



Institute for
European
Environmental
Policy

January 2020

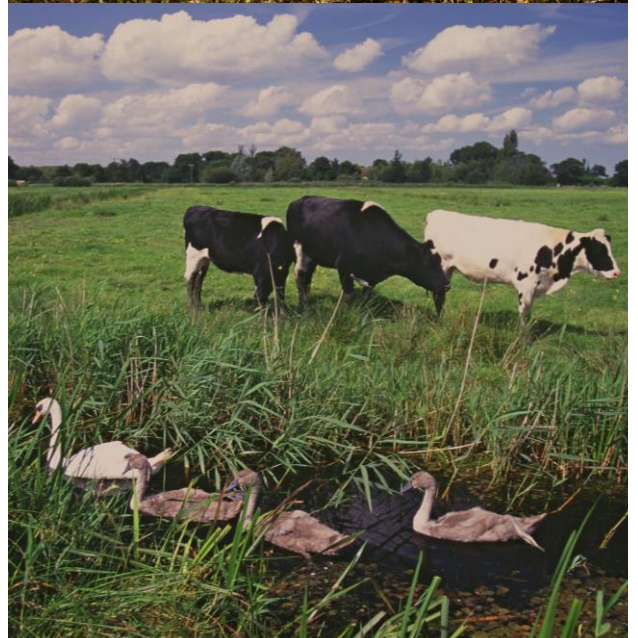
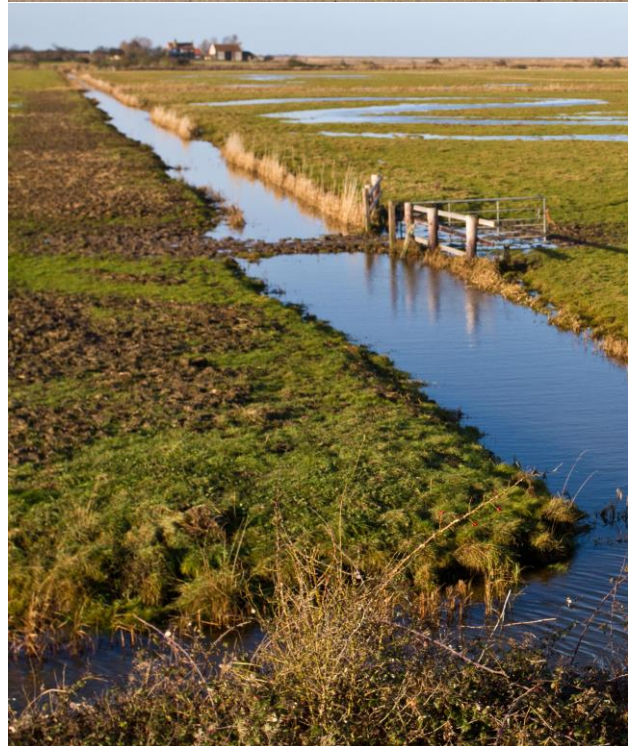
Risks and opportunities of a post-EU environmental regulatory regime for agriculture in England

By:

David Baldock

Kaley Hart

Funded by



Disclaimer: The arguments expressed in this report are solely those of the authors and do not reflect the opinion of any other party.

The report should be cited as follows: Baldock D and Hart K (2020), Risks and opportunities of a post-EU environmental regulatory regime for agriculture in England, Institute for European Environmental Policy.

Corresponding author: Kaley Hart (khart@ieep.eu)

Acknowledgements:

We thank the steering group for the study (Tom Lancaster and Jack Rhodes – RSPB, Ellie Brodie – the Wildlife Trusts, Tom Stuart and Zoe Draisey – WWF) for their inputs and comments on drafts of the report and for the participants in the stakeholder workshop held in July 2019, whose contributions have helped guide the proposals put forward here.

Photo credits: Natural England - <https://www.flickr.com/photos/naturalengland/>

Institute for European Environmental Policy

London Office
11 Belgrave Road
IEEP Offices, Floor 3
London, SW1V 1RB
Tel: +44 (0) 20 7799 2244
Fax: +44 (0) 20 7799 2600

Brussels Office
Rue Joseph II 36-38
1000 Bruxelles
Belgium
Tel: +32 (0) 2738 7482
Fax: +32 (0) 2732 4004

The **Institute for European Environmental Policy (IEEP)** is an independent not-for-profit institute. IEEP undertakes work for external sponsors in a range of policy areas as well as engaging in our own research programmes. For further information about IEEP, see our website at www.ieep.eu or contact any staff member.

Table of Contents

Executive Summary	i
1 Introduction and purpose	1
2 Current state of play	3
2.1 The current regulatory framework	3
2.2 Current delivery and enforcement arrangements in England.....	5
3 Overview of issues with the current system	8
3.1 Purposes of environmental regulation	8
3.2 Concerns relating to the operation of the current system.....	9
4 Consequences of Brexit for the regulatory system	18
4.1 Principles and objectives	18
4.2 Content of environmental regulations	20
4.3 Issues surrounding the removal of cross-compliance	21
4.4 Delivery and enforcement	24
5 Setting a post-EU framework for environmental regulation relating to agriculture in England - proposals	25
5.1 Setting the overarching framework.....	26
5.2 Updating the regulatory framework to fill gaps and support new priorities	30
6 Establishing a new delivery system in England - proposals	36
6.1 Setting clear objectives for the regulatory regime in relation to agriculture	36
6.2 A fully integrated whole farm or multi-strand model?	37
6.3 Establishing targets for compliance.....	38
6.4 Establishing a new delivery model	39
6.5 Transitional and time limited financial support.....	40
6.6 More efficient monitoring and controls	41
6.7 Allocating sufficient resources.....	41
6.8 Concluding remarks	42
7 Summary of recommendations	44
Annex 1 Environmental legislation relating to agriculture	47
Annex 2 The SEPA approach to improving adherence with regulations to tackle diffuse water pollution	49

List of Tables

Table 4-1: Gaps arising from changes to cross-compliance GAEC standards in the transition period and its subsequent discontinuation in England	23
Table 5-1: Summary of regulatory gaps and possible solutions for the environment and climate.....	34
Table A1-1: EU environmental legislation relevant to agriculture	47
Table A1-2: Environmental regulations operating in England not derived from EU law	48

List of Figures

Figure 2-1: Current approach to environmental regulation relating to agriculture in England	4
Figure 3-1 All serious (Grade 1 and 2) water pollution incidents by activity type (including activities permitted and non-permitted by the Environment Agency).	12
Figure 3-2 Serious water pollution incidents in England by agricultural sector.....	13
Figure 5-1: Outline of an environmental regulatory regime for agriculture post EU-Exit....	26

Executive Summary

A fresh approach to the system of environmental regulation as it affects land managers in England is timely. This is not only because of the UK's planned withdrawal from the European Union (EU) and the Common Agricultural Policy (CAP) but also because of the scale of the environmental challenges ahead and problems identified with the current enforcement system. The Government committed in 2017 to design a new, fairer yet robust system. The 2018 Farm Inspections and Regulation Review (FIRR) was commissioned to advise on what this might comprise and made a set of wide-ranging recommendations. These included a less rules-based approach to achieving compliance on farms and the creation of a single independent regulator. A Government response had not been published at the time of writing.

The report is a contribution to the debate on the role of environmental standards and regulations and the way they will be applied on farms in England in the future. It summarises the rationale for their existence, the current state of play and the challenges facing the present system, before providing recommendations on what a future regulatory framework and delivery system might look like. These are summarised in Chapter 7.

Current state of play: In England, as in other parts of the UK, the regulatory framework relating to the environment for the agricultural and broader land use sector comprises a series of regulations that are binding on all farmers, a large number of which are based on EU law. In addition, the CAP's cross-compliance mechanism makes adherence to selected environmental regulations a condition of receipt of most agricultural support payments as well as introducing basic levels of protection for certain concerns not covered by domestic legislation (e.g. soil management). As a result, cross-compliance has become a key tool used to enforce compliance with environmental regulation and standards on the great majority of farms that currently claim direct payments under the CAP.

Rationale for an environmental regulatory system with particular reference to agriculture: Fundamentally, the reason for putting in place robust environmental regulations is to establish and codify standards to protect and enhance the environment and to help ensure that farming as a sector plays an appropriate role in meeting wider social objectives. In so doing, regulatory requirements create a baseline or reference level to distinguish between those commitments that farmers must meet at their own expense and those that are voluntary and potentially eligible for support. In principle, they help to internalise the negative external environmental costs of food production, in line with the Polluter Pays Principle (PPP) and provide transparency and increased confidence for consumers and other actors in the food chain.

Issues with the current system: Critiques have come from several quarters, not least the farming community, which has been critical in particular of the penalties imposed for cross-compliance breaches and of the number of farm visits. This is despite the fact that the level of farm inspections related to compliance with environmental law has fallen substantially in recent years. From a civil society perspective there is a concern about unsatisfactory environmental outcomes. From the perspective of the regulators and enforcement bodies, reduced funding levels and limited means available to them to drive improvements in farm

standards hamper their efforts to improve the enforcement of environmental regulation. Evidence shows significant breaches of environmental regulations on farms continuing to occur, particularly in relation to water pollution, and a lack of investment in certain remedial technologies. In addition, limited flexibility and discretion for regulators as well as a lack of join up between datasets and systems frustrate efforts to achieve greater efficiencies in farm inspections.

Looking ahead, while the current regulatory baseline covers many important environmental issues, it has significant gaps when set alongside current and future environmental priorities. These include enhanced ambition on biodiversity, a more proactive approach to the protection of soils and the significant changes required in agriculture to contribute to meeting net zero GHG emissions by 2050 or earlier.

Consequences of leaving the EU: The UK's departure from the EU introduces changes and uncertainties about how the system will function in future in England. Amongst the changes in governance that will arise will be the removal of oversight by the European Commission of implementation and compliance with EU derived environmental legislation. How far the proposed Office for Environmental Protection (OEP) will fulfil this role will become apparent in due course, but not before the Environment Bill becomes law. In addition, the current reliance on cross-compliance as a mechanism for enhancing compliance (and reducing recourse to the courts) is in question. It is unclear how the system will be amended if, as Ministers have suggested, a cross-compliance mechanism is not included within future agriculture policy.

Setting a post EU framework and delivery system in England: Moving to a forward-looking post EU environmental regime for agriculture in England involves two related but separate challenges.

The **first** is to set up a new overarching framework of environmental regulation that meets the needs of the coming decades. The **second** is to deliver the relevant components of this framework on the ground, taking account of the special character of agriculture and farm businesses as appropriate. These proposals are encapsulated in the diagram below.

Proposals for a post EU-Exit
environmental regulatory regime for
agriculture in England

Overarching Regulatory Framework:

1. Set of underpinning principles and governance
2. Clear, timebound objectives established for the environment and agriculture's role in meeting targets and key goals
3. Secure full suite of environmental regulation and standards that currently exist into English law
4. Develop / improve robust reporting and accountability systems
5. Compliance and monitoring enforcement role via the Office for Environmental Protection (OEP) due to be established in January 2021
6. Potential links to agricultural support payments
7. Updating the regulatory framework to fill gaps & support new priorities:
 - a) Arising from the removal of cross-compliance
 - b) To address issues recognised as critical in light of future pressures (climate / soils)
 - c) Build a new role from complementary, market-based approaches (e.g. assurance schemes)



Applying the framework to agriculture: A new approach to delivery

1. Clear objectives for the regulatory regime in relation to agriculture
2. Improved coordination
3. Establishing targets for compliance – based on outcomes not process
4. Delivery model based on:
 - a) Advice and information
 - b) Engagement
 - c) Signposting to financial support
 - d) Enforcement and penalties
5. Transitional and time limited financial support
6. More efficient monitoring and controls:
 - a) Remote sensing opportunities
 - b) Sharing data
7. Sufficiently resourced:
 - a) People
 - b) Data systems

Source: own compilation

This report proposes that the **overarching framework** should be underpinned by strong environmental principles (including both those currently in place in EU treaties and a non-regression principle) and robust domestic governance machinery. This should include thorough and transparent monitoring, reporting and accountability systems. At a higher level, and particularly in the absence of the supervisory role of the European Commission and European Court of Justice (ECJ), a strong and robustly independent Office for Environmental Protection will be essential to hold government and the regulators to account and measure progress over time.

This framework should be informed by a set of clear objectives for the environment in England, amongst which specific objectives and targets concerned with land management need to be put in place. As well as bringing across the full suite of current EU based environmental regulation and standards into English law, the gaps that arise from the loss of cross-compliance should be filled, notably in relation to soils and landscape features. In parallel, the regulatory framework should be extended to cover increasingly key priorities not now being addressed, for example relating to climate mitigation and pesticides.

The scope of this overarching framework needs to extend beyond agriculture as part of a more strategic approach to rural land management as a whole. Within this there is a particularly pressing need to provide a coherent overall frame and context within which a regulatory system for agriculture and related land uses will sit. This would provide a stronger basis for resolving some current challenges, such as designing an appropriate role for assurance schemes in complementing the regulatory baseline.

In relation to the **delivery system**, the proposals made here draw on the findings of the FIRR, pilot projects in England and other parts of the UK, the Scottish Environment Protection

Agency's (SEPA) record over several years in parts of Scotland and the views of a range of farming and environmental and public sector stakeholders. Changes are proposed to transform the delivery system into one that improves environmental compliance and engages farmers more deeply in the journey to sustainability, involving a much greater emphasis on advice and working alongside land managers to find solutions. This can be achieved without prejudicing the trust of farmers or the rigour of the enforcement process given the right approach and separation of functions where required.

