

What we can say though is that 'piggy-backing' – where one farm assurance scheme audit derives assurance from another, so that the farm is inspected on the same occasion for the two schemes – is clearly an efficient arrangement, and helpful to the farmer.

We have been unable to find much large-scale research to show how effective farm assurance schemes are. We know of course of recent *exposés*. We do not doubt, however, that farm

assurance has increased compliance with basic standards.

Research conducted by Defra in 2013⁽¹¹⁷⁾ suggests that farm assurance membership lowers the odds of non-compliance on matters such as livestock identification, food and feed law, control of weeds and the protection of hedgerows and watercourses. Environment Agency have indicated that LEAF Marque certified farms are lower environmental risk.

We are grateful to Waitrose, for pointing out to us Warwick Life Sciences Institute research showing that farms in farm assurance, organic, and herd health schemes were more likely to pass government welfare inspections. The research also shows that there is no association

EARNED RECOGNITION: THE DRIVER AND VEHICLE STANDARDS AGENCY

DVSA has introduced a voluntary scheme for all goods vehicle operators who can demonstrate a strong track record of compliance and adherence to standards.

Operators must be able to show that they have robust systems and processes that promote effective and proactive transport management. Once successfully accepted into the scheme, these operators will enjoy the benefit of a reduced burden of enforcement. Operators who successfully achieve DVSA Earned Recognition status will possess a proven culture of compliance.

By allowing DVSA to remotely monitor their compliance systems, checks can be carried out which will provide the assurance and confidence that the operator is effectively managing the transport operation and functioning in a compliant manner.

In exchange, these operators may benefit from a reduced number of inconvenient and costly roadside checks and visits from enforcement officers, thereby reducing the administrative burden of regulation on those who achieve high levels of compliance.

This scheme ensures that compliant operators with DVSA Earned Recognition status obtain best business value from the enforcement regime and creates a model that will drive up compliance and enable others to aspire to. It also enables DVSA to divert its resource to target the seriously and serially non-compliant where the risks to road safety are highest.

Those in the scheme are able to display a DVSA Earned Recognition marque.

117. Study on farm assurance scheme membership and compliance with regulation under cross compliance, FERA (2013).

between compliance at welfare inspections and cross compliance outcomes, incidentally.

We have made it plain already that disease surveillance must continue, together with bovine TB controls. However, if a new regulator regulates in the ways we suggest, and makes best use of modern technology, then other regulatory checks on farm will inevitably reduce. Each visit could be less wieldy as well.

Information could already be available to the regulator from registration (and any updates since) and from remote technologies, reducing the inspection load on farm. RPA inspections will dissipate with the removal of CAP. Inspections on premises holding livestock can transform, with the benefit of the Livestock Information Programme. In short, government inspections will inevitably become less burdensome.

We have spoken of the value of advice visits with farmers. In our view, one measure of effectiveness for the regulator could be the proportion of visits predominantly for giving advice that leads to helpful reports for farmers, as opposed to visits solely for compliance-checking.

All that said, earned recognition should be pursued by the regulator, and we set out here, the options we see. We start with direct and then indirect reliance on farm assurance schemes, before moving on to other types of earned recognition.

The regulator could rely directly on a farm assurance scheme instead of inspection, to check and certify the degree to which a farm complies.

We advise the regulator could do this if: the scheme standards covered the core regulatory requirements; scheme inspection and judgements passed muster; the scheme was open and transparent with the regulator about individual inspection outcomes (a commitment to information sharing); and the scheme could itself be audited/monitored by the regulator to ensure all is above board.

Realistically though, some scheme standards would need to extend considerably. They would need to include welfare and the environment, to give the regulator the assurance needed.

Some approaches to monitoring would need to develop as well, to get beyond an audit-based approach. Farm assurance cost would increase.

Farm assurance schemes may not want to develop in this way. Even if they did, we would be left with the fact that farmers doing mixed farming may only be assured for one element, such as dairy. That would give the regulator incomplete assurance.

An alternative, non-voluntary direct approach is to hard-wire farm assurance into regulation, by edict. Legislation provides for this in New Zealand, we understand, in a form of contract regulation. The States of Jersey government has taken a different approach. It will require those seeking opportunity funds to be Leaf-Marque-certified. We do not see these either of these approaches as immediately workable here in England.

Alternatively, the regulator could rely indirectly on a farm's status as assured. A strong record of farm assurance compliance, a farm may lower its risk rating. This could lead to less, or less comprehensive regulatory inspection. However, the same prerequisites are still relevant (the right standards, information-sharing protocols and so on). Scheme membership would likely cost more.

There are other sorts of earned recognition that do not rely on assurance from another party. Earned recognition is all about reducing the burden of regulation for those who have a strong record of reliability and adherence to standards. If we then envisage the new regulator, we can consider what might constitute a strong record that the regulator could take into account.

The regulator would be wise to talk with experienced inspectors and with the relevant farming sectors in depth about that. It would also be sensible to pilot any proposals before any national roll-out.

Some retailers are forging a new approach to assurance. Working directly with farmers, they are using new technologies to provide real-time assurance on farm. For example, well-sighted cameras spot lameness or other symptoms in livestock.

They are also joining up data and information. So for example, infrared technology is being used to assess meat carcasses and provide information to farmers on yield and condition.

These and other developments hold great promise, not just to ensure compliance but also to increase quality and productivity. If the

regulator can rely on retailer systems of this sort, then farmers participating could earn recognition more directly.

Equally, if the regulator develops systems that enable farmers to provide pertinent information electronically and over time, we see that a strong record could be built up. Remote surveillance data and information would contribute, together with any previous inspection data and information and perhaps information provided under protocols agreed with farm assurance schemes or retailers.

This may sound fanciful, but it has been done in at least one other sector. Goods vehicle operators can load up information regularly onto the Driver and Vehicle Standards Agency(DVSA) information system. Those who demonstrate a strong track record of compliance and adherence to standards are subject to fewer checks by the DVSA. They are also able to display a DVSA Earned Recognition marque.

It will be regrettable if the regulator does not take advantage of a strong farm assurance record to reduce the burden of regulation in one way or another. We have shown ways in which it can be done. Equally, there are other ways in which farmers can demonstrate they can be trusted to comply. We are interested to know of the appetite in the industry for a DVSA-type approach, perhaps with a marque attached. Such an approach could be aimed for, if it suited the sector.

Conclusion

Farms vary so, with no two the same. Together they provide the texture of our countryside, from the cereal fields of the east, top fruit orchards in the south east and cattle and sheep in the south west and west, through to our upland grazing in the north, and our forests, vegetables and fresh produce grown across the land. Each farm has its own unique combination of opportunities to improve animal or plant health and animal welfare, redress legacy harms of the past and enhance the environment, as the government intends. Each inevitably carries risk, because that is the nature of farming.

It is a diverse and rich tapestry, but we have regulated farming with a blanket approach in the main, largely because of CAP requirements. As we leave the EU, we have the opportunity to

regulate differently, in ways that are more likely to meet both the government's and farmers' own aspirations for farming. We have proposed that as we leave CAP behind, and the government shapes its own aspirations for the sector, we should take the chance to be clear about why we regulate farming in this country, and about what we are trying to achieve. We can then regulate with this country's aims in mind.

Regulation should be all about changing the behaviours of those who need to change. We have suggested that the way we regulate needs to be well-aligned to farming – because if it is not, then farmers will be less likely to have confidence in or respect for it, and will be less likely to do what needs to be done. We argue that strict rules and swingeing penalties will sometimes have their place, and that a good deal of visits to farms still need to take place, for bovine TB and other disease control and surveillance, and to facilitate international trade. But we also argue that modern technologies can play a much bigger part, and that we can regulate in a more proportionate and sensitive way.

We are confident that most farmers wish to farm responsibly, yet some do need to change the way they do things. We can learn from the mature regulatory thinking developed elsewhere, and at the same time recognise the value of that old adage of carrot and stick. Softer regulatory approaches (including advice, incentives and the chance to comply) should feature much more than they do now. They could pay dividends and at the same time, increase trust in farm regulation. We argue as well that much can be achieved by working with the sector, rather than removed from it.

To regulate well, our system of regulation needs to be set up to deliver well. We have put forward what we believe to be a compelling case for a new, independent regulator. Should it be created, it will be a big regulator. It needs to be, to cover the ground. Farming is big business, and the regulator needs to reach farmers and to get to farms. We appreciate that this will mean significant changes for the Defra group and its staff. We know that many wish to regulate and work differently, and we hope they will welcome the chance to do so.

Annexes

Recommended Powers

	Power	Purpose(s)	Operation and controls
1.	<p>To create binding requirements on farmers and land managers within specified areas of responsibility.</p>	<p>To allow the regulator to set and change requirements that can be tailored and targeted to address specific risks or issues.</p> <p>To allow the regulator to deploy different regulatory approaches within rule-making.</p> <p>To allow the regulator to set different requirements for farms with different characteristics.</p> <p>To allow requirements to be changed and updated at pace.</p> <p>To reduce the number of regulatory instruments that farmers and land managers are subject to, and to secure simplification and consolidation into a single rulebook.</p>	<p>The regulator should have delegated authority to set binding requirements on farmers and land managers within specified areas.</p> <p>The regulator should be able to set different requirements for different types of farms, to allow different approaches to reflect the different inherent characteristics of farms.</p> <p>The regulator should be able to set different requirements for different regions, to allow different approaches to reflect the relevant local contexts.</p> <p>The regulator should have discretion to set process-based, outcome-based or management based requirements, and to use a blend of approaches if appropriate.</p> <p>Requirements must be published.</p> <p>The setting of requirements should be subject to mandatory consultation.</p> <p>The setting of requirements should be subject to mandatory impact assessment.</p>

	Power	Purpose(s)	Operation and controls
2.	To set and publish statutory guidance/codes of practice	<p>To assist farmers and land managers in understanding their legal obligations and to promote good practice.</p> <p>To create as closely as possible a single point of reference for farmers and land managers in relation to all of their obligations.</p> <p>To enable the regulator to change guidance to reflect changing circumstances.</p> <p>To provide a framework against which the regulator can make consistent assessments of farmer compliance.</p>	<p>The more complex the substantive legal requirements, the harder it is for farmers and land managers to understand what is required. The regulator should ensure that it has a comprehensive understanding of the legal requirements, and create accessible guidance that assists farmers and land managers in understanding what their obligations are and how to comply.</p> <p>The regulator should use its statutory guidance/codes of practice in assessing compliance and in its enforcement decision-making.</p> <p>The regulator should adapt its statutory guidance/codes of practice as needed in response to decisions of the courts which clarify or change the law.</p> <p>Statutory guidance/codes of practice must be published.</p> <p>The setting of statutory guidance/ codes of practice should be subject to mandatory consultation.</p> <p>The setting of statutory guidance/ codes of practice should be subject to mandatory impact assessment.</p>
3.	To undertake or commission research.	<p>Undertaking research can enable the regulator to better perform its functions by improving technical knowledge and understanding.</p> <p>The ability to commission and fund third parties to undertake research targeted at high-risk and uncertain areas can secure the information necessary to better regulate to achieve outcomes.</p> <p>The ability to collaborate with third parties on research programmes can be cost effective.</p>	<p>Regulators should be technical experts and/or have access to such expertise in order to be credible and authoritative.</p> <p>Research should be undertaken with the aim of assisting the regulator to achieve its aims by exploring and innovating through research.</p> <p>The regulator should have a wide margin of discretion to find ways of funding research to reduce the cost to the taxpayer.</p> <p>The regulator can draw on research to help develop and refine standards, and to inform its qualitative judgements in relation to achieving regulatory objectives.</p> <p>This power should be enabling and discretionary and will be subject to availability of funding.</p>

	Power	Purpose(s)	Operation and controls
4.	To provide advice to farmers and land managers.	This creates the ability to provide bespoke advice to individual farmers and land managers to support compliance.	<p>The regulator should have discretion to develop and implement an approach to providing advice to individual farmers and land managers, but this should not be mandatory.</p> <p>The regulator should have discretion on how to implement and operate an advisory function, and should have discretion to use multiple delivery models, such as the use of relationship managers, regional forums or the field force.</p> <p>The regulator should publish a policy which makes clear the status of its advice and its relationship to compliance and decisions on enforcement.</p> <p>The regulator should have discretion to deliver this function by procuring an outsourced advice service if that would be the most efficient and effective delivery model.</p> <p>The regulator should have discretion to help encourage or facilitate the creation of private sector advice services or co-operatives.</p> <p>The regulator should have the power to charge for advice. Charging should not create unfairness by allowing farmers and land managers to buy advice that should reasonably be available to all in the form of statutory guidance/codes of practice.</p>
5.	To share information with other relevant bodies.	To create enabling powers to share information with third parties, including other regulatory bodies, where that will assist the regulator in performing its functions.	The regulator should be able to create information sharing protocols with any relevant third party, subject to complying with substantive information law provisions.
6.	To cooperate with other public bodies.	Co-operation between the regulator and other public bodies may assist the regulator in performing its functions, particularly where sectoral risks and issues are created in the external environment.	The regulator can best achieve its objectives where it can co-operate with other authorities, at national or local level, in relation to cross-cutting or systemic issues.
7.	To give advice to the Secretary of State.	To create the authority to provide advice, on request, or unilaterally. This reflects the regulator's status as both expert and independent.	<p>The regulator should be empowered to provide advice to the Secretary of State on any matters within its expertise.</p> <p>Advice must be provided on request.</p> <p>Advice may be given at the discretion of the regulator.</p>

	Power	Purpose(s)	Operation and controls
8.	To commission or contract third parties to deliver regulatory activities.	To allow the regulator to commission or contract third parties, including local authorities, to deliver specified regulatory activities.	<p>The regulator should be able to commission or contract out regulatory activities or services where it is efficient or effective to do so.</p> <p>The regulator should clearly specify its requirements, should retain adequate controls and oversight and should ensure commissioned or contracted services operate effectively.</p>
9.	To create registers and to require registration to be completed.	To create and maintain a land-keeper's register, animal-keeper registers and any other registers necessary to secure information over who is undertaking activities relevant to the regulator's remit.	<p>Express requirements for farmers and land managers to register with the regulator.</p> <p>The requirements for registration should be administrative. However, the regulator should have discretion to determine what information should be provided as part of the registration.</p> <p>Farmers and land managers should be obliged to ensure that their registration information remains up to date and accurate.</p> <p>The regulator should have authority to use enforcement powers in relation to farmers and land managers, or land managers undertaking farming activities, who are not registered.</p>
10.	To attach conditions to registration.	To be able to apply temporary or permanent conditions to specific registrations or classes/types of registration to limit or control designated activities.	<p>General registration conditions can be applied to an individual registration or a class/type of registration (for example, all poultry farmers).</p> <p>Individual registration conditions can be applied to an individual farmer or land manager. They are likely to address matters concerning them or their activities specifically.</p> <p>Registration conditions can be revised or updated from time to time.</p>

	Power	Purpose(s)	Operation and controls
11.	To create or administer licence schemes in relation to designated farming activities.	<p>To create entry controls so that only suitably capable farmers and land managers undertake designated farming activities.</p> <p>To create an exit system to secure that unsuitable persons are prohibited from undertaking designated farming activities (temporary or permanent bans).</p> <p>To create a system that can impose limits or additional controls over designated farming activities at the level of individual farms.</p>	<p>The regulator should have discretion to create a licensing regime linked to farm registration.</p> <p>The regulator should have discretion to specify which activities are designated activities that require a licence.</p> <p>Licensing should only be required where the burden can be justified in order to manage specific risks.</p> <p>The regulator should have discretion to set the minimum requirements that must be met in order to obtain a license for each designated activity and in order to retain that licence. These requirements can legitimately differ from scheme to scheme and from time to time as long as they are transparent and consistently applied.</p> <p>The regulator should have discretion to grant licences subject to additional controls imposed at the point of licensing or later. The basis on which additional controls are imposed should be transparent and consistently applied.</p> <p>The regulator should have discretion to prohibit farmers and land managers from undertaking activities that are subject to licensing, unless licences are held.</p> <p>The regulator should have discretion to refuse licences, in line with a published policy.</p> <p>A right of appeal should exist that is independent from the licence decision itself.</p> <p>Licence schemes and any material changes to them should be subject to mandatory consultation.</p> <p>Licence schemes and any material changes to them should be subject to mandatory impact assessment.</p>

	Power	Purpose(s)	Operation and controls
12.	<p>To accredit third party assurance schemes and to impose requirements that the schemes must meet in order to retain accreditation.</p>	<p>The regulator should be empowered to exercise oversight over private sector assurance schemes where those schemes seek accreditation.</p> <p>This will be for the purpose of ensuring that those schemes are assessing against minimum regulatory standards, and undertaking that activity with appropriate skill. This would allow the regulator to rely on judgements from accredited schemes, and also allow third parties to have confidence in them.</p>	<p>The regulator should have discretion to create a system of voluntary accreditation for assurance schemes where those schemes are assessing minimum regulatory standards.</p> <p>The regulatory should have discretion to set the terms of those schemes and the bar that assurance schemes should have to meet to achieve accreditation and to retain accreditation.</p> <p>The regulator should have discretion to set the terms of accreditation, such as requirements to share information, the right to audit the scheme, and the right to undertake supervision and observation of judgements.</p> <p>The regulator should have discretion to use accredited schemes in place of its own monitoring activities where farms are subject to the oversight of accredited schemes.</p> <p>Assurance schemes should not be required to be accredited, but the regulator should consider how to incentivise schemes to seek accreditation, particularly if this creates a commercial advantage for that scheme.</p> <p>The regulator should retain the discretion to undertake monitoring or investigative activities, even if a farmer is using an accredited scheme.</p> <p>An appeal system is necessary in relation to decisions not to accredit.</p> <p>Accreditation schemes and any material changes to them should be subject to mandatory consultation.</p> <p>Accreditation schemes and any material changes to them should be subject to mandatory impact assessment.</p>