The preference is for the existing environmental agencies to maintain the primary role in relation to enforcement, working with partners to provide advice, rather than handing this to a new single regulator dealing with all aspects of agricultural regulation, as proposed in the FIRR report. This would allow environmental regulation, advice and financial incentives to be managed within the same coherent agri-environment framework, without the regulatory functions being hived off separately. The link with the new Environmental Land Management (ELM) support scheme would be closer.

Targets for enforcement bodies should move away from measuring process (e.g. annual total number of farm visits) towards measuring outcomes (e.g. proportion of farmers compliant with water quality requirements by a specified date). Transitional and time limited financial support will be required to help some farmers achieve higher standards, potentially in the form of soft loans rather than grants. Monitoring and controls should be made more efficient, both by finding ways of streamlining and sharing data between agencies as well as making best use of new and emerging technologies. Additional enforcement tools, such as new forms of warning or control notices that do not require court action, could be considered.

Finally, if a delivery system is to be put in place that involves more advice and farmer engagement, and that compensates for the removal of cross-compliance as a key incentive for environmental compliance, it will be imperative to marshal sufficient resources to operate it effectively, both in the short and longer term. This approach would mean reversing recent trends of funding cuts to enforcement agencies, such as the Environment Agency and Natural England. Significant but affordable increases in funding would enable them both to discharge their duties with respect to securing compliance to the extent required and also to resource the additional advisory capability they need alongside their regulatory function. Such costs are necessary to avoid the greater costs to society of inadequate enforcement and potentially could be offset by new sources of income to some degree.

Some of the proposals outlined will entail relatively small adjustments, others more extensive change and a longer-term perspective. Key will be to move towards a more outcome focussed system, with an emphasis on improving rates of compliance and achieving an active contribution by the agriculture sector towards environmental goals. This in turn requires clearer environmental objectives to be set and a much stronger emphasis on dialogue and information sharing, both between regulators as well as between regulators and land managers. To achieve this, a significant increase in resources for delivery is essential.

The key recommendations of the report can be summarised as follows:

A. Setting a clear overarching framework for environmental regulation:

1. Strong environmental principles should be embedded in English law to maintain the current position and to avoid moving backwards.
2. New long-term binding commitments for the environment should be set in UK/English legislation, including quantitative targets where appropriate and these should be linked to agriculture policy, given that environmentally friendly farming is a key means of achieving the outcomes required.
3. Secure a strong set of environmental regulations and standards in English law to act as a baseline for all those managing land.
4. Strong scrutiny of the implementation of environmental regulation is essential.
5. Compliance with environmental regulations should apply to all farmers irrespective of whether they receive public funding, thereby removing the separate inspections and penalty regime currently required for cross-compliance under the CAP. However, those farmers receiving public money (e.g. via the new ELM scheme) should be compliant with those items of environmental legislation that are relevant to the objectives of the schemes in which they are participating.

B. Establishing a new delivery system for the agricultural sector in relation to environmental regulation:

6. Set out clearly the purpose of environmental regulation with specific reference to the agricultural sector.
7. Targets should be set at both strategic and farm level to measure achievement against outcomes.
8. A new delivery model should help build a more collaborative and long-term relationship with farmers and land managers, striking a better balance between information, advice, enforcement and incentives than is currently the case.
9. There is a case for transitional and time limited financial support to help farmers achieve higher standards where required.
10. Opportunities to make inspections and monitoring more efficient should be harnessed, for example through increasing the use of new technologies, such as satellite imagery and mobile devices where appropriate.
11. Sufficient public resources should be allocated to operate a delivery system that involves more advice and engagement than previously, increasing Defra agency budget allocations to take account of potential revisions to their enforcement responsibilities, given more ambitious targets and potentially the removal of cross-compliance.
12. The case for an integrated, specialist farm regulating body and accompanying machinery, as advocated in FIRR, does not look attractive in environmental terms. However, improved coordination of the enforcement bodies dealing with environmental regulation in relation to the agricultural sector is required, both in terms of farm visits, but also data sharing and exchange.

1 Introduction and purpose

A fresh approach to the system of environmental regulation as it affects farmers and land managers in England is timely, not only because of the UK's planned withdrawal from the European Union (EU) and the Common Agricultural Policy (CAP) but also because of the scale of the environmental challenges ahead. On top of this, the farming community has been fairly vocal in criticising the complexity and demands of the combined regulatory and support system, one element of which involves environmental regulation.

In 2018, Defra highlighted that, in relation to environmental and animal health and welfare standards, it wanted “to design a new, fairer enforcement system whilst maintaining a robust approach that delivers value for money for taxpayers”¹. The goal was to overcome the problems it had identified with the current enforcement system, namely disproportionate penalties and insufficient scope for farmers and competent authorities to remedy underperformance.

To assist this process, the Secretary of State for Defra commissioned a review, led by Dame Glenys Stacey, to look at opportunities for improving regulation and enforcement pre- and post-EU Exit in England. This covered the broad spectrum of regulation, including the environmental element. Known as the Farm Inspections and Regulation Review (FIRR), it reported at the end of 2018. It made a set of wide-ranging recommendations, at the heart of which was a proposal to move towards a system in which regulators have a fuller understanding of the level of compliance with current standards in the farming system and a wider range of mechanisms to improve them. This would include more robust monitoring of compliance with environmental standards, and a supportive and flexible approach to farming regulation backed by targeted incentives and a greater ability to act on egregious failings². To support these aims, the FIRR recommended the creation of a new agency concerned specifically with the regulation of farming. As yet, there has been no response to this report from Defra and no announcements about the future of policy in this area have been made. Careful consideration of the options is now timely.

The current regulatory system for the environment, as it applies to agriculture, provides a baseline of environmental standards to be met on all farms, the majority of which are shared in other parts of the EU. It provides a large part of the “reference level” of environmental standards below which farmers should in principle meet the obligations at their own cost, like other businesses, (although this is somewhat distorted currently by linking adherence to certain regulatory requirements with receipt of direct payments under the CAP³). Assuming departure from the EU, there is scope to raise the current baseline – a step which seems necessary if new environmental objectives and outcomes, for example those set out in the 25 Year Environment Plan⁴, are to be met.

¹ [Health and harmony: the future for food, farming and the environment in a Green Brexit](#)

² [Final report: Farm Inspection and Regulation Review](#)

³ This is done through the cross-compliance mechanism – see Chapter 2 for details.

⁴ [A Green Future: Our 25 Year Plan to Improve the Environment, 2018, HM Government.](#)

For environmental commitments going beyond this reference level there is also scope for securing a significant flow of public funding for voluntary action on farms, i.e. payments for providing environmental public goods. Since public good provision via the Environmental Land Management Scheme (ELMS) will be central to the post-Brexit agricultural policy in England, establishing the right reference level and pathways for developing it over time is now of particular importance and of some urgency. A key goal is to provide sufficient motivation for farmers to comply with environmental standards. Agriculture is a sector where there is evidence of relatively low compliance in some areas, such as diffuse water pollution, and where the costs of monitoring and enforcement are significant.

Some of this incentive is now supplied via the cross-compliance system, i.e. the link between adhering to environmental standards and receipt of farm payments. However, the future of cross-compliance is in doubt because the CAP will cease to apply while alternative means of securing greater levels of compliance have yet to attract much attention.

This report is a contribution to the debate on the role of environmental standards and regulations and the way they are applied on farms in England following the UK's departure from the EU. It covers:

- a) The current state of play in England regarding the system of environmental regulations applying to agriculture and their evolution in response to leaving the EU;
- b) The rationale for having an effective set of standards and regulations in this field and the challenges confronting the present system;
- c) The consequences of departure from the EU and some specific challenges arising;
- d) Recommendations on what a future regulatory framework and delivery system might look like.

2 Current state of play

It is useful to distinguish between two different elements of the present environmental regulatory system relating to agriculture in England:

1. The overarching regulatory framework comprising:
 - a) the environmental standards embodied in regulations which apply to all land managers irrespective of whether they receive financial support under the CAP; and
 - b) additional standards that currently are tied specifically to the agricultural support system. These take the form of conditionality requirements under the CAP (some of the standards of Good Agricultural and Environmental Condition under cross-compliance);
2. The design and delivery of the system for implementing regulations on the ground - which includes both the detailed policy as well as administrative design such as inspection and penalty regimes.

A brief overview of both elements is set out below.

2.1 The current regulatory framework

In England, as in other parts of the UK, the regulatory framework relating to the environment for the agricultural and broader land use sector comprises a series of regulations that are binding on all farmers and related users of land. These cover a range of environmental concerns, with some issues (such as water, pesticides and biodiversity) covered more comprehensively than others (see Figure 2-1). This framework currently comprises two elements. One is based on law determined at EU level, which is either directly applicable or implemented through national legislation. The key areas of EU environmental legislation that are relevant for agriculture are set out in Table A1-1 in Annex 1. The other element is a set of environmental regulations and arrangements that apply to agriculture that are not derived directly from EU legislation. These are set out in Table A1-2 in Annex 1.

Cross-compliance, introduced under the CAP in 2005, made adherence to some environmental regulations a condition of receipt of most support payments under the CAP⁵, providing farmers with an additional impetus to comply with the rules. However, cross-compliance also included standards that introduced basic levels of protection in spheres that are not covered by domestic UK legislation (e.g. protecting soils). As a result, cross-compliance has become a key tool used to enforce compliance with environmental regulation on those farms in the UK claiming direct payments.

However, even with cross-compliance in place, this still leaves some aspects of the farmed environment currently unprotected through regulation. Many aspects of climate protection,

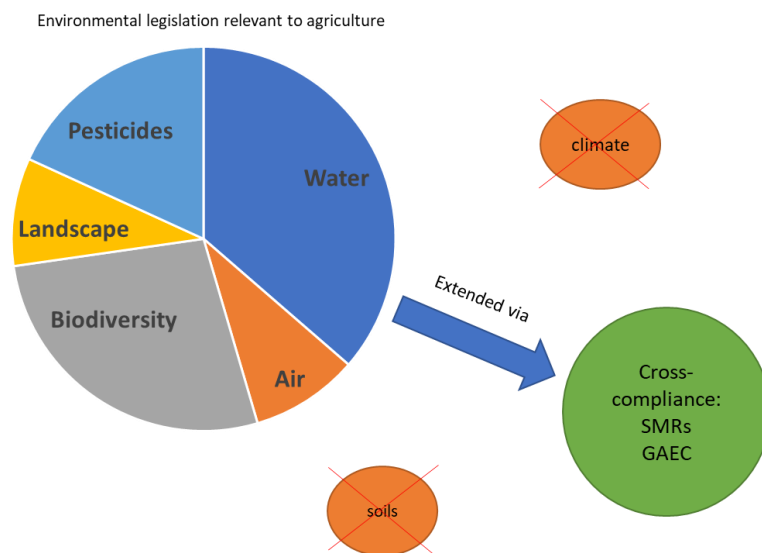
⁵ Essentially all agricultural area payments, including all Pillar 1 direct payments as well as area-based Pillar 2 payments, such as agri-environment, organic and payments in Areas facing Natural Constraints (where these apply).

some aspects of pesticide management, soils and some landscape features lie outside the scope of current regulations.

Looking beyond these regulations to other approaches, there are two main Codes of Good Agricultural Practice for farmers in England, relating to protecting water, soil and air⁶ and reducing ammonia emissions⁷. These are practical guidance documents for farmers that provide advice on suitable actions to take and how to tailor these to individual farm situations. Where there are legal requirements relating to the issues covered by the Code, these are highlighted and signposts to further information are included.

In addition, there are several farm assurance schemes running in England, many of which require compliance with a set of basic regulations. However, with some exceptions, the environmental component of schemes is often limited to nutrient management. Some, including LEAF Marque⁸ and organic standards are more demanding.

Figure 2-1: Current approach to environmental regulation relating to agriculture in England



Source: own compilation

NB: size of segments is relative to the number of regulations on an issue

2.1.1 Underlying principles and objectives

The EU legislation underlying a large proportion of the environmental law applying to agriculture is itself underpinned by a series of principles enshrined in the EU Treaties. These help to provide coherence, a clear foundation and consistent direction to environmental legislation and guiding the development of policy. The key principles⁹ are:

⁶ [Protecting our Water, Soil and Air, A Code of Good Agricultural Practice for farmers, growers and land managers](#)

⁷ [Code of Good Agricultural Practice \(COGAP\) for Reducing Ammonia Emissions](#)

⁸ Linking Environment and Farming: <https://leafuk.org/eating-and-living/leaf-marque>

⁹ The principles developed over time and can be found in the Treaty on the Functioning of the European Union (TFEU); several are set out in Article 191.

- The principle of preventative action to avert environmental damage;
- The Precautionary Principle;
- The principle that environmental damage should as a priority be rectified at source;
- The Polluter Pays Principle;
- The principle of sustainable development;
- The principle that environmental protection requirements must be integrated into the definition and implementation of policies and activities.

In addition, within the EU there are formal objectives for the Union, which include, amongst several others, the pursuit of sustainable development. Under Article 3 of the consolidated version of the Treaty on the Functioning of the European Union (TFEU)¹⁰, the Union shall “work for the sustainable development of Europe based on ... a high level of protection and improvement of the quality of the environment”. Sustainable development is not defined but is a blend of environmental, economic and social objectives, the balance between which is subject to a process of constant re-adjustment, some of which is achieved through regulation.

There is no such constitutional commitment to sustainable development in England (or the UK) and nor is there a legal commitment to a high level of environmental protection.