	Power	Purpose(s)	Operation and controls
13.	To administer environmental land management schemes and other incentives schemes.	<p>The regulator should ensure that public money is paid properly to those who qualify.</p> <p>The regulator should advise government on the overarching structures of the schemes, including qualifying criteria, performance obligations and outcome measurements, to ensure that each scheme is optimised to deliver its aims.</p> <p>The regulator should have discretion to develop and deliver the operational elements of the scheme, including the detailed rules and assessments.</p> <p>The regulator should be able to use qualitative assessments of compliance with the requirements of the schemes.</p> <p>The regulator should have access to its enforcement powers to ensure that the money paid out is used as it should be.</p>	<p>The scope of schemes under which public money can be paid to farmers and land managers, and the objectives of those schemes, are matters for the government to decide.</p> <p>Administration and the operational design of the schemes, including decisions on whether individual farmers and land managers have met the requirements of the schemes, can properly fall within the remit of the regulator.</p> <p>By delegating the operational design of the schemes to the regulator, the regulator can use its toolkit to optimise how each scheme is delivered.</p> <p>The regulator should be able to use its professional judgement to make qualitative assessments on whether farmers and land managers have met the requirements of the schemes, and be able to secure changes in approach.</p> <p>The regulator can take a whole-farm view in assessing the suitability of any one farm for inclusion in a scheme.</p>
14.	To investigate complaints.	<p>The regulator should be empowered to investigate complaints about farmers and land managers in relation to matters linked to farmers' and land managers' legal obligations, and to use its enforcement powers to deal with any non-compliance identified as a result.</p>	<p>The regulator should have discretion as to the basis on which it will investigate complaints.</p> <p>The regulator should have a complaints policy which it adheres to.</p> <p>The regulator should be able to delegate the investigation of complaints to third parties.</p>

	Power	Purpose(s)	Operation and controls
15.	To monitor compliance.	The regulator should be fully empowered to assess the degree to which farmers and land managers are compliant with any regulatory requirement.	<p>The regulator should have discretion to design and develop suitable monitoring regimes that can take a variety of operational forms. This could include:</p> <ul style="list-style-type: none"> • remote and satellite surveillance; • physical inspection; • data analysis; and/or • desk based analysis. <p>The regulator should determine its policy and approach to monitoring, and be transparent about those choices.</p> <p>Farmers and land managers should understand the purpose and basis of monitoring and the likely outcomes.</p>
16.	To require self- assessment of compliance, or assessment of compliance by independent third parties.	The regulator can minimise costs to the taxpayer by requiring farmers and land managers to assess their own compliance and provide that information to the regulator. This also can minimise burden and encourage responsible approaches to compliance.	<p>The regulator should be able to establish schemes whereby farmers and land managers are obliged to undertake self-assessment of compliance. The scope of the scheme should be for the regulator to determine.</p> <p>The regulator should have discretion on how the scheme should operate, including what self-assessments should cover, how often they should take place and whether they should be submitted to the regulator.</p> <p>The regulator should have discretion to require assessments to be undertaken by third parties, and should have discretion to set minimum requirements for those third parties.</p> <p>The regulator should have discretion to require that third party assessors must be approved by the regulator, and the terms of that approval.</p> <p>The regulator should have discretion to help facilitate collaborations between farmers/land managers and other suitable parties to establish assessment schemes.</p>

	Power	Purpose(s)	Operation and controls
17.	To undertake investigations.	In order to gather evidence in a structured and professional way to support effective enforcement.	<p>The regulator should be transparent about when it is undertaking an investigation rather than undertaking monitoring activities.</p> <p>The regulator should have a published investigation policy and an investigation process that it adheres to.</p> <p>Farmers and land managers should understand why they are being investigated, and the potential consequences of that investigation, and should be able to make meaningful representations to the investigation before it concludes.</p>
18.	To require the provision of information.	<p>Regulators need to obtain information in order to perform many of their functions. This power should be broad and fully enabling.</p> <p>The regulator should be able to require compliance with an information request via the civil courts.</p>	<p>The regulator should have a published policy on how it will use this power.</p> <p>The regulator should be clear about the information required, the time period in which it must be provided, the form it should be provided in, the purpose for which it must be provided, how it will be used (including sharing with third parties), how long it will be retained for and how it will be protected.</p> <p>Information requests should always be proportionate, but the regulator should be able to require information to be provided in very short time frames where it is necessary for the performance of its functions.</p>
19.	To obtain access to premises.	The regulator will require access to both farm and non-farm premises for the purposes of performing its functions.	<p>Existing powers of entry should be retained, but they should be consolidated and simplified to ensure that they are properly configured to allow the regulator to perform its functions.</p> <p>Powers of entry should be subject to strict statutory controls. However, the regulator will need the strongest possible powers in relation to dealing with serious incidents.</p> <p>Powers to force rapid entry to premises, that can be exercised at the shortest possible notice, should be retained for emergency situations.</p>

	Power	Purpose(s)	Operation and controls
20.	To issue warnings.	The regulator should have the power to issue warnings as an alternative to more significant action.	<p>Warnings are a simple and straightforward way to formally bring non-compliance to the attention of the farmer.</p> <p>The regulator should have discretion to decide the basis on which a warning would be issued, and the process of issuing one.</p> <p>Issuing a warning should be a recorded enforcement action, which can be used to justify more significant intervention or sanction should the warning not secure the desired outcome.</p> <p>The regulator should guard against using warnings for purely administrative convenience, when a more significant intervention may be more appropriate.</p>
21.	To accept binding undertakings.	Where there is agreement on non-compliance, an efficient method of resolution is for the farmer or land manager to offer to take specific actions, in specific time frames, to achieve compliance and/or rectify the consequences of a breach.	<p>Undertakings must be in writing and must be on the basis that the farmer or land manager accepts the non-compliance.</p> <p>Undertakings should be offered on a voluntary basis, but once accepted should be legally binding on the farmer or land manager, insofar as the promised actions address the non-compliance or are designed to prevent future non-compliance.</p> <p>Undertakings should be created to align with the power of direction, so that the regulator can move swiftly to compel performance if the farmer or land manager fails to comply with an undertaking.</p> <p>The regulator should monitor performance of the undertaking, and should have discretion to re-negotiate the terms should that be appropriate.</p>

	Power	Purpose(s)	Operation and controls
22.	To issue directions to take specified steps or to cease from taking actions, (a) where the farmer or land manager is likely to become non-compliant, or (b) to bring the farmer or land manager back into compliance.	<p>This power allows direct intervention to prevent or correct non-compliance.</p> <p>It is not punitive but does ensure that the cost of prevention or correction is met by the farmer or land manager.</p> <p>The ability to direct will incentivise farmers and land managers to offer undertakings which are less costly to administer, and which afford farmers and land managers more discretion in how to resolve non-compliance issues.</p> <p>This power would cover the equivalent of a stop notice, but go further in reach.</p>	<p>This power is a significant one and should be exercised in a controlled way. The regulator should ensure that it has sufficient evidence of non-compliance, or evidence of a likelihood of future non-compliance.</p> <p>The regulator should ensure that the farmer has the opportunity to make representations as part of the directions process.</p> <p>The regulator should monitor performance of a direction and discharge it as soon as it is reasonable to do so.</p> <p>An appeal system should be in place to challenge decisions to direct.</p>
23.	To require farmers and land managers to publish specific information.	This power allows a regulator to harness the power of the market, by requiring farmers and land managers to publish specific information.	<p>The regulator should have discretion to establish mandatory publication schemes for farmers and land managers.</p> <p>The regulator should consider where schemes of this type might be useful, for example in cases where information that is likely to inform consumer choice (which in turn drives positive behaviour from those being regulated) is unreliable, inconsistent or absent.</p> <p>Requirements to publish specific information should be subject to mandatory consultation.</p> <p>Requirements to publish specific information should be subject to mandatory impact assessment.</p>
24.	To develop and implement a farm ratings scheme.	Independent ratings can help encourage trade and can allow meaningful differentiation by consumers based on trusted information.	<p>The regulator can have discretion to establish ratings schemes by drawing on existing standards, good and best practice.</p> <p>The regulator should have discretion to determine the scope of the schemes, the relevant measures and the areas against which farms will be rated.</p> <p>The regulator should be empowered to amend the schemes over time.</p> <p>Ratings schemes should be subject to mandatory consultation.</p>

	Power	Purpose(s)	Operation and controls
25.	<p>To require farmers and land managers to undertake rectification works at their own cost, to correct damage or harms caused by non-compliance, and to empower the regulator to undertake or commission those works itself on a cost recovery basis.</p>	<p>This would allow the regulator to ensure that damage caused by non-compliance is rectified at the cost of the responsible party.</p> <p>Rectifications are likely to be achieved through voluntary undertakings rather than by using this power, however by having the power, the likelihood of settlement by consent is increased.</p>	<p>This power is distinct from the direction power, as it gives the regulator the powers to require rectification at the cost of the farmer or land manager who has caused the non-compliance.</p> <p>The regulator should have discretion as to when it is appropriate to step in to ensure that rectification works are completed, and to appropriate standards.</p> <p>As this is a significant power, it should be subject to an independent appeal.</p>
26.	<p>To create and administer fixed financial penalty schemes.</p>	<p>To deter simple non-compliance issues such as late returns or failures to meet deadlines.</p>	<p>The regulator should have discretion to develop and implement fixed penalty schemes to address non-compliance issues which can be characterised as strict liability. This may involve multiple schemes.</p> <p>The regulator should have the discretion to develop and set different tariffs (where appropriate), so that penalties act as a meaningful deterrent to farms of different sizes and resources.</p> <p>Penalties should be proportionate to the risk they are designed to mitigate.</p> <p>An appeal mechanism should be created to address and resolve errors.</p> <p>The terms of any fixed penalty schemes should be subject to mandatory consultation.</p> <p>Any fixed penalty schemes should be subject to mandatory impact assessment.</p> <p>The terms of any fixed penalty schemes should be published.</p> <p>The terms of any fixed penalty schemes should be applied consistently.</p>

	Power	Purpose(s)	Operation and controls
27.	Discretionary financial penalties.	<p>To punish, and be seen to punish, significant non-compliance issues that either cause harm or create a significant risk of harm.</p> <p>To deter other farms from such behaviours.</p>	<p>The regulator should have discretion to develop and implement a discretionary financial penalty system that will allow the imposition of financial penalties for non-compliance, or for undertaking designated activities without a licence.</p> <p>The regulator should develop and consult on a policy for the use of discretionary financial penalties, including how the amount of the fines will be set. The policy should identify aggravating and mitigating factors to be taken into account by the regulator.</p> <p>Maximum financial penalties should be defined in statute, but the amount to be levied in any particular case should be for the regulator to determine.</p> <p>The regulator should have discretion to settle financial penalty cases by agreement.</p> <p>The regulator should be obliged to be transparent about financial penalty cases.</p> <p>An independent appeal mechanism should be available. This ideally would be to the first-tier tribunal (General Regulatory Chamber).</p> <p>Any discretionary financial penalty schemes should be subject to mandatory consultation.</p> <p>Any discretionary financial penalty schemes should be subject to mandatory impact assessment.</p>
28.	To seize and dispose of livestock or other associated assets where there is a risk of harm, where the farmer is in breach of a registration or licence condition or restriction, or to secure compliance with an undertaking or direction.	<p>To ensure that the regulator can enforce licence conditions that place restrictions on keeping animals.</p> <p>To ensure that the regulator can seize animals where the farmer is unregistered or unlicensed.</p> <p>To ensure that the regulator can secure compliance with an undertaking or direction.</p>	<p>This is a significant power that must be exercised with appropriate care and under suitable controls.</p> <p>It is ancillary to other enforcement powers, apart from in animal welfare cases.</p>

	Power	Purpose(s)	Operation and controls
29.	To seize or compulsorily purchase farming assets, and to dispose of those assets, including by culling.	To ensure that the regulator has the ability to seize livestock, animal products or by-products, plants and other farming chattels, where it is necessary to do so. This power may be exercised separately to any issue of compliance, and so should be exercisable in relation to specific risks or issues.	The regulator should be subject to standard controls arising from powers that permit interference with private property.
30.	To undertake criminal prosecutions.	To ensure that the regulator can prosecute the most serious offences.	The regulator should retain the ability to prosecute relevant offences but should have discretion to determine if this is the most appropriate course of action, rather than be obliged to prosecute in all cases.
31.	To recover monies through the civil court.	To recover the costs of investigation and enforcement from farmers and land managers. To recover the costs of enforced rectification from farmers and land managers. To recover monies given as subsidies, incentives or grants if not used.	The regulator needs civil recovery powers, enforceable through the civil courts, to be able to recover its costs of investigation and enforcement.
32.	To give grants or make loans or provide loan guarantees.	To have the powers to fund specific projects, including to support programmes of research or pilots, where that will help the regulator deliver its objectives. To do the same but on a loans basis, on terms set by the regulator. To underwrite or guarantee private loans to allow farmers and land managers to borrow to invest in compliance. Allows innovations that might not otherwise be financially viable.	Giving grants, funding or loans for specific projects can assist the regulator to test new methodologies. The regulator will need to set specific terms and monitor performance.
33.	To have the ability to charge for issuing licences.	The ability to charge for issuing licences.	To cover the costs of the administration of the licence regime.
34.	To undertake any other activities necessary for performance of their functions.	A catch all provision to allow the regulator to undertake other ancillary activities.	This is a general enabling power to avoid the risk of ultra vires challenges for ancillary activities that are not expressly covered, but which are complementary to the regulator performing its functions.

Design Principles

Focus	Principle	Rationale
Build confidence	The system provides/promotes parliamentary, public, industry and international confidence in the standards achieved by those regulated.	<p><i>We have no reliable, overall measure of trust in how things are now. We do know that farmers question the approach and the fairness of the system.</i></p> <p>Those who are regulated and the wider public need to be able to have trust and confidence in the system.</p> <p>Parliament needs to be assured that boundaries between the regulator and the government are properly drawn and adhered to, that the proper checks and balances are in play and that the regulator is held to account.</p> <p>International confidence in our standards and in our compliance is necessary, to support and promote international trade.</p>
Be more straightforward	The regulatory system is simplified, standardised and accessible.	<p><i>The current regulatory system is universally regarded as overly complex.</i></p> <p>Regulatory requirements should be no more complex than necessary. Operational arrangements should be as seamless as possible.</p> <p>It should be easy for all those who are regulated to understand what is expected of them, and why.</p> <p>Where regulatory requirements differ, the regulator should be open about why that is: regulation should be coherent.</p> <p>Where individuals are subject to more regulatory attention than others, it should be for a valid reason.</p>
Be clear about what is expected, and why	The regulatory standards are well-designed, and pitched appropriately; take account of competing objectives, and are supported by industry, professional experts, policy makers and the regulator.	<p><i>Standards are embedded in a large number of Acts of Parliament and other regulatory instruments at the moment. There is a lot of guidance, some of it good, but it can be difficult to find. It is often not clear why the standard is needed – what it is trying to achieve. Some of the standards are unduly picky, largely down to CAP requirements.</i></p> <p>The regulatory system should drive compliance with relevant standards, which in turn drives achieving desired outcomes. For that to happen, standards should be very well drafted. Standards need to strike the right balance, in all respects.</p> <p>Standards are more likely to be drafted well and more likely to work if the sector they apply to is involved. A sense of common ownership embeds the standards.</p>

Focus	Principle	Rationale
Reflect mature regulatory thinking	The regulatory system is aligned with the Hampton, Macrory and Better Regulation principles, ensuring the system and delivery are transparent, fair and justifiable.	<p><i>These are the established expectations for modern-day regulatory systems, but much of the current system has been in place since before these expectations came about.</i></p> <p>These expectations have been tried and tested in other sectors and are designed to ensure that regulation is focused on areas where it is needed and that it is fair, effective and efficient.</p>
Reflect a sophisticated and balanced view of regulation	<p>The regulatory system takes into account:</p> <ul style="list-style-type: none"> the nature of the Farm and the interconnection of environment, production systems and ecosystems; the nature of associated risks and opportunities; the operation and achievements of the farm; and <p>enables appropriate interventions to drive changes in activity or behaviour where needed.</p>	<p><i>Current arrangements for regulation are not joined up. Established regulatory tools that can help (incentives, advice) are not generally in play. Enforcement can be binary.</i></p> <p>Modern-day regulatory approaches generally focus on changing people's behaviours where they need to change.</p> <p>They are proportionate, and tend to give people the opportunity, encouragement and incentive to comply rather than always resorting to formal enforcement. Regulators should give advice, and can use incentivisation where it is the best tool to ensure compliance.</p>
Be adaptive and fast moving	The regulatory system and standards can adapt and change in good time when needed and utilise feedback loops to ensure that the system adapts to: deregulate where appropriate; reset minimum requirements where higher standards are desirable; correct standards if they are not achieving the desired outcomes; modify, to take account of different objectives or when new requirements or incentives are indicated.	<p><i>Many standards are set in statutes or statutory instruments and many are derived from the EU, making it difficult to change quickly, or at all.</i></p> <p>Policy priorities, trade dynamics and farming risks can all change quickly, and the system needs to be responsive.</p> <p>The system must include mechanisms that allow adaptation in a timely way. To avoid undue confusion or complexity, it must also provide for standards to be modified or removed (should they become obsolete).</p>
Regulate where necessary	The regulatory system aligns with and builds on initiatives driven by the market and does not seek to duplicate or discount these unless there is a need to counterbalance to achieve a policy objective for the greater public good.	<p><i>Currently there are some system constraints that prevent more reliance on initiatives driven by the market.</i></p> <p>We should only intervene when necessary, so that the regulator system is effective, efficient, fair and proportionate.</p>