The concept of sustainable development is not a strategic goal in the UK, but it does appear in domestic legislation, not least in the 2015 Well-being of Future Generations Act in Wales¹¹. It also applies to agencies regulating agriculture. Under the 1995 Environment Act, the purpose of the Environment Agency (EA) is defined as “to protect or enhance the environment taken as a whole”, so as to promote “the objective of achieving sustainable development”. Interestingly, the Scottish Environment Protection Agency (SEPA) website defines the role of the Agency as being “to make sure that the environment and human health are protected, to ensure that Scotland’s natural resources and services are used as sustainably as possible and contribute to sustainable economic growth”¹².

2.2 Current delivery and enforcement arrangements in England

Delivery and enforcement of environmental regulations with respect to agriculture is the responsibility of Defra, the Environment Agency, Natural England and local authorities (and National Park Authorities in National Parks). All regulators are bound by the Regulators’ Code¹³, which advocates a risk-based approach to enforcement. The European Commission also plays an important oversight role.

The Environment Agency’s responsibilities cover soils, water and air. For agriculture this includes water abstraction, discharges to surface and groundwater, spreading waste on land, disposal of pesticides and sheep dip and intensive farming (of pig and poultry units). They are responsible for issuing licences and permits as well as enforcing relevant regulations. Natural

¹⁰ [Official Journal C 326, 26/10/2012 P. 0001 - 0390](#)

¹¹ [Well-being of Future Generations \(Wales\) Act 2015](#)

¹² SEPA website/ About Us/ Our role. Accessed 8/10/19

¹³

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/300126/14-705-regulators-code.pdf

England has responsibility for compliance with the law relating to nature conservation, including protected sites and species. It is responsible for issuing certain licences for wildlife as well as enforcing these and a range of other legislation covering Sites of Special Scientific Interest (SSSIs), The Environmental Damage Regulations, heather and grass burning, agricultural work that affects uncultivated land or semi-natural areas (subject to the EIA regulations), breaches of wildlife licences and notices, pesticide poisoning of animals and complaints relating to certain weeds.

Local authorities (and National Park Authorities) have responsibility for overseeing and enforcing laws such as the hedgerow regulations, tree preservation orders and rules relating to public rights of way.

Cross-compliance is controlled and enforced by the Rural Payments Agency (RPA). It acts on behalf of other bodies where requirements under regulations for which they are responsible fall under the cross-compliance rules. There are strict rules for controls and enforcement, including penalties, which are currently set out within the CAP regulations¹⁴. These stipulate that a minimum of one per cent of those claiming area-based support under the CAP (both direct payments and rural development area payments) will be inspected each year. The RPA bases the choice of who is inspected on a risk assessment based on:

- the size of claim;
- the time since last inspection;
- previous Basic Payment Scheme (BPS), Single Payment Scheme (SPS) or cross-compliance inspection results; and
- applicable statutory management requirements (SMR) and good agriculture and environmental condition (GAEC) features¹⁵.

Inspections are based on a set of 'verifiable standards' to identify the extent of the non-compliance and how severe and permanent it is. This information is then used to work out the penalty that is to be applied¹⁶. Since penalties are applied as a percentage reduction of direct payments, in theory this means that for larger farms and organisations with multiple landholdings, a financial penalty could be higher than for the same breach under national legislation.

Some publicly funded advice is available through the Farming Advice Service (FAS), as required under the CAP. This is funded by Defra. The aim of the FAS is to help farms understand and meet the requirements of cross compliance, the regulations deriving from EU directives on water protection and sustainable pesticide use (as well as the greening measures under Pillar 1 of the CAP).

¹⁴ Regulation (EU) No 1306/2013 of the European Parliament and of the Council of 17 December 2013 on the financing, management and monitoring of the common agricultural policy and repealing Council Regulations (EEC) No 352/78, (EC) No 165/94, (EC) No 2799/98, (EC) No 814/2000, (EC) No 1290/2005 and (EC) No 485/2008

¹⁵ See <https://www.gov.uk/guidance/cross-compliance-inspection>

¹⁶ Article 99 of Regulation (EC) 1306/13 provides information on the scale of penalties that can be applied – a maximum of 5% if the breach is due to negligence and of 15% if the breach re-occurs. For intentional non-compliance the penalty should be greater than 20% and may go as far as total exclusion from one or several support schemes. It may apply for one or more calendar years.

The European Commission has a role both in relation to the implementation of those pieces of environmental legislation that originate from the EU and of cross-compliance under the CAP. For environmental legislation that emanates from the EU, the European Commission is charged with holding Member States to account for unsatisfactory implementation and can launch infringement proceedings if it considers non-compliance may have occurred. Cases may be referred to the European Court of Justice (ECJ) if Member States do not respond to a Reasoned Opinion from the Commission. With regard to the implementation of cross-compliance under the CAP, the European Commission auditors check that Member States are complying with the rules set out in EU regulations and in cases of non-compliance can disallow or claim back some of the CAP budget allocated to the country in question. This has occurred in the case of the UK.

3 Overview of issues with the current system

Before considering the strengths and weaknesses of the present regulatory system and options for its revision and development as the UK leaves the EU, it is worth reflecting first on the underlying purposes of an environmental regulatory system concerned particularly with agriculture.

3.1 Purposes of environmental regulation

At a fundamental level the role of environmental regulation is to *establish and codify standards to protect the environment (and human health) and to enhance it*. Within this frame, there are some standards that apply universally and others that are focussed specifically either on agricultural activities or land management more generally. Regulations can be a helpful tool in avoiding a range of risks to health and the environment and also in contributing to the achievement of the many environmental goals that cannot be reached without action by farmers and other land managers - including those for water and air quality, biodiversity, landscape, soil health and public access. The scope of such goals is tending to expand over time with emerging new environmental agendas e.g. for a zero carbon and an increasingly circular economy with no waste.

The term regulation is sometimes used in rather a broad way - for example the FIRR report argues that “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.”¹⁷. However, in this report the term ‘regulation’ is used to refer to binding rules that are required of land managers through law or codified in codes of practice.

More specific purposes for environmental regulation pertaining to agriculture include:

1. *To help bring about an appropriate role for the farming sector in meeting wider social objectives* such as cleaner water. An unregulated farm sector potentially would be a free rider on other parts of the economy that were subject to regulation. For example, emissions of ammonia, one of the main sources of nitrogen pollution, with negative effects on both human health and biodiversity¹⁸, have been rising, up from 216,000t in 2008 to 289,000t in 2016, and are expected to rise further to 2030 unless action is taken, contrasting with trends in most other forms of air pollution¹⁹. Around 87% of ammonia emissions are associated with agriculture, mainly from livestock production and the spreading of inorganic fertiliser²⁰.

¹⁷ Farm Inspection and Regulation review. Final Report December 2018. Page 19

¹⁸ Guthrie, S, Giles S, Dunkerley F, Tabaqchali H, Harshfield A, Ioppolo B, and Manville C (2018), Impact of ammonia emissions from agriculture on biodiversity: An evidence synthesis. The Royal Society, 2018. https://www.rand.org/pubs/research_reports/RR2695.html.

¹⁹ ENDS Report 523, October 2018

²⁰ Environment Agency (2018), The State of the Environment: Air Quality and DEFRA Statistical Release, 15th February 2018, Emissions of air pollutants in the UK, 1970 to 2017.

2. *To provide a level playing field for farmers* in all parts of the country and for the sector in relation to competing suppliers abroad, (with many common standards applying at a European as well as UK level) and help to avoid imports from areas with low standards. Outside the EU, compliance with a wide range of standards will be required to *maintain exports of UK food* to the EU and some other international markets.
3. *To increase transparency and provide a degree of confidence and sometimes specific information for consumers and other actors in the food chain.* Without binding standards and accompanying information on their implementation there is a lack of certainty and transparency within the food system which appropriate regulations can reduce, although not eliminate. Public confidence in the standards being met on British farms will be even more important in future within a potentially very competitive trading environment. Consumers also need confidence that their food choices are compatible with established environmental, animal welfare and other standards.
4. *To help to internalise the negative external environmental costs of food production,* in line with the Polluter Pays Principle (PPP). Experience to date shows that practical short-term economic realities often temper the pace and purity with which this approach is applied, thereby leaving others to incur the costs of pollution. Examples would include costs to water companies of having to clean up polluted water or costs to the National Health Service (NHS) of addressing health problems associated with ammonia emissions to the atmosphere. However, in making farmers responsible for meeting the costs it must be acknowledged that some may struggle to generate the resources to do so and may face difficulties in passing on the associated costs of their produce to buyers. Means of adjusting to this reality, where it occurs, may need to be found.
5. *To play a major role in creating a sufficiently clear baseline or reference level* to distinguish between those commitments that farmers must meet at their own expense and those that are voluntary and potentially eligible for payment. Payments for providing environmental public goods via the proposed new agricultural policy in England, should be made only for those commitments that go beyond the reference level. The reference level can be adjusted over time but must be clear, for example about the rights and responsibilities of landowners. The justification for public good payments depends on there being a floor beneath which action to supply a public good should not attract payment but is an obligation for the land manager. The reference level does not necessarily have to be defined in a matrix of binding regulations but often regulations help to produce clarity about where the reference level lies and to back it up with an enforcement mechanism.

3.2 Concerns relating to the operation of the current system

Some of the strengths and weaknesses of the present system are set out below. In reviewing these it is worth distinguishing between:

- a) inherent challenges in any regulatory system applying to farmers in a modern democracy with rising environmental expectations e.g. the extensive and varied geographical area involved, the large number of farmers, the potential costs of inspection, high risk of non-compliance etc; and

- b) the strengths and weaknesses of the present English system, part of which is determined by rules arising from EU membership.

The former are difficult to change, the latter less so.

The current system of regulation has evolved, particularly over the last two decades, covering a broader canvas of environmental issues through a combination of EU and nationally derived elements and in this sense is well established. Implementation is in the hands of a corps of experienced staff but constrained by tight budgets. Despite concerns about certain regulations, either on the agricultural or environmental side, it is now seen as a topic of importance, as evidenced by the commissioning of the FIRR review.

Perhaps the main strength of the present system is that, in theory, it provides a familiar and established (although not complete), legal framework for delivering the core functions set out above. It also locates UK standards within a broadly consistent EU approach. In practice however, delivery is inadequate, particularly because of the limited and declining level of resources deployed to ensure compliance with legal norms, as discussed below.

This framework has the potential to be built on further and populated with standards and delivery systems that are sufficiently robust to protect the environment effectively. This is not to deny the weaknesses in the system and delivery arrangements elaborated further below. Nonetheless it is worth noting that the particular approach adopted in England in the context of a sharply declining budget for Defra over many years reflects specific national political and technical choices as well as being shaped in part by EU requirements.

A broad set of regulations have codified the need for higher standards in farming and, even with imperfect implementation, have introduced beneficial changes in practice across a wide field, including in animal welfare, public health, food hygiene and safety as well as the environment. Important sources of environmental damage have been addressed to varying degrees through regulation e.g. the cessation of straw burning and controls over certain damaging pesticides. Most environmental standards are broadly the same throughout the EU, and at present help to prevent barriers to UK exports and trade in agricultural produce more generally. Unfortunately, this has not prevented levels of environmental pressure derived from farming remaining high, falling in some domains but not in others: agriculture remains a major driver of biodiversity decline in many habitat types²¹.

However, the regulatory system, as it applies to agriculture, has been subject to criticism from ministers, farmers and a review commissioned in February 2018 by Michael Gove, then Secretary of State at Defra²². The independent review of farm inspection and regulation (FIRR) was led by Dame Glenys Stacey. It had the task of identifying opportunities “before and after EU exit, for improving farm-related regulation and enforcement, including inspections, in order to reduce burdens on farmers while maintaining and enhancing our animal, plant and environmental health standards.” The team worked at speed and presented a report in December 2018. At the time of drafting (November 2019) there has been no

²¹ See for example www.nbn.org.uk/stateof_nature2019

²² See: <https://www.gov.uk/government/publications/farm-inspection-and-regulation-review>

response to this report and its extensive set of recommendations, but it is under active consideration within Defra.

Cross-compliance has been unpopular with farming organisations from the outset, because of the relatively onerous inspection procedures and associated paperwork and the fact that non-compliance with the regulations and standards it covers (not just environmental) can lead to reductions in their farm payments. In addition, the system tends to focus on particular breaches that are relatively straightforward to identify, rather than focussing on those farm businesses that generate the largest pollution impacts²³. On the other hand, levels of non-compliance with environmental legislation on farms are relatively high, particularly compliance with the rules to limit pollution in Nitrate Vulnerable Zones, as required under the Nitrates Directive²⁴ and this is both a source of environmental damage and a reason to question the rationale for providing farmers with public financial support. The system has become contentious.

The *weaknesses of the current system* can be summarised as follows:

Issues of enforcement: Environmental regulations applying to agriculture often have not been effectively or consistently enforced. This is partly because it is costly to regulate a geographically large and fragmented sector, tens of thousands of small businesses managing extensive tracts of land (unlike contained industrial plants for example).

Although the majority of farms do comply with environmental regulations, non-compliance remains widespread, at least in the sphere of water pollution where some data are available. For example, Environment Agency catchment walkover surveys identified (conservatively) 7,322 sources of agricultural pollution along 10,000 km of riverbank, despite the operation of cross-compliance²⁵ and a recent report on the River Axe Special Area of Conservation²⁶ found that in 2016, 95% of farms were not complying with storage regulations and 49% of farms were polluting the river Axe. As described in the box below, the most serious incidents tend to be caused by farming activities in the dairy sector (particularly slurry containment issues), although a significant number also occur in the arable sector. There is insufficient political pressure for the compliance effort and cost required to tighten implementation and enforcement through the courts. Relatively few prosecutions occur, and this sends the signal that the chances of a serious penalty for non-compliance are not high. This helps to explain the continuing high level of water pollution from agriculture elaborated in Box 3-1.