Current Regulatory Instruments

Legislation	Type
Animal Welfare Act 2006 (replaced the Animal Health and Welfare Act 1984)	Act
Agriculture Act 1970	Act
Agriculture Act 1993	Act
Ancient Monuments and Archaeological Areas Act 1979	Act
Animal Health Act 1981	Act
Animal Health and Welfare Act 1984	Act
Animal Welfare Act 2006	Act
Animals Act 1971	Act
Animals Act 1971 (Chapter 22)	Act
Clean Air Act 1993	Act
Control of Pollution Act 1974	Act
Countryside and Rights of Way Act (CRoW) 2000	Act
Dangerous Wild Animals Act 1976	Act
Deer Act 1991	Act
Environment Act 1995	Act
Flood Water Management Act 2010	Act
Food and Environment Protection Act 1985	Act
Forestry Act 1967 (and as amended)	Act
Forestry Act 1979	Act
Highways Act 1980	Act
Natural Environment and Rural Communities Act (NERC) 2006	Act
Plant Varieties Act 1997	Act
Pollution Prevention and Control Act 1999	Act
Protection of Animals Act 1911	Act
Protection of Badgers Act 1992	Act
Riding Establishment Act 1964	Act
Dogs (Protection of Livestock) Act 1953 (Chapter 28)	Act
Environmental Protection Act 1990	Act
Hill Farming Act 1946 (and 1985)	Act
Land Drainage Act 1991	Act
Pollution Prevention and Control Act 1999 (replaced the Environmental Protection Act 1990)	Act
Town and Country Planning Act 1990	Act
Water Resources Act 1991	Act
Wildlife and Countryside Act 1981	Act
Code of Good Agricultural Practice (COGAP) for Reducing Ammonia Emissions (2009)	Code of practice
Code of practice for the welfare of goats (1989)	Code of practice
Code of practice for the welfare of cattle (2003)	Code of practice
Code of practice for the welfare of gamebirds reared for sporting purposes (2010)	Code of practice
Code of practice for the welfare of horses, ponies, donkeys and their hybrids (2017)	Code of practice
Code of practice for the welfare of laying hens (2018)	Code of practice

Legislation	Type
Code of practice for the welfare of meat chickens and breeding chickens (2018)	Code of practice
Code of practice for the welfare of pigs (2018 not yet in force)	Code of practice
Code of practice for the welfare of sheep (2003)	Code of practice
Code of recommendations for the welfare of deer (1999)	Code of practice
Code of recommendations for the welfare of ducks (1987)	Code of practice
Code of recommendations for the welfare of rabbits (1987)	Code of practice
Code of recommendations for the welfare of turkeys (1987)	Code of practice
Protecting our Water, Soil and Air: A Code of Good Agricultural Practice for farmers, growers and land managers (the 'CoGAP') (2018)	Code of practice
Commission Decision 2006/968	Commission Decision
Commission Decision of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council Text with EEA relevance	Commission Decision
The Export of Horses (Protection) Order 1969; The Export of Horses (Excepted Cases) Order 1969; The Export of Horses (Veterinary Examination) Order 1986.	Order
Animal Gatherings Order 2010	Order
Animals (Post-Import Control) Order 1995	Order
Anthrax Order 1991	Order
Aujeszky's Disease Order 1983	Order
Avian Influenza (H5N1 in Poultry) (England) Order 2006	Order
Avian Influenza (H5N1 in Wild Birds) (England) Order 2006	Order
Avian Influenza and Influenza of Avian Origin in Mammals (England) (No.2) Order 2006/2702	Order
Brucellosis (England) Order 2000	Order
Brucellosis (England) Order 2015	Order
Cattle Compensation (England) Order 2012	Order
Control of Salmonella in Broiler Flocks Order 2009	Order
Control of Salmonella in Poultry Order 2007	Order
Control of Salmonella in Turkey Flocks Order 2009	Order
Disease Control (England) Order 2003	Order
Disease of Poultry (England) Order 2003	Order
Diseases of Animals (Approved Disinfectants) (England) Order 2007	Order
Enzootic Bovine Leukosis (England) Order 2000/2056	Order
Export of Sheep (Prohibition) Order 1991	Order
Export Quarantine Stations (Regulation) Order 1973	Order
Foot and Mouth Disease (England) Order 2006	Order
Hill Farming Improvements Order 1949	Order
Importation of Animal Pathogens Order 1980	Order
Importation of Animals Order 1977	Order
Importation of Birds, Poultry and Hatching Eggs Order 1979	Order
Importation of Processed Animal Protein Order 1981	Order
Infectious Diseases of Horses Order 1987	Order
Movement of Animals (Restrictions) (England) Order 2002/3229	Order
Pigs (Records, Identification and Movements) Order 2011	Order

Legislation	Type
Plant Health (Forestry) Order 2005	Order
Psittacosis or Ornithosis Order 1953	Order
Rabies (Control) Order 1974	Order
Rabies (Importation of Dogs, Cats and Other Mammals) Order 1974/2211	Order
Sheep and Goats (Records, Identification and Movement) (England) Order 2009/3219	Order
Sheep Scab Order 1997	Order
Specified Diseases (Notification) Order 1996	Order
The Agriculture, Animals, Environment and Food etc. (Miscellaneous amendments) Order 2012	Order
The Avian Influenza and Influenza of Avian Origin in Mammals (England) (No.2) Order 2006	Order
The Foot-and-Mouth Disease (England) Order 2006	Order
The Plant Health (Export Certification) (Forestry) (Great Britain) Order 2004	Order
The Plant Health (Forestry) (Phytophthora ramorum) (Great Britain) Order 2004	Order
The Plant Health (Wood Packaging Material Marking) (Forestry) Order 2006	Order
The Reduction and Prevention of Agricultural Diffuse Pollution (England) Regulations 2018	Order
Transport of Animals (Cleansing and Disinfection) (England) (No.3) Order 2003	Order
Tuberculosis (Deer and Camelid) Order 2014	Order
Tuberculosis (England) Order 2014	Order
Warble Fly (England and Wales) Order 1982	Order
Welfare of Animals (Transport) (England) Order 2006	Order
Welfare of Animals at Markets Order 1990	Order
Welfare of Horses at Markets (and Other Places of Sale) Order 1990	Order
Zoonoses Order 1989	Order
African Horse Sickness (England) Regulations 2012	Regulation
Animal By-Products (Enforcement) (England) Regulations 2013	Regulation
Animal Feed (Composition, Marketing and Use) (England) Regulations 2015	Regulation
Animal Feed (England) Regulations 2010	Regulation
Animal Feed (Hygiene, Sampling etc. and Enforcement) (England) Regulations 2015	Regulation
Animals and Animal Products (Examination for Residues and Maximum Residue Limits) Regulations 1997	Regulation
Animals and Animal Products (Examination for Residues and Maximum Residue Limits) (England and Scotland) Regulations 2015	Regulation
Air Quality Standards Regulation 2010	Regulation
Aquatic Animal Health (England and Wales) Regulations 2009	Regulation
Avian Influenza (Preventive Measures) (England) Regulations 2006	Regulation
Avian Influenza (Vaccination) (England) Regulations 2006/2703	Regulation
Bluetongue Regulations 2008	Regulation
Bovine Products (Restrictions on Placing on the Market) (England) (No.2) Regulations 2005	Regulation
Bovines & Bovine Products (Trade) Regulations 1999	Regulation
Cattle Identification Regulations 2007	Regulation

Legislation	Type
Commission Regulation (EC) 1505/2006	Regulation
Commission Regulation (EC) 509/1999	Regulation
Commission Regulation (EC) 911/2004	Regulation
Commission Regulation (EC) No 1082/2003	Regulation
Commission Regulation (EC) No 1342/2003 laying down special detailed rules for the application of the system of import and export licenses for cereal and rice	Regulation
Commission regulation (EC) No 376/2008 laying down common detailed rules for the application of the system of import and export licenses and advance fixing certificates for agricultural products	Regulation
Commission Regulation (EC) No 644/2005	Regulation
Commission Regulation (EEC) No 120/89 laying down common detailed rules for the application of export levies and charges on agricultural products	Regulation
Common Agricultural Policy (Controls and Enforcement, Cross Compliance, Scrutiny of Transactions and Appeals) Regulations 2014	Regulation
Common Agricultural Policy Basic Payment and Support Schemes (England) Amendment) Regulations 2017	Regulation
Conservation of Habitats and Species Regulations 2010	Regulation
Conservation of Habitats and Species Regulations 2017	Regulation
Contaminated Land (England) Regulations 2006	Regulation
Control of Pesticides Regulations 1986	Regulation
Control of Pesticides Regulations 1986 (as amended)	Regulation
Council Regulation (EC) 21/2004	Regulation
Council Regulation (EC) 2100/94 on Community plant variety rights	Regulation
Council Regulation (EC) No 834/2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91	Regulation
Country of Origin of Certain Meats (England) Regulations 2015	Regulation
Countryside Stewardship Regulations 2000	Regulation
Crop Residues (Burning) Regulations 1993	Regulation
Diseases of Swine Regulations 2014	Regulation
EC Regulation No 1099/2009 on the protection of animals at time of killing	Regulation
EC Regulation No 1/2005 on the protection of animals during transport and related operations	Regulation
Environmental Damage (Prevention and Remediation) (England) (Amendment) Regulations 2017	Regulation
Environmental Impact Assessment (Agriculture) (England and Wales) Regulations 1999 (as amended)	Regulation
Environmental Impact Assessment (Forestry) (England and Wales) Regulations 1999 (as amended)	Regulation
Environmental Permitting (England and Wales) Regulations 2010	Regulation
Environmental Stewardship (England) Regulations 2005	Regulation
Foot-and-Mouth Disease (Control of Vaccination) (England) Regulations 2011	Regulation
Foot-and-Mouth Disease (Control of Vaccination) (England) Regulations 2006	Regulation
Forest Reproductive Material (Great Britain) Regulations 2002	Regulation
Heather and Grass etc. Burning (England) Regulations 2007	Regulation

Legislation	Type
Hedgerows Regulation 1997	Regulation
Horse Passports Regulations 2009	Regulation
Moorland (Livestock Extensification) Regulations 1995	Regulation
Mutilations (Permitted Procedures) Regulations England 2007	Regulation
Nitrate Pollution Prevention Regulations 2015	Regulation
Official Controls (Animals, Feed and Food) (England) Regulations 2006	Regulation
Persistent Organic Pollutants Regulations 2007	Regulation
Plant Protection Products (Sustainable Use) Regulations 2012	Regulation
Prevention of Diffuse Agricultural Pollution (England) Regulations 2017 (known as basic measures)	Regulation
Products of Animal Origin (Disease Control) (England) Regulations 2008	Regulation
Registration of Establishments (Laying Hens) (England) Regulations 2003	Regulation
Regulation (EC) No 1760/2000	Regulation
Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC	Regulation
Regulation (EU) No 1293/2013	Regulation
Regulatory Reform, England and Wales; Animals, England and Wales	Regulation
Sludge (Use in Agriculture) Regulations 1989	Regulation
Welfare of Animals at the Time of Killing (England) Regulations 2015	Regulation
Trade in Animals and Related Products Regulations 2011	Regulation
Transmissible Spongiform Encephalopathies (England) Regulations 2010	Regulation
Veterinary Medicines Regulations 2013	Regulation
Water Environment (Water Framework Directive) England and Wales Regulations 2017	Regulation
Welfare of Farmed Animals (England) Regulations 2007	Regulation
Zoonoses (Monitoring) (England) Regulations 2007	Regulation

Terms of Reference

Independent report: Farm Inspection and Regulation Review

Updated 12 July 2018

The Secretary of State for Environment, Food and Rural Affairs, Michael Gove, has asked Dame Glenys Stacey to conduct an independent Farm Inspection and Regulation Review.

1. Purpose

To identify opportunities before and after EU exit for improving farming-related regulation and enforcement (including inspections), in order to reduce burdens on farmers, while maintaining and enhancing our animal, environmental and plant health standards. The review will apply only to England.

2. Objectives

The review will provide:

- an appraisal of the current regulation of farming, including enforcement;
- a comprehensive review of the current farming inspection regime including an assessment of improvement efforts;
- a review of the potential and effectiveness of enforcement tools (including but not limited to inspections) both before and after EU exit;
- advice on how inspections can be simplified, removed, reduced or improved to reduce the burden on farmers, both before and after EU exit;
- recommendations on the strategic direction and culture of future regulation and enforcement and improvements that can be made in the short, medium and longer term.

The review should take account of:

- the government's EU exit programme;
- the efficiency and reform agenda and the potential of data/technology;
- the vision and ambition set out for the environment and farming in 'A Green Future: Our 25 Year Plan to Improve the Environment', published in January 2018;
- the structure of the farming industry and the rural environment;
- the sustainability, scalability, deliverability and cost-benefit trade-offs of future interventions;
- previous reviews and existing improvement programmes on regulation, enforcement and inspections;
- wider work underway in Defra to consider future farming policy and farming regulation and enforcement, in the light of the UK's exit from the EU. In particular the review should take into account the Command paper 'Health and Harmony: the future for food, farming and the environment in a Green Brexit', published in February 2018, and the forthcoming Agriculture Bill.

3. Scope

The review will consider the range of regulations that farmers and land managers in England have to comply with. It will also consider the associated enforcement functions delivered by the Rural Payments Agency, Natural England, the Animal Plant and Health Agency, the Environment Agency, the Forestry Commission and local authorities.

4. Roles and responsibilities

The review chair will be responsible for overseeing the strategic direction and progress of the review. The review chair will report directly to the Secretary of State.

Over the course of the review, the review chair will provide periodic and timely advice to Defra, to inform the drafting of the Agriculture Bill.

The review chair will produce a final report and recommendations by the end of December 2018, and may produce an interim report or reports.

5. Timing

The review started in March 2018 and is due to be completed by the end of the calendar year.

6. Governance

The review chair will be responsible for governance arrangements within the review, in consultation with the Director General for Food, Farming and Biosecurity.

7. Contacts

The review team can be contacted at FIRR@defra.gsi.gov.uk.

Please email the team to be on the review's mailing list and get the latest updates.

Who we consulted

We are extremely grateful to those listed below and to the staff of the Animal and Plant Health Agency, the Environment Agency, the Forestry Commission, Natural England and the Rural Payments Agency for the information and support they have provided to the review.

Name	Company/ Organisation	Job/Role
Mark Scott	Acoura	Head of Red Tractor Supply Assurance
Harriet Wilson	Aldi	Responsibility Manager - Farming, Fishing, Forestry & Fair Trade
Mark Lloyd	Anglers Trust	Chief Executive
Charlotte Fursdon	Anglia Free Range Eggs	Technical Manager
Chris Hadkiss	Animal and Plant Health Agency	Chief Executive
Michael Seals MBE	Animal Health and Welfare Board	Chair
Wendy Martin	Association of Chief Trading Standards Officers	Director of Policy
Simon Wilkes	Association of Chief Trading Standards Officers	Head of Service at Worcestershire Regulatory Services
Mark Williams	British Egg Industry Council	Chief Executive
John Breach	British Independent Fruit Growers Association	Chair
Clive Edmed	British Independent Fruit Growers Association	Vice Chair
Judi Perry	British Independent Fruit Growers Association	Secretary
David Knight	British Independent Fruit Growers Association	Member
Tim Breitmeyer	Country Land and Business Association	President
Susan Twining	Country Land and Business Association	Chief Land Use Policy Adviser
Stefan Jimenez Wisler	Country Land and Business Association	Land Use Policy Adviser
Christine Middlemiss	Department for Environment, Food and Rural Affairs	Chief Veterinary Officer
Neil Parish	EFRA Select Committee	Chair
Sir James Bevan KCMG	Environment Agency	Chief Executive
Charlie Forbes Adam	Escrick Estate	Owner
Andrew Swift	FERA Science Ltd	Chief Executive
Andrea Waller	FERA Science Ltd	Chief Operating Officer
Guy Thallon	FERA Science Ltd	Strategic Business Development Manager
Glyn Jones	FERA Science Ltd	Environmental Economist
Damian Malins	FERA Science Ltd	Venturing Projects
Richard Greenhous	Forestry Commission	Director of Forest Services
Colin Wilson	Government Actuary's Department	Deputy Government Actuary
Richard Ashcroft	Great Holt Farm	Beef Farmer
David Peace	Hall Mark Veterinary and Compliance Services	Chair
Becky Holden	Holden Farm Dairy	Cheesemaker
Lord Curry of Kirkharle	House of Lords	
Countess of Marr	House of Lords	