²³ WWF-UK, The Angling Trust, The Rivers Trust (2018) [Saving the Earth, a sustainable future for soils and water](#), WWF-UK

²⁴ In 2017 34.5% of all inspections of SMR1 (NVZs) were failed – 433 failures out of 1,198 inspections. This is second only to failures of SMR7 (cattle identification and registration) which had a failure rate of 50.2%

²⁵ RSPB, unpublished paper, “RSPB views on the polluter pays principle in farm regulation”.

²⁶ Cossens, J (2019), River Axe N2K Catchment Regulatory Project Report

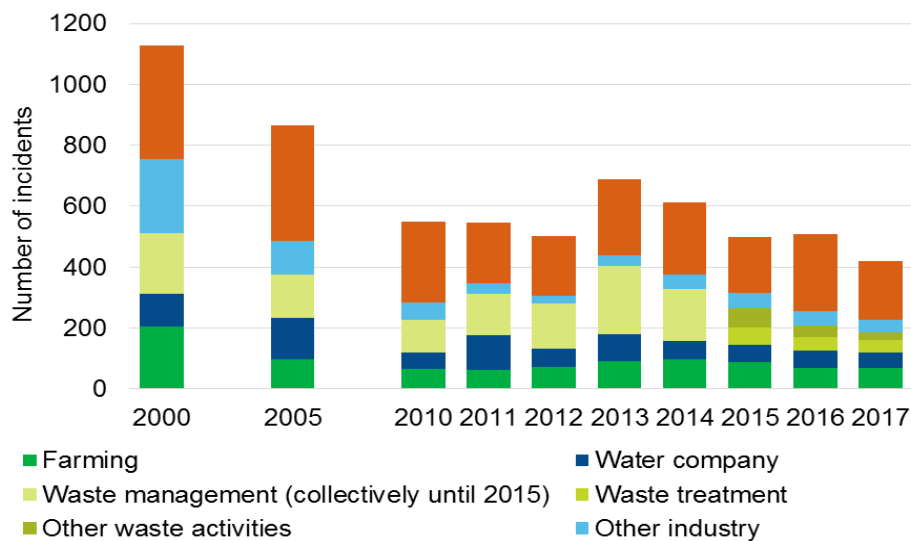
Box 3-1 - Data on water pollution from agriculture in England.

The number of recorded serious and significant pollution incidents (known as category 1 and 2 incidents), increased to 493 in 2018-19 up 35% from 432 incidents in the prior year partly due to the prolonged periods of dry and hot weather in 2018-19. Farming activities caused 65 incidents – more than one a week, down slightly from 2017 and a similar number to those from waste management activities and water companies (both 69 incidents).

Most of these agricultural incidents are caused by non-permitted farming activities, mainly in the dairy, but also in the arable sector. In many cases the scale of the incidents is increasing. In 2017, 40 of the 68 incidents (59%) were caused by dairy farming activities. Slurry containment and control failures caused 48 incidents (71% of the total). This type of incident is due to herd sizes being expanded but without the requisite increase either in slurry storage or additional land on which to spread the slurry. These incidents are preventable and indicative of poor environmental management controls. In the dairy sector, 38 of the 40 incidents involved slurry or silage, and 33 of these (87%) were due to containment and control failures. The intensive pig and poultry sub-sector, which is the only farming sector regulated by the EA under the Environmental Permitting Regulations (EPR), caused 12 incidents.

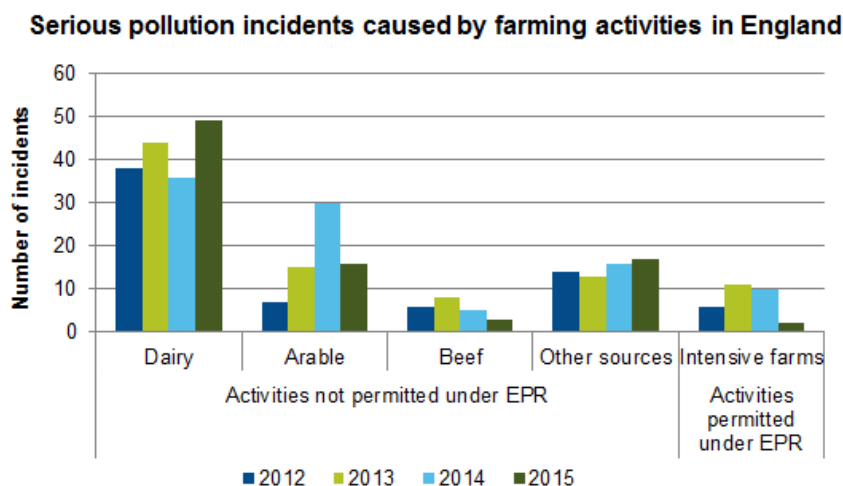
Despite serious pollution incidents from agriculture having fallen since 2015 (e.g. 68 in 2017, 70 in 2016, 87 in 2015 and see Figure 2 below), the sector has been responsible for the greatest number of incidents for several years now, as those from other sectors have decreased more quickly.

Figure 3-1 - Recorded serious (Grade 1 and 2) water pollution incidents by activity type (both permitted and non-permitted activities).



Note: From 2015, waste management activities are divided into the waste treatment sector and other waste activities.

Figure 3-2 - Serious water pollution incidents in England by agricultural sector.



Source:

Environment Agency Annual Report 2018-19 (published July 2019): https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/819383/Environment_Agency_annual_report_and_accounts_2018_to_2019.pdf

Environment Agency, 2018, Regulating for people, the environment and growth (October 2018)

<https://www.gov.uk/government/publications/regulating-for-people-the-environment-and-growth>

Part of the problem, particularly in relation to diffuse water pollution is the substantial reduction in enforcement activities undertaken by regulators such as the EA, independent of the cross-compliance inspections carried out by the RPA. The FIRR interim report noted that of the EA's 10,600 staff, around 40 inspect farms, with any individual farm standing just a one in two hundred chance of being inspected by the EA in any one year. According to information supplied to WWF in response to a Freedom of Information request, the EA currently has around 28 staff (27.6 FTE) devoted to agriculture within the Area Land and Water teams. They are responsible for all the non-permitted inspections.

This diminished capacity has arisen since the funding available to the public sector bodies responsible for enforcement has decreased over time, with enforcers required to seek to put cost recovery mechanisms in place wherever possible. For example, the funding received by the Environment Agency from the Government to protect the environment has been cut from £120m in 2010 to £52m in 2019, a 57% cut which 'has affected [their] ability to protect and enhance our waters'²⁷.

In many cases the objectives of environmental regulation applying to farming are not being met currently. Where progress is occurring often it is on a much longer timescale than planned. For example, the Environment Agency estimates that at the current rate of progress, it will take over 200 years to reach the Government's 25-year environment plan target of at

²⁷ [Letter to The Times from Emma Howard Boyd, Chair of Environment Agency, Response from the Chair to The Times' article "Filthy Business", 3 August 2019.](#)

least 75% of waters to be close to their natural state²⁸. The persistence of heavy nitrate concentrations in water is another example. In 2016, 86% of English river water bodies had not reached good ecological status (and 84% of lakes), up from 75% in 2009, with agriculture and rural land management being a major cause of the failure²⁹. In addition, the poor conservation status of many habitats and species associated with agriculture is a major concern – for example the majority of habitat types associated with agriculture protected under the Habitats Directive are in unfavourable conservation status³⁰.

Burdens on farmers: On the other hand, many of those who are subject to it see the system often as burdensome and intrusive. The Government shared this view in its consultation document on a future system of farm support for England in 2018. The introduction stated “the current system puts excessive burdens on farmers and can be very rigid in its application. On occasion, an incomplete record or the loss of one cattle ear tag can lead to substantial reductions to payments”³¹. The EU derived penalty regime for cross-compliance is the example quoted here and the penalty system is widely seen as rigid and unfair, with insufficient scope for issuing warnings and opportunities for remedial action before penalties escalate on a pre-set formula. There are some grounds for this critique. The cross-compliance system has slipped into having an excessive focus on relatively minor breaches rather than singling out farms that are major polluters or repeat offenders. However, the flaws in the cross-compliance regime are not applicable to mainstream environmental regulation, which is independent of the CAP and does not share the same penalty system.

Costs of inspection: Not surprisingly given its small scale and dispersed structure, the effort and cost of inspection of the agriculture sector are higher than in some sectors and multiple farm visits are involved. Given the wide range of regulations applying to farming, within one year there may be several different visits to the same farm concerned with a related set of issues but from a different regulatory perspective. This means that inspections or visits from government agencies can be time absorbing and demanding for the farmer as well as for the enforcement agencies. There are over 100,000 farm visits per annum, only a proportion of which are strictly speaking compliance inspections³², a total which the Government is keen to reduce³³. The interim FIRR report stated that about 58% of farm visits were checks on animal, plant or bee health.

According to the Defra Annual Report and Accounts 2017-2018, the number of farm visits is being cut by 20,000 by 2020 through eliminating or combining visits, to reduce the “regulatory

²⁸ Environment Agency (2019) [Challenges and Choices consultation](#)

²⁹ Environment Agency (2018) [The State of the Environment: Water Quality](#) - the highest proportion (31%) of all pressures preventing England’s waters reaching good health can be attributed to agriculture and land management.

³⁰ See 2019 Article 17 Habitats Directive reports: <https://jncc.gov.uk/our-work/article-17-habitats-directive-report-2019-habitats/>

³¹ Insert Health and Harmony ref

³² An NAO report in 2012 quoted in the FIRR report (op cit p53) estimated that nine government bodies together made at least 114,000 visits to farms in England in 2011/2012, about 30 % of which were concerned with checking farmers compliance with a set of rules including but extending beyond environmental regulation.

³³ Griffiths (2018) [Parliamentary Under Secretary of State for Small Business, Consumers and Corporate Responsibility statement HCWS776 on the Business Impact Target](#).

burden on compliant farmers” (although most of these reductions probably are not related specifically to enforcement of environmental regulations).

Multiple agencies are involved in inspection and the FIRR report argues that “the fact that oversight of farming is dispersed across the Defra group makes it inefficient and much less effective than it could be”³⁴. Others might say that inspection volumes are acceptable but probably not always focussed on the most critical environmental issues or most holistic approach, given that they tend to be focused on specific issues and activities rather than the wider performance of the farm³⁵. The scope for alternative monitoring/ compliance checking methods e.g. by more remote sensing could be explored considerably further.

Issues with specific regulations/ requirements: Several farmers and farmer representatives object to some individual environmental regulations quite strongly. Conversely several stakeholders, including a proportion of farmers, consider that current regulations are insufficient to achieve important national environmental objectives, even if they were fully implemented. One example of contention is the Nitrates Directive, which is challenged on several fronts including its objectives, level of health risk associated with nitrate contamination and the proportionality of effort required and costs entailed relative to the environmental damage³⁶. In this paper there is not the space to consider the merits of specific standards, so they are not pursued here.

Lack of joined up datasets and systems between compliance authorities: This weakness was well summarised in the FIRR report, which highlighted that, “There is no one base dataset for farms that all regulators can access. Each organisation’s information needs are different and therefore the requests for information to farmers differ leading to farmers being asked for the same information in different formats by different organisations. From the organisations’ perspective there are challenges trying to find the person responsible on the farm with whom to engage. Despite improvements over the past few years in coordinating farm inspections, the degree to which efficiencies have been possible have been frustrated largely by ‘immovable system constraints’”³⁷.

Lack of flexibility and discretion for regulators: There is a more generic criticism that environmental regulations applying to agriculture generally are too standardised and inflexible and as such do not take enough account of the inherent nature of the sector and the considerable variations between farms, the practices they follow and the land and landscapes involved.

Increasingly there are calls for a more discretionary role for regulators, such as that from the FIRR which stated that, “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”. This is inferred to be because the UK regulatory approach and culture

³⁴ Farm Inspection and Regulation review. Final Report December 2018, p46

³⁵ This was broadly the view set out in the interim FIRR report (op cit).

³⁶ However, the standards embodied in the Directive are based on World Health Organisation (WHO) standards for drinking water and when they have been subject to review within the EU they have been retained.

³⁷ FIRR report (op cit) , p 41

have been influenced by the CAP in ways not commonly understood³⁸. For cross-compliance this may be true but much less so for mainstream environmental regulation, as noted above.

Many regulations focus on rather specific actions or detail the specification and use of particular equipment, storage facilities etc. Often this is necessary in light of the objectives being pursued, but in some fields a more outcome-based approach might be preferable.

Limited ability of regulators to support improvements in practice: The FIRR concluded that regulators currently lack the tools to drive improvements in farm standards. They are constrained in this by the lack of flexibility and discretion summarised above, by limited resources for advice and follow-up, and by the rather narrow scope of a predominantly rules-based approach. As a consequence, government agencies can penalise isolated occurrences of poor practice but have limited scope to secure across-the-board progress in the standards of any individual farm or the farming system as a whole.

Volume of regulation: Some consider the whole body of regulation applicable on farms, including for the environment, to be too high given the other demands on farmers and the economic pressures on them. This critique is associated with another widespread and more fundamental concern that there is too much regulation for farmers and other small businesses to be able to absorb, digest and respond to, even if the costs are not burdensome. For example, in the response to the consultation on new “basic rules” for tackling diffuse water pollution, Defra reported that “Some farming organisations opposed a regulatory approach and considered that existing voluntary initiatives supplemented by advice could deliver the water quality improvements needed”³⁹. However, it would be surprising if regulation was entirely popular and little evidence that voluntary schemes, which also need to be monitored at farm level, could replace the mix of mandatory and voluntary measures now in place. Nevertheless, improved targeting of enforcement to those where risks of non-compliance are greatest, would help alleviate some of this pressure on those farms which have demonstrated they are compliant over time (see chapter 6).