Name	Company/ Organisation	Job/Role
David Baldock	Institute for European Environmental Policy	Senior Fellow
Mrs and Mrs R Noad	J.S Noad	Dairy Farmers
Professor Sir Hugh Charles Godfrey CBE FRS	Oxford Martin School, University of Oxford	Director of the Oxford Martin School and Independent chair of the Bovine TB Strategy Review
Peter Bonish	Kage Strategy	Managing Director
Tom Green	Leaf Marque	Chair
Simon Wells	Lower Hope Fruit	Managing Director
Mark Clinch	M J Clinch MRICS	Chartered Surveyor
John Chaplin	National Animal Health and Welfare Panel	Chair - Suffolk County Council
Jane Matthews	National Animal Health and Welfare Panel	Vice Chair - Cheshire County Council
Simon Goodwin	National Animal Health and Welfare Panel	Member - East Riding of Yorkshire Council
Zoe Phillips	National Animal Health and Welfare Panel	Welsh representative -Merthyr Tydfil County Borough Council
Paula Cooper	National Animal Health and Welfare Panel	Member - Norfolk County Council
Jamie Yates	National Animal Health and Welfare Panel	Member -Bucks & Surrey County Council
Rob Quest	National Animal Health and Welfare Panel	Member -City of London
Rachael Readman	National Animal Health and Welfare Panel	Member -Hartlepool Borough Council
Michelle Beer	National Animal Health and Welfare Panel	Member -Plymouth City Council
Tim Barber	National Animal Health and Welfare Panel	Member -Herefordshire
Stephanie Young	National Animal Health and Welfare Panel	Member -Staffordshire County Council
Minette Batters	National Farmers Union	President
Terry Jones	National Farmers Union	Director General
Andrew Clark	National Farmers Union	Director of Policy
Phil Hambling	National Farmers Union	Head of Food and Farming
Andrea Graham	National Farmers Union	Head of Policy Services
Nina Winters	National Farmers Union	Chief Legal Adviser
Tamara Hill	National Farmers Union	Skills and Employment Adviser
Tom Wornham	National Farmers Union	Poultry Board Chair
Gary Ford	National Farmers Union	Chief Poultry Adviser
Paul Tompkins	National Farmers Union	Vice Chair NFU Dairy Board
Ian Harvey	National Farmers Union	NFU Dairy Board member
Ruth Edge	National Farmers Union	Acting Chief Dairy Adviser
Verity Richards	National Farmers Union	Dairy Adviser
Lee Abbey	National Farmers Union	Horticulture Adviser
Rupert Weaver	National Farmers Union	Horticulture Adviser
Julian Glover OBE	National Parks Review	Chair
Dr Zoe Davies	National Pig Association	Chief Executive
John Kay	National Trust	Consultant
Dieter Helm CBE	Natural Capital Committee	Independent Chair
James Cross	Natural England	Chief Executive
Chris Kebbell	New Zealand High Commission	Counsellor (Primary Industries)

Name	Company/ Organisation	Job/Role
Julie Collins	New Zealand Ministry for Primary Industries	Head of Te Uru Rākau
Ashley Joule	Oakland Eggs	Manager
James Hook	PD Hook	Chair
Patrick Hook	PD Hook	Director
Daniel Dring	PD Hook	Group Poultry Welfare Officer
Baroness Neville-Rolfe	Red Tractor	Chair
Jim Moseley	Red Tractor	Chief Executive
Jessica Sloss	Red Tractor	Technical Manager, Agriculture
Arlin Rickard	Rivers Trust	Chief Executive
David Bowles	Royal Society for the Prevention of Cruelty to Animals	Head of Public Affairs
Dr Marc Cooper	Royal Society for the Prevention of Cruelty to Animals	Head of Farm Animals
Tom Lancaster	Royal Society for the Protection of Birds	Principal Land Use Policy Officer
Jack Rhodes	Royal Society for the Protection of Birds	Water Policy Officer
Paul Caldwell	Rural Payments Agency	Chief Executive
Judith Batchelor OBE	Sainsburys	Director of Sainsburys Brand
Derek Wilkinson	Sandfields Farms Ltd	Managing Director
John Addams-Williams	Soham Ltd	Managing Director
Tim MacMillon	Soils Association	Director or Innovation
Perry Hobbs	South West Water	Head of Strategic Investment Planning
John Rowsell	Stoke Charity Farm	Arable Farmer and Contract Farmer
John Chaplin	Suffolk Trading Standards	National Health and Welfare Panel
Phill Crawley	Sunrise Eggs	Director
Adele Jones	Sustainable Food Trust	Head of External Relations
Patrick Holden	Sustainable Food Trust / Holden Farm Dairy	Chief Executive
Matthew Orman	Sustainable Soils Association	Director
Philip Ward	Tempellow Farm	Dairy Farmer
Yvette de Garis	Thames water	Head of Environmental Regulation
Stephen Russell	The Ramblers Association	Policy and Advocacy Officer
Ellie Brodie	The Wildlife Trusts	Senior Policy Manager
Mark Gorton	Traditional Norfolk Poultry	Managing Director
Malcolm Hynd	United Kingdom Accreditation Service	External Affairs Manager
Suzi Daley	United Kingdom Accreditation Service	External Affairs Adviser
Professor Richard Macrory	University College London	Emeritus Professor, Faculty of Laws
Professor Christopher Hodges	University of Oxford	Professor of Justice Systems and Fellow of Wolfson College
John Gregson	Waitrose	Senior Manager, Agri-Food Communications
Duncan Sinclair	Waitrose	Agriculture Manager
Hannah Freeman	Wildfowl and Wetlands Trust	Senior Government Affairs Officer
Zoe Davies	Wildlife Conservation Link	Policy and Campaigns Manager

Name	Company/ Organisation	Job/Role
Helen Chesshire	Woodland Trust	Chair of Link Agriculture Working Group
Debbie Tripley	World Wildlife Fund - UK	Head of Advocacy
Cat Moncrieff	World Wildlife Fund - UK	Freshwater Policy Programme Manager
Tom Stuart	World Wildlife Fund - UK	Water and Agricultural Policy Officer
Simon Evans	Wye and Usk Foundation	Chief Executive
Tango Fawcett		Land Consultant

Glossary

Term	Definition
Act of Parliament	An Act of Parliament (also known as a statute) creates a new law or changes an existing law. An Act is a bill that has been approved by both the House of Commons and the House of Lords, and been given royal assent by the monarch. Taken together, Acts of Parliament make up what is known as 'statute law' in the UK.
Agri-environment scheme	A land management scheme under the Rural Development Programme, offering payments for farmers and land managers who manage the land to protect and enhance the environment and wildlife. Scheme participants enter into voluntary land management agreements.
Antimicrobial	Describes an agent which kills or stops the growth of microorganisms.
Assurance scheme	A scheme, such as Red Tractor or the Lion mark for eggs, which guarantees defined standards of food safety or animal welfare. Usually voluntary, although many food businesses require certification in an assurance scheme from their suppliers.
Biodiversity	The diversity of life forms, species, genetic variation, and ecosystems.
Biosecurity	Preventive measures designed to reduce the risk of transmission of: infectious diseases in crops and livestock; quarantined pests; invasive alien species; and living modified organisms.
Blockchain	A decentralised, public digital ledger where records can be held.
Basic Payment Scheme (BPS)	A Pillar 1 payment, in accordance with the Common Agricultural Policy. Pillar 1 payments are based on the amount of land farmed. There is a minimum claim size.
Bovine Tuberculosis	An infectious disease in cattle caused by <i>Mycobacterium bovis</i> (<i>M. bovis</i>)
Buffer strips	A piece of vegetated land used to separate farmed land from features such as watercourses and hedgerows, to protect against damage and act as a filter to prevent the spread of pollution.
Catchment	The area of land that drains into a particular channel or body of water.
Catchment-based approach	An approach that embeds collaborative working at a river catchment scale, to deliver cross-cutting improvements to water environments.
Catchment-sensitive farming	A partnership between Defra, the Environment Agency and Natural England, designed to help farmers and other partners to improve water and air quality in high-priority areas.
Climate change mitigation	Action to reduce the impact of human activity on the climate system, primarily through reducing greenhouse gas emissions.
Compaction	The physical reduction in volume of soil due to a compressive force, as a result of either soil vulnerability or applied stress to the soil (or a combination of both). Causes preferential loss of larger pore spaces, which impacts both soil fauna and flora, and can lead to an increased loss of greenhouse gases (including nitrous oxide, carbon dioxide and methane) and ammonia.