Gaps in the coverage of environmental rules, guidance and regulation relating to the agricultural sector: Some areas of environmental concern are not covered by existing rules. Most of these are longstanding gaps, some arising partly because of limited EU legal competence for the environmental topic concerned, e.g. the quality of agricultural landscapes. Other gaps are becoming more apparent as environmental priorities and agendas within England and beyond develop quite rapidly. Despite their growing importance, there are no regulations or codified rules relating to:

- a. Climate mitigation - either reducing emissions or enhancing sequestration – e.g. protection of carbon rich soils, improving soil organic matter.
- b. Climate adaptation.
- c. Protection of landscape features not covered by cross-compliance, e.g. ponds.
- d. Requirements for Integrated Pest Management.

³⁸ FIRR report (op cit), p46

³⁹ Defra 2017 op cit.

Prior to the 2019 election, the Government was considering how environmental regulations should develop in England. The part they could play in meeting the goals of the 25 Year Environment Plan for example is not yet clear. The Environment Bill, as introduced on 15 October 2019, contained sections addressing key environmental issues including waste and resource efficiency (Part 3), air quality (Part 4), water (Part 5), nature and biodiversity (Part 6) and conservation covenants (Part 7). New long-term environmental targets are to be established which will be of relevance to agriculture and the future of land management. There will also be new mechanisms to support greater environmental ambition, such as the statutory mapping of Nature Recovery Networks. It is expected that when the Bill is reintroduced early in 2020 it will have very similar provisions.

Consequently, it would be timely to address topics not currently covered by the established corpus of regulation, but which are of importance for agriculture. For example, Defra has indicated that a more proactive policy to restore soil health and increase carbon sequestration is required, with inclusion in the 25 Year Environment Plan of the aim to ensure the sustainable management of soil by 2030. However, it is not yet clear how far this goal will be advanced by regulation, potentially implementing the PPP, or by voluntary measures and if there is a role for incentive payments via the new ELM scheme. Refreshing the regulatory framework, could help to bring clarity in this area and assist in reaching future goals.

4 Consequences of Brexit for the regulatory system

In this chapter some of the main consequences of the UK's expected departure from the EU for the current environmental regulatory system with respect to agriculture and supporting governance arrangements are considered. These include the implications of bringing cross-compliance to an end.

Leaving aside the concerns about the functioning of the current system elaborated in the previous chapter, there is an immediate need to adjust the environmental regulatory regime applicable to agriculture in England and other parts of the UK because of the country's expected departure from the EU. It also provides the opening for overdue improvement and aligning regulation with new environmental ambitions. The Government has talked of an "opportunity to foster a new regulatory culture in agriculture".

The elements of the current system that must change on departure from the EU include:

- the replacement of environmental laws that no longer will have a legal basis within the UK upon EU withdrawal;
- the replacement (or conceivably the outright removal) of the underpinning governance regime applying within the EU, including the environmental principles in the TFEU and the role of the European Commission in oversight and enforcement of regulations based on EU law;
- the governance for securing compliance - the extent to which the proposed new Office for Environmental Protection (OEP) will have the powers and standing to pursue compliance with environmental legislation in the way that the European Commission does now is of importance and a matter of political debate⁴⁰ extending beyond the scope of this report;
- the role of certain CAP instruments now integral to the regulatory system, notably cross-compliance; and
- other issues related to the application of EU law, such as reporting requirements and the role of stakeholders in certain processes.

4.1 Principles and objectives

The environmental principles in the TFEU referred to in Section 2.1.1 are not brought across into UK law by means of the EU(Withdrawal) Act 2018. This weakens the foundations of environmental regulation as it stands now and as it develops in future. However, the last Government was required to bring environmental principles into English law in some form, via an Environment Bill. This was duly introduced to Parliament on 15 October 2019 but then fell with the general election; it is expected to be reintroduced early in 2020. The October Bill contained the six principles listed previously and three further ones that stem from the Aarhus Convention, such as "public participation in environmental decision- making".

⁴⁰ See for example the House of Commons Environmental Audit Committee (2019): *Scrutiny of the Draft Environment (Principles and Governance) Bill*, HC 1951, published 25 April 2019. The Government proposals set out in the October Environment Bill do not go as far as the Committee proposes or the Greener UK coalition has advocated.

Exactly how the environmental principles will be applied in England and other parts of the UK after January 2020 will not be clear until new legislation and accompanying policy measures are in place. However, in their pre-legislative scrutiny reports of the Draft Environment Bill⁴¹ that foreshadowed the full Bill introduced in October, both the EAC and EFRA committees⁴² proposed a more substantive role for the principles in the new governance architecture than the Government had set out in the draft Bill. For example, the EAC argued that “The environmental principles ... have been severely downgraded by the proposals in the Bill”, noting that their application would be subject to a substantial band of exclusions and be limited to ministers’ actions rather than those of public bodies as a whole. The principles would not be legally binding in English law in the way that they are currently within the UK as part of the EU because of the different arrangements being proposed.

Greener UK and other environmental bodies called for a substantial strengthening of the provisions in the Environment Bill when it was laid before Parliament in October 2019⁴³ to ensure that the current foundations of environmental regulation will not be weakened once the UK leaves the EU. Given the goal of maintaining the level of environmental protection once the UK leaves the EU, criticisms of the approach set out in the Bill appear valid.

Given the uncertainties that are associated with leaving the EU and about whether ministerial statements about maintaining high standards will materialise in practice (especially in scenarios involving greater trade with the United States), there is a case for adding a further principle or a straightforward legal requirement to those quoted above. This would be to ensure that environmental standards and targets do not fall below the level reached at the time of leaving the EU and continue to progress to a high level. This would be a version of the principle of “non-regression”. Such a commitment for the UK was contained in the environmental section of the Northern Ireland Protocol of the Withdrawal Agreement (the Backstop). However, it was removed together with the rest of the Backstop in the revised text agreed between the Government and the EU in mid-October 2019. It was notable that there is no provision of this kind in the European Union (Withdrawal Agreement) Bill (the WAB), despite this being discussed as a possibility in Parliament prior to the 2019 election.

This raises questions about the Government’s intentions and introduces distinct uncertainty in the agriculture field at a time when regulatory standards will be in the spotlight as the UK negotiates with the EU and the US over new trade agreements. It is very likely that non-regression requirements similar to those in the discarded Backstop will be proposed by the EU in the course of negotiations over a future Free Trade Agreement with the UK. This is clearly anticipated in the revised text of the Political Declaration. To remove the uncertainty over regression, it would be helpful both environmentally and in relation to trade

⁴¹ The Draft Environment (Principles and Governance) Bill (the first part of the now published complete Environment Bill) was published by the Government in early 2019

⁴² House of Commons Environmental Audit Committee (2019): *Scrutiny of the Draft Environment (Principles and Governance) Bill* (HC 1951), published 25 April 2019. House of Commons Environment, Food and Rural Affairs Committee, *Pre-legislative scrutiny of the Draft Environment (Principles and Governance) Bill* (HC 1893), published 30 April 2019.

⁴³ [Greener UK/ Wildlife Link Briefing](#), October 2019

relationships with EU partners for a binding non-regression requirement applying to environmental standards to be incorporated in the Environment Bill, if not in the WAB.

4.2 Content of environmental regulations

It is necessary to bring across EU legislation on the environment into UK law so that there is continuity before and after the UK's departure from the EU. Subsequently it will be possible to change this legislation, along with other domestic law, whether by primary or secondary legislation.

Under the EU (Withdrawal) Act 2018 any EU Regulation or EU decision addressed to the UK which was operative before the date of exit from the EU will continue to form part of domestic law (under the concept of 'retained EU law'). Similarly, 'EU derived domestic legislation' that implements EU Directives will continue in force⁴⁴. The EU (Withdrawal) Act 2018 has given the Government broad powers to make regulations considered appropriate to prevent, remedy or mitigate—(a) any failure of retained EU law to operate effectively, or (b) any other deficiency in retained EU law, arising from the withdrawal of the United Kingdom from the EU. Any such changes are therefore not intended to make substantive changes to the content of the legislation involved. To prepare for leaving the EU, therefore, government departments have been reviewing and revising Statutory Instruments (SIs) that relate to EU legislation, aiming to make sure that they are 'fit for purpose' in the UK.

This process is quite advanced. It involves bringing across most but not all the provisions of EU law, excluding certain elements considered inappropriate or inoperable.

There are a number of issues emerging from this ongoing process. Amongst the key ones are:

- To be fit for purpose requires that the EU Directives have been correctly transposed into domestic legislation, since these will no longer have any legal status in the UK once it has left the EU. A considerable number of SIs have been tabled and some corrected, but it is too soon to say with certainty whether all the key elements have been preserved in this process.
- It is only the articles of EU directives, not the preambles (recitals) that are generally transposed into domestic legislation – however the environmental objectives and principles relating to a Directive are contained within these preambles and therefore do not automatically come across, potentially affecting the coherence of the legal instruments in the UK. There are also questions about how far consultation with independent scientific advice will be required in the UK once outside the EU. It will be reduced in the case of pesticides for example⁴⁵.
- The volume of legislation being reviewed is so vast that the scrutiny given to each piece is limited. This is leading to some concerns about errors and also the extent of deliberate changes, such as the deletion of certain clauses within the Directives, which go beyond the scope of the intentions of the EU (Withdrawal) Act 2018 – i.e. changes are only permitted to remedy any failures or deficiencies that arise solely from leaving the EU.

⁴⁴ Macrory, R (2018), Environmental law in the United Kingdom post Brexit, ERA Forum (2019) 19:643–657 <https://link.springer.com/content/pdf/10.1007%2Fs12027-018-0531-6.pdf>

⁴⁵ Lydgate, E. Anthony, C., Millstone, E. (2019) Brexit Food Safety Legislation and Potential Implications for UK Trade: the Devil in the Details. UKTPO Briefing Paper 37 October 2019.

- Where there is a requirement in an EU directive for national governments to report certain data relating to the implementation of the law periodically to the European Commission there is a question about whether such reports will still be prepared and to whom they will be submitted after Brexit. From the viewpoint of transparency and accountability there is a strong case for continuing to prepare these reports, to make them publicly available and to lodge them with an independent authority rather than to the Secretary of State who is ultimately responsible for their content. In future, once it is set up in 2021, submission of reports to the OEP, which will be responsible for overseeing implementation and ensuring compliance, would seem to fit well with the new governance architecture. Interim arrangements may be needed.
- Finally, there is the more generic issue that UK ministers will have full powers to amend the legislation in these SIs and make new legislation in the relevant fields without full Parliamentary debate. This opens the prospect of major changes in regulations applying to agriculture which would be better addressed through primary legislation given their importance and sensitivity.

By contrast, the EU legislation covering the CAP will be brought across only for a limited purpose – maintaining the legality of payments to farmers and providing sufficient continuity until the CAP is replaced entirely by domestic agricultural law and policy. This means that the provisions concerning cross-compliance will fall away and no longer apply in England. It creates a gap, even during the transition period, expected to last until December 2020.

4.3 Issues surrounding the removal of cross-compliance

Prior to the election, the Government indicated that cross-compliance will not continue in England. No requirement for farmers to abide by a basic set of environmental regulations as a condition of receipt of area-based financial support under the CAP featured in either the October 2019 Environment Bill or the 2020 Agriculture Bill. In addition, given that direct payments to farmers are planned to be phased out in both England and Wales over the coming years, there is a question about the area of land to which these conditions would apply in the future.

This is a key issue. It means that there will no longer be the lever to encourage compliance that the policy currently supplies, both in England and elsewhere.

Whilst not strictly part of cross-compliance, the associated rules in the CAP to contain the loss of permanent pasture, currently operating at the national level, also will cease to apply once the UK is outside the EU. There has been little discussion of whether to replace them with a domestic measure but potentially their absence may reduce the level of constraint on large scale conversion of pasture to arable.

In England, since there has been no provision made for the continuation of some form of environmental baseline tied to agricultural policy in the Agriculture or Environment Bills to date, this has the potential to reduce the protection of some environmental features once the UK leaves the EU.

In addition, the transposition of the rules for the application of cross-compliance into domestic legislation have watered down the requirement for what constitutes GAEC standards. The EU legislation states that Member States must set 'minimum standards for beneficiaries for good agricultural and environmental condition of land on the basis of Annex II, taking into account the specific characteristics of the areas concerned, including soil and climatic condition, existing farming systems, land use, crop rotation, farming practices, and farm structures' (Article 94 of regulation 1306/2013).

The current cross-compliance standards operating in England reflect this and include standards based on domestic legislation as well as additional standards agreed as important to protect the environment. However, the transposed SI changes this sentence to "The minimum standards for beneficiaries for good agricultural and environmental conditions of land are as set out in the legislation applying in the constituent nation." This suggests that any GAEC standards not based on domestic legislation would no longer apply, even during the transition period. This mainly affects protection afforded to soils and certain landscape features (see below).

Once the transition period is over and conditionality is removed from the receipt of farm support payments an additional gap will arise in relation to the change to the control and enforcement rules. As set out in Section 2.2 above, these rules are much stricter and the fines potentially more onerous for cross compliance than for the same breach under domestic regulation. Therefore, the incentive to comply with these regulations is likely to diminish once cross-compliance no longer applies.

A key gap that results from the anticipated removal of cross-compliance is the leverage that this provides for compliance with environmental regulations - given its link to agricultural payments. If this is removed, enhanced efforts to ensure compliance that go beyond a tweaking of the inspection regime would seem to be needed. This is particularly relevant given the substantial reduction in enforcement activities undertaken by regulators such as the EA that are independent of the cross-compliance inspections carried out by the RPA (see Section 3.2 for details).

The gaps identified for England as a result of the removal of the cross-compliance GAEC standards are set out in the table below. It is notable that many of the identified gaps (i.e. in relation to soil management) have implications for water pollution – an area where there remain significant numbers of pollution incidents each year (see Chapter 3).

Possible ways of addressing these gaps are considered in the next chapter.

Table 4-1: Gaps arising from changes to cross-compliance GAEC standards in the transition period and its subsequent discontinuation in England

Cross Compliance GAEC standard (England)	Gap identified
GAEC 1 - Establishment of buffer strips along water courses	<p>Outside NVZs:</p> <ul style="list-style-type: none"> - Rules around the requirement for buffer strips (green cover) next to watercourses. - Requirement to keep a farm map with surface water, boreholes etc. marked. <p>Within NVZs:</p> <ul style="list-style-type: none"> - None identified as long as gaps do not appear when the Nitrates Directive is transposed into domestic legislation.
GAEC 2 - Water abstraction	<ul style="list-style-type: none"> - None identified since GAEC requires compliance with legislation on abstraction licences.
GAEC 3 - Groundwater	<ul style="list-style-type: none"> - None identified since GAEC requires compliance with permitting requirements already in place.
GAEC 4 - Minimum soil cover	<ul style="list-style-type: none"> - The majority of the rules around providing minimum soil cover, particularly green cover. - The new Farming Rules for Water do include the use of stubbles as one possible solution to preventing soil erosion (Rule 6) but not any other forms of soil cover.
GAEC 5 - limiting erosion	<ul style="list-style-type: none"> - Rules 6 and 7 of the new Farming Rules for Water require farmers to ‘take all reasonable precautions to prevent soil erosion’ which cover most of the causes of soil erosion mentioned under GAEC 5, with the exception of protecting bare soil from wind blow.
GAEC 6 - maintaining the level of soil organic matter in soil	<ul style="list-style-type: none"> - None identified since GAEC requires compliance with the Crop Residues (Burning) Regulations, 1993; Heather and Grass etc Burning (England) Regulations 2007; and the Environmental Impact Assessment (Agriculture) (England)(No2) Regulations 2006; Environmental Impact Assessment (Forestry) (England and Wales) Regulations 1999
GAEC 7a - boundaries	<ul style="list-style-type: none"> - Hedgerows: various rules covered by the GAEC are not found in the domestic Hedgerow Regs 1997, most notably: <ul style="list-style-type: none"> o The hedge cutting ban period, o hedge laying, and tree coppicing dates; o buffer strips by hedgerows (ban on cultivation or application of pesticides/fertilisers within 2m of centre of hedge) - Earth/stone banks: the ban on the removal of earth/stone from earth/stone banks except to widen access / repair other walls is not covered by domestic legislation.
GAEC 7b - public rights of way	<ul style="list-style-type: none"> - None identified as GAEC requires compliance with public rights of way legislation.
GAEC 7c - Trees	<ul style="list-style-type: none"> - None identified since GAEC requires compliance with FC licencing rules and TPO conditions
GAEC 7d - SSSIs	<ul style="list-style-type: none"> - None identified since GAEC refers to protections already covered via the Wildlife and Countryside Act 1981 as amended (primarily by the Countryside and Rights of Way Act 2000)
GAEC 7e - Scheduled monuments	<ul style="list-style-type: none"> - None identified since GAEC requires compliance with national rules relating to Scheduled Monuments under the Ancient Monuments and Archaeological Areas Act (1979)

Source: own compilation

4.4 Delivery and enforcement

The current systems that depend specifically on the CAP will cease to apply after the post Brexit model replaces the current agriculture support regime. Most of these systems are concerned with the control and verification of claims for CAP support, especially the BPS and the greening rules. They are detailed and rather rigid. This does create the opportunity for a new approach both to the control of future public payments to farmers and for any environmental conditions attached to these.

The possibility and cost of penalties imposed on the UK as a result of failures of compliance with EU law regarding payments, such as inadequate inspection systems, are removed and there is an opportunity for the Government to adopt less of a risk-averse approach than the kind embodied in the cross-compliance penalty rules.

5 Setting a post-EU framework for environmental regulation relating to agriculture in England - proposals

There are several persuasive reasons for acting over the next year or so to adapt, review and take forward the environmental regulatory system with respect to agriculture. The previous Government accepted this to some extent although the views of its successor, both on the topic as a whole and on the FIRR recommendations in particular are not yet clear. Thus far no consultation has been issued on potential changes in light of the changing context.

Clues to the direction of Defra's thinking appeared in the introduction to the summary of responses to the Consultation on new "basic rules for farmers to tackle diffuse water pollution from agriculture in England" in 2017. Defra suggested that these would be a "first step towards a new more holistic way of regulating the agriculture sector that we might adopt more widely in future, with rules that are practical and risk based to prevent and reduce agricultural pollution. They will set a baseline of good practice for all farmers"⁴⁶.

The implication of this statement is that the current rules are not considered to be practical or sufficiently risk based but it is less clear whether this is seen as a matter of the content of the standards themselves or the compliance and delivery machinery in place, aspects of which are currently determined by underlying EU legislation. However, thus far the need to strengthen environmental standards in future has had much less attention

Moving to a forward-looking post EU environmental regime for agriculture in England involves two related but separate challenges:

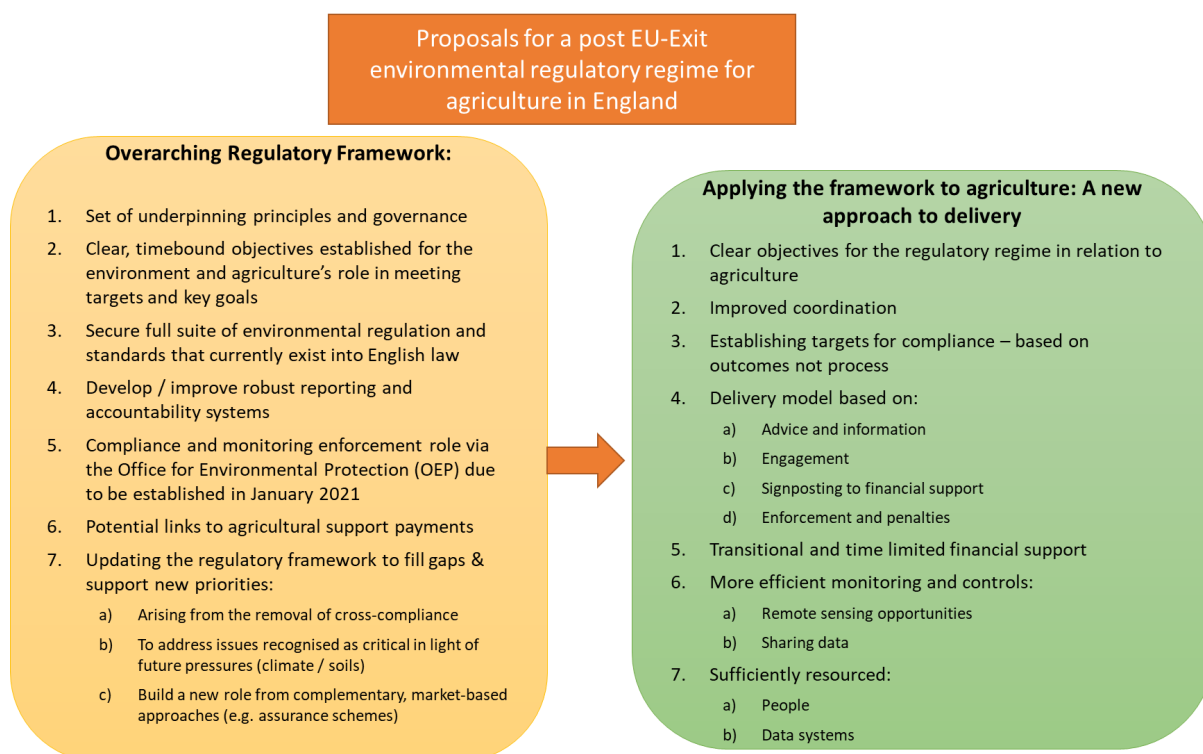
- The first is to set up a new overarching framework of environmental regulation that meets the needs of the coming decades and is robust in relation to the changes arising from Brexit. This framework includes specific environmental standards, the regulations that express them, the principles behind them and the broader governance setting. The reach of this overarching framework is much broader than just agriculture, but it is essential to providing the overall frame and context within which a regulatory system for agriculture and related land uses will sit.
- The second is to deliver the relevant components of this framework on the ground, taking account of the special character of agriculture and farm businesses as appropriate. The delivery system in this sense includes the objectives for delivery and improved levels of compliance, the processes and procedures put in place, the monitoring, inspection and enforcement requirements and regimes, the advice, support and financial aid, the roles of the relevant public bodies and their responsibilities etc.

These two dimensions are set out in Figure 5-1.

⁴⁶ Defra, 2017 Consultation on new basic rules for farmers to tackle diffuse water pollution from agriculture in England. Summary of Responses. November 2017.

In this and the following chapter, ideas for how the framework for environmental regulation should develop in England and then what a new delivery system might look like are presented. These have drawn on the evidence presented in the first part of the report, the findings of the FIRR, experiences with improving diffuse water pollution in Scotland as well as inputs from a range of stakeholders attending an expert workshop, organised as part of this study, in July 2019.

Figure 5-1: Outline of a proposed environmental regulatory regime for agriculture in England post EU-Exit



Source: own compilation

5.1 Setting the overarching framework

The challenge is to create a durable environmental regulatory framework tuned to the needs of a new era; one in which land management has a central role in meeting a growing range of environmental goals. It is suggested that this framework should have several elements.

Underpinning principles: As rehearsed in the previous chapter, there is a good case for establishing the environmental principles, currently in place in the EU treaties, in English law so that they continue to underpin environmental law and policy, maintaining a status equivalent to the one they enjoy now. Several principles are particularly relevant to the regulation of agricultural activities and policy, including the PPP, Precautionary and Integration principles. An additional principle of non-regression in environmental standards and obligations would be beneficial to secure the current baseline against pressures from prospective trading partners as discussed in the previous chapter.

Clear objectives established for the environment: As the UK leaves the EU, there is agreement on the need to establish new environmental objectives and targets for England, tying these to specific timescales wherever appropriate. A process for setting long term targets for several environmental topics (excluding soil for example) was set out by the Government in October 2019 in the Environment Bill⁴⁷. If these proposals are taken forward when the Bill is tabled again, they will need to be scrutinised and debated in Parliament, with new long-term binding targets put in place within a defined timetable.

In the process of setting and implementing the long term targets, and others that might be introduced alongside them, the opportunity will arise to relate these national priorities much more closely to land management, including both agriculture and forestry, as has occurred in other European countries. There have been significant steps in this direction with the 25 Year Environment Plan and in the climate sphere with the new legal commitment to meet the target of net zero carbon emissions by 2050, although there is not yet a specific target for agriculture.

For the agriculture and broader land management sector, appropriate objectives for biodiversity, water, soil, landscape, resource management, forestry and other parameters would provide the frame, logic and direction for developing a new regulatory regime applying to agriculture in England. Agriculture has a role to play in meeting several objectives but not the sole responsibility for doing so. The current regulations and codes then could be modified and augmented to work towards the longer-term objectives in a systematic way.

However, regulation would not be the only way of meeting new objectives. There also would be a central role for financial support for farmers, available through ELMS and other channels. Several other policy tools, including much enhanced advice, should also play an important part. Once objectives and timescales are agreed the roles of different policy interventions could be spelled out in a more explicit way, for example in a preliminary “Roadmap”, showing how policy mechanisms will be used to support objectives for the sector in a systematic way over time.

This approach would help the farming community and wider food chain to plan for a more predictable future than can be discerned at present, phasing investment and changes in management in ways that are driven by a balanced set of objectives. In this way the regulatory baseline would be coupled more closely to the environmental public goods orientation of the new support scheme, potentially increasing the efficiency of both.

Secure the full suite of environmental regulation and standards that currently exist into English law: As noted in the previous chapter, it is essential that the regulatory frame for the environment (as opposed to the CAP) is brought across from current EU law into fully functional domestic legislation backed up by appropriate governance machinery. This is required to provide continuity and enough certainty in a period of transition and to confirm the commitment to existing environmental standards and objectives, such as those in the Water Framework Directive. It is important that this process does not leave significant gaps

⁴⁷ <https://services.parliament.uk/bills/2019-20/environment.html>

or uncertainties or introduces undesirable changes. Several gaps and suggestions for filling them are outlined in Section 5.2.

Compliance and monitoring enforcement: Environmental regulations related to agriculture are amongst the most challenging to implement. A sufficiently independent and resourced Office for Environmental Protection (OEP) needs to be in place to secure compliance by public bodies with their legal obligations. The powers and operational independence bestowed on the OEP by the Environment Bill need to be sufficient to allow it to exercise this function effectively. This was not the case in the draft Bill laid before Parliament in October 2019⁴⁸ but amendments may be made before the legislation enters into force.

Robust reporting and accountability systems: There are good reasons to maintain a functional and transparent reporting regime after the UK ceases to send regular reports on the implementation of most environmental regulations to the European Commission. A new approach should cover both the reporting on the implementation of the full range of environmental legislation in force and the creation of a fresh domestic culture of engagement and consultation with stakeholders.

Reports should be publicly accessible, informative and useful for stakeholders as well as official bodies. They should assess progress in meeting the goals of the legislation concerned, levels of compliance and standards of practice, issues arising, and any proposals being developed which might alter the regulations or impact upon them. Transparency and engagement are primary steps in improving compliance and the operation of the whole system. Greater openness in this sphere would help to build understanding and trust. This should be combined with active learning on effective and efficient means of implementation from good practice in different parts of the UK and other countries.