Term	Definition
Common Agricultural Policy (CAP)	An EU policy to provide financial support to farmers in member states. It is one of the founding policies of the original common market, bringing national intervention programmes into one scheme to allow farmers to compete on a level playing field. It is designed to protect against volatility in agricultural prices (and hence rural incomes) and to provide food security whilst tackling other issues such as climate change and landscape feature retention.
County Parish Holding (CPH)	A unique number to describe the land and buildings that people use for keeping livestock, including livestock kept as pets.
Cover crops	A non-cash crop grown primarily for the purpose of protecting or improving soil between periods of regular crop production, often used repeatedly as part of a long-term strategy to improve soil quality.
Countryside Stewardship scheme	A scheme to provide financial incentives for farmers and land managers to look after their environments through: conservation and restoration of wildlife habitats; flood risk management; woodland creation and management; reduction of widespread water pollution from agriculture; maintenance of the character of the countryside; preservation of historical features in the landscape; and encouragement of educational access.
Cross compliance	Cross compliance is a mechanism that links Direct Payments to compliance by farmers with basic standards concerning the environment, food safety, animal and plant health and animal welfare, as well as the requirement of maintaining land in good agricultural and environmental condition.
Culling	The killing of animals to control the spread of disease.
Deterrence	A deterrence strategy seeks to deter. It assumes that if offenders are detected with sufficient frequency and punished with sufficient severity, then they and other potential violators will be deterred from violations in the future.
Direct Payments	Agricultural payments granted to farmers based on the number of hectares farmed.
Ecological damage	Environmental degradation and/or damage to ecological or ecosystem health.
Ecosystem	A biological community of interacting organisms and their physical environment.
Environmental Land Management Scheme (ELM)	A proposed government scheme to pay farmers and land managers public money for public goods such as increased biodiversity and improved soil health.
Endemic disease	A disease that has been in the UK for some time and become established in plant or animal populations.
Enforcement	The application of policies, rules and tools on the ground in response to detected or suspected non-compliance. Enforcement activities may include education, advice, persuasion, negotiation or more formal actions such as warnings, improvement notices, directions, fines or prosecutions.
Executive Agency	A body established to allow the delivery of executive functions of government to be carried out separately from – but within a policy and resources framework set by – a primarily policy focused department
Exotic animal disease	A disease which is not usually present in the UK.

Term	Definition
Farm tenant	A tenant under a farm business tenancy as defined by the Agricultural Tenancies Act 1995, or a tenancy to which the Agricultural Holdings Act 1986 applies.
Field force	Operational staff in a regulator who undertake activities such as provision of advice, inspection or surveillance.
Geospatial data	Data about where people and objects are in relation to a particular geographic location.
Greening	Greening is a Pillar 1 component that rewards agricultural practices beneficial for the climate and the environment. A farmer claiming BPS payments must comply with greening practices, including crop diversification and maintenance of permanent grassland and ecological focus areas, on all their eligible hectares to receive a 'greening payment' in addition to their BPS payment.
Incentives	Inducements. Used by regulators to induce individuals to behave in the public interest. Incentives can include advice, subsidies or financial assistance or reductions in the regulatory burden.
Incidence	This statistic reflects the number of cases of infection or disease in a population as a rate per time unit
Inspections	Any type of visit or check conducted by authorised officials on products or business premises, activities and documents in order to assess compliance. A form of monitoring.
Issues-based regulation	An approach to regulation that is not solely focussed on individuals but on systemic issues. The regulator chooses the issues to focus on and then employs a range of tactics to make the most difference with the resources at its disposal.
Leaching	In agriculture, leaching is the loss of water-soluble plant nutrients from the soil, due to rain and irrigation.
Levers	In regulation, levers are instruments or tools available to the regulator that can be used to maintain or alter patterns in behaviours or in regulated entities.
Livestock	Animals being kept for the production of food, wool, skin or fur on agricultural land.
Livestock Information Programme	A scheme to replace separate databases for tracing cattle, sheep goats and pigs with a single, multi-species digital service which will provide improved traceability (including where the animals are, where they have been and who keeps them).
Magic mapping application	The MAGIC website provides geographic information about the natural environment from across government. The information covers rural, urban, coastal and marine environments across Great Britain. It is presented in an interactive map which can be explored using various mapping tools.
Management-based regulation	Sets out a requirement for the development of a management plan (this must be done) and a requirement to follow that plan. Also called enforced self-regulation, or process-based regulation.
Monitoring	How the regulator assesses whether individuals are compliant with the standards that are relevant to them, or else whether they are moving in the right or wrong direction.
Natural capital assets	The elements of nature that directly or indirectly provide value to people, including ecosystems, species, fresh water, land, minerals, the air and the oceans, as well as natural processes and functions.

Term	Definition
Neonicotinoid pesticides	A class of neuro-active pesticides used by farmers to prevent damage to crops by insects.
Organic farming	A holistic method of farming that avoids the use of artificial fertilisers and pesticides, and involves crop rotation and other forms of husbandry to maintain soil fertility and to control weeds, pests and diseases.
Outcome-based regulation	Sets out what must be achieved but does not specify how it is to be achieved. Also called goals-based or principles-based regulation.
Pillar 1	Pillar 1 payments are direct income support payments to farmers. Payments come from the EU and are administered by national governments. Includes the BPS payment, the greening payment and the young farmer payment.
Pillar 2	Pillar 2 is co-financed from EU member state governments. Each member state or region implements its rural development strategy through a Rural Development Programme (RDP). These provide a range of support measures, including annual agri-environment payments to farmers who voluntarily take part in agri-environment schemes. UK devolved administrations each have their own RDPs.
Pollinators	Insects and animals that move pollen from one plant to another.
Pollutant	Any substance liable to cause pollution.
'Polluter pays' principle	The principle according to which the polluter should bear the cost of measures to reduce pollution, according to the extent of either the damage done to society or the exceeding of an acceptable level (standard) of pollution.
Precision farming	Precision farming combines technology with livestock and crop science to improve agricultural practice.
Price-takers	A price-taker must accept the prevailing prices in the market of its products, its own transactions being unable to affect the market price.
Primary legislation	An Act of Parliament.
Red-light regulation	A form of non-discretionary command and control regulation where prescriptive rules are consistently enforced to prohibit unacceptable behaviour.
Regulatory burden	The administrative cost of a regulation in terms of financial cost, time and complexity.
Regulatory instruments	Regulatory powers, usually granted under an Act of Parliament, that can be used in order to achieve the regulator's objectives or purpose.
Regulatory sandbox	A regulatory sandbox allows innovators to trial new products, services and business models in a controlled but real-world environment, without some of the usual rules applying.
Risk-based regulation	Systematised decision-making frameworks and procedures to prioritise regulatory activities and deploy resources, principally relating to inspection and enforcement, based on an assessment of the risks that regulated firms pose to the regulator's objectives
Rules-based regulation	Sets out what must be done. Usually very prescriptive. Also called direct, technology-based, command and control regulation.
Secondary legislation	A law created by ministers (or other bodies) under powers given to them by an Act of Parliament, typically under a statutory instrument.

Term	Definition
Slurry	A liquid or semi-liquid matter composed of excreta produced by livestock while in a yard or building (including that held in wood-chip corrals); or a mixture wholly or mainly consisting of livestock excreta, livestock bedding, rainwater and washings from a building or yard used by livestock.
Standards	The norms, goals, objectives, or rules around which a regulatory regime is organised. Standards express, if not the broad outcomes intended for a regime, then at least some aspect of the behaviour which participants in the regime are intended to adhere to.
Statutory instrument	Acts of Parliament often confer powers on Ministers to make more detailed orders, rules or regulations through statutory instruments. The scope of these powers varies greatly, from the technical (for example, to vary the dates on which different provisions of an Act will come into force, to change the levels of fines or penalties for offences, or to make consequential and transitional provisions) to much wider powers, such as filling out the broad provisions in Acts.
Surveillance	The process of gathering intelligence or information related to system-wide hazards, such as exotic animal disease, or bovine TB.
Value chain	A process by which value is added to a product before it is sold to customers.
Watercourse	Watercourses are all surface waters, including coastal water, estuaries, lakes, ponds, rivers, streams, canals and field ditches. The term includes temporarily dry watercourses.
Watercourse margins	A watercourse margin is an area of uncultivated land next to a ditch, river or pond, which can act as a sediment-trap as well as helping to reduce nutrient and pesticide losses in run-off.
Zero-tillage system	A way of growing crops or pasture from year to year without disturbing the soil through tillage.

Abbreviations

Abbreviation	Meaning
AI	artificial intelligence
APHA	Animal and Plant Health Agency
BPS	Basic Payment Scheme
CAP	Common Agricultural Policy
CPH	County Parish Holding
CIPFA	Chartered Institute of Public Finance and Accountancy
Defra	Department for the Environment, Food and Rural Affairs
DVSA	Driver and Vehicle Standards Agency
EA	Environment Agency
EU	European Union
FC	Forestry Commission
FSA	Food Standards Agency
GDPR	General Data Protection Regulations
LA	Local Authority
NAO	National Audit Office
NDPB	Non-departmental Public Body
NE	Natural England
NMD	Non-ministerial Department
ELM	Environmental Land Management
NTS	National Trading Standards
OECD	Organisation for Economic Co-operation and Development
OS	Ordnance Survey
RDP	Rural Development Programme
RDPE	Rural Development Programme for England
RPA	Rural Payments Agency
TB	tuberculosis