Currently there is no independent body charged with receiving and scrutinising the implementation reports outlined above. Once the new OEP is in place in England it would appear to be the best body to take on the role of oversight and guardian of compliance as part of its broader scrutiny functions.

Potential links to agricultural support payments: The cessation of cross-compliance will remove the conditionality that it placed on farmers and land managers in receipt of financial support to adhere to a sub-set of environmental regulations and standards. Despite the unpopularity of cross-compliance with farmers, it has helped to increase compliance in some cases and to raise awareness amongst land managers of their obligations under environmental regulations. The question therefore arises about whether some form of conditionality on recipients of public support in the future should be pursued or not. This would be a means of seeking to reach higher levels of compliance but in a fairer way with a penalty system that is more reasonable than the present one.

This could be achieved with a single-track compliance regime applying to all farmers irrespective of whether they were participating in any voluntary schemes involving payment.

⁴⁸ See: https://greeneruk.org/sites/default/files/download/2019-10/GreenerUK_LINK_Environment_Bill_briefing_2nd_reading.pdf

The separate inspections and penalty regime required for cross-compliance within the CAP could be removed. All farms could be inspected at a frequency dictated by a robust risk assessment framework with an earned recognition component that would not be influenced by receipt of agricultural policy funding. However, land managers in receipt of public money, e.g. via ELMS, should be compliant with those particular items of environmental legislation that are relevant to the objectives of the schemes in which they are participating. If they were in breach of the relevant legislation, then they would be at risk of losing some or all the incentive payment they otherwise would be due as well as any penalties imposed for the breach itself. This principle protects taxpayers from supporting agricultural operations that are not compliant with the law and strengthens the long-term integrity of environmental management and public spending in this arena. In this way, the scope of conditionality is limited to a more targeted purpose.

Such a model would mean that a public body would need to be responsible for checking that those farmers supported via ELMS are complying with the requisite rules. However, the penalty system could be redesigned to focus more on penalising serious rather than petty offences and allow warnings rather than immediate penalties where appropriate. Those farms not receiving support via ELMS would still be subject to inspections to check they were compliant with environmental regulations more generally.

To balance the large-scale reduction in the current scope of cross-compliance as a front-line mechanism to incentivise environmental compliance by the overwhelming majority of farmers currently in receipt of CAP payments, more active programmes of legal enforcement by regulators would be required. This implies the need for greater resources to be devoted to straightforward compliance checks at farm level irrespective of receipt of payments under any agriculture policy scheme. This would include new resources for enforcement bodies (e.g. the EA), thereby reversing the trend to reduce their budget for such work (see chapter 6).

Maintaining a more limited compliance regime of this kind would involve administrative and other costs but the removal of cross-compliance without any alternative would create the hazard of reduced compliance. Lower levels of compliance in turn result in the imposition of costs on society. For example, the costs of health and biodiversity impacts from ammonia emissions have been estimated to be approximately £2.50 per kg of NH₃, which at current emission levels is estimated to be over £700 million per year⁴⁹ and the costs associated with soil degradation have been calculated to range between £0.9 bn and £1.4 billion per year, with a central estimate of £1.2 billion⁵⁰.

⁴⁹ These figures come from a recent review of the relevant literature, summarised in Guthrie et al (2018) *ibid*. This review notes that [there are significant uncertainties in these values. The range of possible costs, based on the estimates in the literature and best available projections for emissions, are between £580m and £16.5bn per year.](#)

⁵⁰ Cranfield University, (2011), Cost of soil degradation in England and Wales, Report for Defra.

5.2 Updating the regulatory framework to fill gaps and support new priorities

There are at least three reasons to review and update the regulatory framework applicable to agriculture:

- To fill gaps arising from the removal of cross-compliance, mainly where standards of Good Agricultural and Environment Condition (GAEC) are not currently part of domestic legislation. Solutions to incorporate these into domestic law should be identified so as not to weaken the environmental baseline (as discussed in chapter 4).
- To address issues now recognised as being of central importance for land management and agricultural production in the coming decades but where the current set of regulations is largely silent (e.g. soils, climate). One such issue is whether the existing baseline is high enough to achieve a satisfactory level of environmental protection.
- To build a new role for complementary approaches, particularly assurance schemes and other market mechanisms, as well as new sources of private sector funding, most notably from the water industry.

There is some urgency for action given the expected departure from the EU at the end of January 2020 and the level of uncertainty in the agricultural sector, currently being amplified by continuing speculation about possible future trade deals. The process for introducing new domestic legislation could be started in the Environment Bill when it is reintroduced or in fresh legislative initiatives if these emerge on an appropriate timescale.

5.2.1 Assurance schemes and private sector initiatives

Starting with the third of the three issues above, how far is it possible to give a larger role to **assurance schemes and other private sector initiatives** in securing a successful pathway to meeting new environmental objectives? There are clear advantages to avoiding regulatory burdens and creating positive incentives to comply with new standards, potentially giving well managed farms a competitive advantage and helping to establish realistic prices for sustainably produced food.

Farmers seem less critical of being inspected by assurance schemes, such as Red Tractor which undertakes around 60,000 a year, than of those by regulatory bodies. Most schemes have only 1 % of their inspections arranged on an unannounced basis and both this fact and the voluntary nature of the engagement might be amongst the reasons for greater acceptability if this really is the case.

On the other hand, there are also risks that assurance scheme standards may not be sufficiently ambitious with regard to environmental issues or align with national priorities, especially if they aim for maximum levels of farm participation. Their core role is not to apply Government policy and they need the flexibility to respond to changing conditions. The rigour of monitoring and compliance procedures within assurance schemes also may not be sufficient, especially if they have a wide coverage, including food safety, animal health and welfare and other complex and demanding topics. There may be tensions between the desire of assurance scheme managers to build the brand and levels of farm participation on the one hand and the commitment to rigorous inspection and compliance with standards on the other.

The most immediate question may be whether there is a substantive role for assurance schemes in taking responsibility for the oversight and promotion of non-regulatory standards, such as those relating to soil management and integrated pest management for example. Potentially this would give these environmental priorities more status, market momentum and visibility to farmers but would carry some risks, particularly if many farmers remain outside assurance schemes and standards between schemes vary considerably. Potentially a variety of different standards and messages to consumers could be in play.

This issue would benefit from more analysis than is possible here. It raises questions about exactly how a larger role for assurance schemes might work in practice, whether in addressing certain environmental land management themes or in contributing to an earned recognition system for regulatory purposes. One issue would be whether there should be more regulation of assurance schemes to equip them for a larger role in policy and regulation and to protect consumers from insufficiently reliable claims.

On any trajectory, a helpful first step might be to establish a well-founded set of common metrics for all assurance schemes. Potentially the “Gold Standard Metric” project for domestic food announced by Michael Gove at the Oxford Farming Conference in January 2018 when he was Secretary of State for the Environment may lead in this direction. He argued that, despite the positive role of current assurance schemes “there is no single, scaled, measure of how a farmer or food producer performs against a sensible basket of indicators, taking account of such things as soil health, control of pollution, contribution to water quality as well as animal welfare”.

The environmental integrity of such a project and its alignment with the metrics deployed in relevant regulation would be critical. However, a robust metric of this kind could provide part of a coherent interface between existing agricultural assurance schemes, new incentives under ELMS, the requirements of regulation and longer-term goals such as the 25 Year Environment Plan.

Pending further research, there are grounds for caution in extending the role of assurance schemes in ways that may reduce the need for regulations, particularly if there are no binding requirements on these schemes and there are risks to their environmental integrity.

5.2.2 *Introducing new environmental standards or regulations*

Turning next to areas where **new environmental standards** and potentially regulatory initiatives may be required, four specific issues arise in the literature. All four also came to the fore in the workshop organised as part of this project in July 2019. Some of the main issues and possible ways forward are set out below and in Table 5-1:

1. **Soils:** better soil management is identified as a priority in the 25 Year Environment Plan, but it is less clear how improvements are to be achieved other than through the voluntary adoption of better practices. Currently there is discussion about the extent to which healthy soils are a public good or a private asset and to what extent their protection should be regulated or incentivised. Aspects of soil management certainly have public

good characteristics, particularly building up soil carbon, as the benefits of protecting and enhancing soil carbon go beyond those accruing directly to the farm. Improved soil management is important for carbon sequestration and hence reducing climate emissions. Similarly, the ability of soils to hold water provides benefits beyond the farm; whilst avoiding drought damage to crops is in the interest of the farmer, the wider societal benefits of river baseflow protection in times of drought, and water retention in times of heavy rain, could be significant.

There is a case therefore for going beyond the current Code of Good Agricultural Practice (COGAP) in certain respects and introducing rules that require farmers to protect soils, particularly carbon rich soils, from damaging forms of management. There is a gradient of possible forms of intervention, ranging from measures to prevent some of the damaging forms of management to those that aim to restore soils and prevent carbon loss from peat soils. The latter would imply re-wetting on a significant scale, not only on moorland of relatively little agricultural value but also of prime agricultural land in Eastern England.

An ambitious programme of peatland restoration and re-wetting is likely to involve the use of incentives because of the potential scale of costs and loss of agricultural production and income involved. However, a new strategy could combine incentives with regulatory measures such as rules to prevent the ploughing of peatland under grass, inappropriate moorland management and damaging forms of land drainage as a starting point.

A tightening of regulation and codes of good practice could operate alongside incentives to maintain existing carbon rich soils and for the restoration of degraded soils. Other approaches also are worth consideration, for example a tailored form of charging system in which farmers are charged per tonne of carbon emitted and paid per tonne of carbon sequestered.

In addition, some aspects of soil protection are essential to maintain good water quality. Many of these are covered by the new Reduction and Prevention of Agricultural Diffuse Pollution regulation. However, the requirement for buffers of green cover alongside watercourses is not included. It is proposed that this should be added to these regulations and at the very least included as an important means of achieving Rule 6 (taking reasonable precautions to avoid soil erosion and runoff) in any guidance documents.

2. **Landscape features:** hedges and others

- a. *Hedgerows:* current cross-compliance requirements have evolved over time to include protection that goes beyond that provided for under the 1997 Hedgerow regulations. It would seem perverse to lose this much-needed protection which focuses on protecting the biodiversity value of the hedgerow. This could be achieved relatively simply through amending the Hedgerow Regulations to incorporate these additional protections.
- b. Apart from hedgerows, environmentally valuable landscape features, such as *linear features (dry stone walls) and site-specific features (e.g. ponds)* are not protected in domestic legislation. This is despite them being an important part of the cultural landscape as well as contributing to the protection and enhancement

of biodiversity and having declined in number and/or condition over the decades. The extent of significant stone removal from dry stone walls over many years was one of the reasons that this condition was brought under cross-compliance in 2005. A review of the current scope of regulations and related codes would be timely. Is there a case for new domestic regulations to be put in place to prevent the removal of stone/earth from dry stone walls/earth banks? Could the Hedgerow Regulations be broadened to encompass other important linear features? Or is there a role for new domestic regulation to protect landscape features more generally?

- 3. *Pesticides and Integrated Pest Management (IPM)*:** The current use of pesticides is associated with a number of environmental pressures, including being the single largest source of breaches in water pollution standards in some areas. Many European countries have introduced policies designed to reduce the use of pesticides. In December 2018 the Government announced a ban from 2020 onwards on the use of metaldehyde, commonly used in slug pellets, because of its widespread presence in water, requiring treatment for its removal. However, this was withdrawn in July 2019 following a legal challenge. This illustrates the prevailing air of uncertainty about where regulation will go, both with regard to individual products and the broader approach to pesticide use. For example, the recent report from the Food, Farming and Countryside Commission advocates “a timetable for more stringent controls on the use of pesticides and antibiotics, anticipating that the case for this will continue to grow”⁵¹. It suggests that more stringent regulation of spraying near watercourses and residential areas is needed.

The future direction of policy in England has yet to emerge. However, it is worth noting that the aims of the EU sustainable use of pesticides directive continue to apply in the UK and do require effort to advance the application of integrated pest management methods. This is not being pursued actively at present, partly on the basis that there are insufficiently precise definitions of what constitutes IPM, although these could be developed. Indeed, the LEAF farm assurance scheme uses a form of IPM framework and it has informed the Red Tractor scheme as well. Retailers demand standards that may have elements of IPM or the outright prohibition of some products.

Rather closely focused forms of IPM could be developed alongside broader brush approaches. For example, the control of invasive non-native species (INNS), commonly found in riparian margins or in-channel often involves the use of pesticides adjacent to watercourses, which is problematic in environmental terms. This could be a promising area for IPM where alternative means of treatment both eliminate risk of water pollution and increase the opportunities available for the successful control of damaging INNS.

Both regulation and incentives will have a role in reducing the environmental footprint of pesticides but the balance between them seems less than strategic at present and requires closer attention. Severn Trent Water, which already has experience of providing financial assistance to farmers to reduce water pollution via its STEP programme, currently is paying farmers up to £8 a hectare to reduce metaldehyde use in certain

⁵¹ Food, Farming and Countryside Commission (2019) *Our future in the land*. RSA London, p43

catchments (for example by using an alternative product such as ferric phosphate). Concentrations of the pesticide in water are monitored closely and if the level of metaldehyde falls to the legal limit a bonus of £100 is payable. New approaches such as this are having an impact but are difficult to square with the focus on public good payments in ELMS and highlight the lack of clarity in the reference level in this area.

There is little consensus about whether to require the introduction of amended forms of management through legislation in addition to the role of assurance schemes (including those for organic farming). However, there is a potential gap in regulation here, especially on farms outside assurance schemes and more strategic thinking about the regulation of pesticides, is needed.

4. **Climate adaptation:** At present, there are no rules that require farms to climate proof any investments made in terms of land restructuring or development of buildings or other farm infrastructure. If clear guidelines for what is required were to be developed, then there is potentially a case for this to become a mandatory requirement. If not a regulatory requirement, perhaps this should become a condition for receipt of any public support. For example, any built development on farms must not only be climate resilient but should support the wider enterprise to adapt, for example to water scarcity where this is an issue.

Table 5-1: Summary of regulatory gaps and possible solutions for the environment and climate

Environmental issue	Gap	Reason for gap	Proposed solution
Soils	<ul style="list-style-type: none"> No requirements to protect carbon rich soils 	Existing gap	<ul style="list-style-type: none"> Introduce ban on ploughing of peatland that has not been ploughed previously.
	<ul style="list-style-type: none"> Requirement to protect soils from wind erosion Provision of minimum levels of green cover 	Removal of XC Removal of XC	<ul style="list-style-type: none"> Add to the new Farming Rules for Water under Rule 6 for soil management.
Climate mitigation	<ul style="list-style-type: none"> No regulation to require emissions reductions or to enhance carbon sequestration 	Existing gap	<ul style="list-style-type: none"> Introduce ban on ploughing of peatland and drainage of moorland Regulations/codes of practice to improve moorland management. Accelerate progress in improving nutrient (including slurry/manure) management Possible introduction of targets for climate mitigation for agriculture specifically.
Water quality	<ul style="list-style-type: none"> Requirement for buffer strips (green cover) next to water courses outside NVZ Requirement to keep a farm map with surface water / boreholes etc marked – outside NVZ 	Removal of XC	<ul style="list-style-type: none"> Add to the new Farming Rules for Water.
Landscape features	<ul style="list-style-type: none"> Hedgerows – hedge cutting ban period / permissible dates for hedge laying/tree coppicing / ban on cultivation etc within 2 m of a hedge 	Removal of XC	<ul style="list-style-type: none"> Amendments to the Hedgerow Regulations. Possible new regulations for other landscape features.

	<ul style="list-style-type: none"> Ban on the removal of earth/stone from dry stone walls and earth/hedgebanks Some landscape features are not covered by any regulations (e.g. ponds) 	<p>Removal of XC</p> <p>Existing gap</p>	<ul style="list-style-type: none"> Possible broadening of the Hedge Regs to include other landscape features.
Pesticides	<ul style="list-style-type: none"> No requirements on farmers to adopt more ambitious forms of Integrated Pest Management (IPM) 	<p>Existing gap</p>	<ul style="list-style-type: none"> Could be a regulatory requirement or promoted via incentives
Climate adaptation	<ul style="list-style-type: none"> No regulation requires land managers to take actions required to adapt to climate change 	<p>Existing gap</p>	<ul style="list-style-type: none"> Possible new rules in relation to land restructuring / new buildings. Possibility to make a condition of support.

6 Establishing a new delivery system in England - proposals

As the UK leaves the EU there will be an opportunity to revise the current environmental element of the farm level regulatory inspection and enforcement system for agriculture, since the current CAP rules will no longer apply. These rules have a strong focus on common control and penalty regimes within the EU and less detailed and rigid stipulations will be possible in a purely national regulatory and related financial control model.

The FIRR underlined that, compared to other sectors, farming was poorly regulated, and that enforcement bodies were not equipped with a lot of the necessary information they needed to ensure compliance. More flexibility will be possible in certain respects outside the CAP and the way this is used will be critical. It is not the moment to adopt a de-regulatory agenda. Rather, the opportunity should be taken to improve compliance and engage more farmers more deeply in the journey to sustainability. This is a central challenge for agriculture; the delivery system should be more than a set of bureaucratic rules and associated eligibility conditions for receiving support.

The last Government signalled the creation of a more “integrated, appropriate and targeted enforcement system” and was considering a response to the FIRR review. However, no proposals appeared before the 2019 election. Now it would be helpful if a timetable for achieving this could be established, to be considered alongside the new Agriculture Bill.

Proposals for some of the elements that could be included in such a new delivery system are set out below for further discussion.

6.1 Setting clear objectives for the regulatory regime in relation to agriculture

The overall goals of environmental regulation of farming were discussed in section 3.1 and can be summarised as to “secure, maintain and enhance good management of farmed land and the natural environment”.

In a new context it would be useful to set out clearly the purpose of the whole system of environmental regulation with specific reference to the agricultural sector. This would help to clarify the role of the broader implementation system as well as the environmental regulations themselves. This could link regulation with other policy levers and signpost its relationship with incentive payments, by setting a baseline of requirements that farmers meet at their own cost, above which financial support can be made available.

For the purposes of discussion, we propose that the objective of a new regulatory system for agriculture should be:

To attain a baseline level of required performance set in regulations, acting in concert with other policy levers such as advice and incentives, to achieve targeted outcomes in an effective, fair and timely way, avoiding disproportionate economic cost to the farming and related sectors or the public purse.

Such a framing would be helpful in developing the system further.

6.2 A fully integrated whole farm or multi-strand model?

The FIRR report argues for a whole farm model of regulation covering the full gamut of regulation, including animal health and food hygiene in a single system. This would bring all inspection regimes into an integrated structure operated by a new specialised agency concerned solely with the agricultural sector. This is proposed on the basis that it could be more efficient, potentially would be more understanding of agriculture as a special sector and could rationalise the organisation and number of farm visits by regulatory bodies. Trade-offs and potentially conflicting advice might be reduced within a single structure.

Whilst this has attractions, there are drawbacks from an environmental perspective. One of these is that the environmental component of the regulatory spectrum that applies to farms is large already and becoming more complex, with new topics such as climate mitigation gaining in importance. It requires special expertise that may not be the priority of a more generic agency and its inspectors.

At this juncture, the family of regulations that deal specifically with the environment and the associated interactions with farmers they require have come to need strategic prioritisation as they are a key part of a new national focus on achieving long term sustainability and a net zero economy. They have not had the level of attention that they merit in recent years, as outlined in Chapter 3. This enhanced level of prioritisation could be at risk if the environmental strand of farm focused regulation is blended into a body seeking to combine several different and sometimes competing priorities. Given the nature of food safety and animal health concerns, serious threats can arise quite suddenly and require rapid large-scale mobilisation of resources, as has been experienced several times in recent decades. The management of an integrated body would need to be highly responsive to such issues and they might be more immediately pressing than the systematic, longer term delivery of environmental regulations and nurturing of better relationships with farmers. The latter could suffer. Multiple roles for an agency are entirely feasible but there would need to be a strong case made and plans put in place to avoid creating new tensions and to help manage potentially competing priorities, when alternative institutional models are readily available.

Furthermore, there are close connections between environmental regulations and a support system that is focussing more on public good provision and potentially significant changes in land use. These linkages need to be maintained and fostered in agencies that are dealing with agriculture and land management, with an eye on the incentives as well as the obligations. This is less the case for other aspects of farm regulation.

More fundamentally, there are good reasons for maintaining the supervision of environmental regulation of agriculture within the wider fabric of environmental policy implementation and enforcement as a whole. Here there is a clear role for a properly resourced and equipped Natural England as well as the Environment Agency. The rural environment is an interconnected set of ecological as well as socio-economic systems.

The recovery of nature involves multiple related changes in management tuned to local conditions and priorities in which the role of agriculture is pivotal but not separate. New initiatives such as biodiversity Net Gain and Nature Recovery Networks (involving local authorities and NGOs as well as NE) link farming to other land uses. Carbon sequestration

involves complementary developments in soil and vegetation management and stronger links to forestry.

In addressing diffuse water pollution, looking only at the farming sector in isolation is short sighted. It is valuable to work within the framework of the whole chain. For example, are there sufficient facilities available to handle sewage sludge and anaerobic digestate in an area where the aim is to stop its disposal on farmland? At present the independent statutory bodies (notably EA and NE) are well positioned and qualified to appraise such questions and seek to resolve them; taking away their role in this arena would be a step backwards environmentally

Given these considerations and the disruption that would be caused by the creation of a new agency and the transference of responsibilities, the case for an integrated body and accompanying machinery does not look attractive in environmental terms, irrespective of merits it may have in other fields.

However, there remains a strong case for co-ordinating the work of related agencies and the management of farm visits where this would be appropriate.

6.3 Establishing targets for compliance

Targets for compliance should be set at both the strategic and farm levels and would seek to measure how far the desired outcomes are being met rather than measure process within governmental bodies. The metrics for targets might include both degree of farmer awareness of regulations and levels of compliance with environmental standards. This would provide clarity at a strategic level, in place of instrumentalist targets such as the number of farm visits in any particular period.

At the farm level, there should be a clear expectation of farm level compliance by a given date. This can be built into an appropriate target for the agency concerned. The SEPA target - that 75% of farmers should be compliant with water quality requirements by the time of the first farm revisit under their approach - might be a pragmatic starting point for such a target in England.

Existing Defra targets need to be re-examined in parallel. For example, there is now a target of reducing the total number of farm visits, irrespective of their utility. Fewer visits are desirable if they are not necessary and other options, including remote sensing, prove effective and accurate. However, as the SEPA example of reducing water pollution by closer engagement shows, the extent and frequency of helpful as well as formal farm visits may need to increase to facilitate better results. The current Defra goal of reducing the number of farm visits seems rather blunt and inappropriate in this context. Alternative targets to achieve progress towards agreed levels of compliance should be developed in its place. This could include building a significant role for 'earned recognition' whereby farmers with a track record of compliance would be at less risk of inspection than those with a poorer or more doubtful record.

6.4 Establishing a new delivery model

In thinking about how a new system might operate, it is important to consider what the best means of achieving compliance might be, taking into account the benefits of building a collaborative and long-term relationship with farmers and land managers. Here there is an opportunity both to build on the insights of the FIRR report and to learn from experience within the UK and elsewhere.

The current approach to enforcing environmental regulation on farms in England is mainly advice led but constrained by resources so that the intensity of advice and level of tailoring to individual farms is insufficient. This is accompanied by a declining number of farm visits and fewer prosecutions for water pollution. This too seems to have been driven at least partly by the rapidly shrinking budgets of enforcement agencies, such as the EA. However, the doubly constrained approach is not a success judging by the level of water pollution in particular.

Three key requirements for a new approach are:

- The availability to the regulators of a sufficient roster of tools to aid enforcement, ranging from information and advice to farmers to formal warnings and the potential for prosecutions under civil and, where necessary, criminal law.
- A capacity to strike the right balance between these different forms of intervention while managing relationships with farmers and land managers in a measured and strategic way. Different approaches, including information provision (with scope for more ambitious proactive publicity), tailored advice to farms, the enforcement of regulations and the provision of incentives need to be used in a coherent and complementary way. This is a delicate balance already due to be changed with the prospective withdrawal of cross-compliance.
- The provision of sufficient budgetary and human resources for the regulatory agencies (see 6.7 below).

A re-balancing in favour of more enforcement effort accompanied by enhanced and repeated advice tailored to individual farms and a general investment in publicity to raise awareness of the issues in the farming community could be a first step in addressing current shortcomings. It would require both a political mandate and enhanced resources for the enforcement bodies to bring it about but has the scope to be more cost –effective overall.

There is some evidence of how such a combined approach would work from the experience of SEPA in Scotland where a distinctive approach to addressing diffuse water pollution from farms, initially in 14 but now 43 priority catchments, has been in use since 2010. An overview of how the scheme works is offered in Annex 2. This approach focuses on advice and engagement before penalties and involves an initial farm visit by a trained adviser, a risk assessment by the farmer, a subsequent letter, report and advice from the adviser and up to three follow up visits to establish whether the issues have been resolved. It is a more intensive and focussed effort than the equivalent in England and is backed up by a national awareness campaign. It underlines the central role of advice and engagement sustained over time in securing clear expectations of farmers as well as concrete improvements.

Often lack of knowledge of the regulations appears to be the leading reason for non-compliance on the farms visited and anecdotal evidence suggests that this is often the case in England too. Furthermore, farmers often are not aware of the business benefits that might ensue from improved practice, including the availability of financial aid for some investments in Scotland. This approach has resulted in a significant increase in compliance levels. Currently the overall uptake of the required actions one year after the first visit is 82%, compared with a target of 75%.

This focussed approach has much to commend it and could provide insights for a re-balancing within the English model, bearing in mind that it covers only water pollution and would need to be extended to play a wider role. A number of projects in England (e.g. the WILD river basin management initiative in southern England⁵² and the Upstream Thinking project in the South West⁵³, as well as the Wye and Usk Foundation on the Welsh borders⁵⁴), confirm that more intensive engagement of farmers and local communities can bring significant benefits. Given this evidence, face to face advice and dialogue should be recognised as a key part of more effective and farmer friendly delivery.

Even with an enhanced, multi-track approach of this kind, several pressing challenges would remain. The lack of knowledge, understanding and buy-in from many farmers needs to be addressed. This could be more challenging if significant geographical differences emerge between certain standards and incentives in a response to understandable arguments for more regionalised approaches. Even without regionalisation, more localised or tightly focussed communication channels may be needed. If there is a rising level of farm visits and capacity to inspect agricultural operations in future, the methods being used for assessing risk and devising risk-based models for inspection regimes may need to be adjusted. The approach to earned recognition will be important, both to maximise the efficiency of inspections and to win the confidence of farmers that a record of compliance and good practice will be rewarded. The system will be judged as fair or not by such criteria.

6.5 Transitional and time limited financial support

An important part of any new system is to find ways to help farmers to achieve higher standards where this is needed, bearing in mind the uncertainties that they now face on several different fronts (even without the threat of a no deal Brexit). There is a case for establishing some financial help where this is required, for example in relation to costly investments such as slurry stores on farms where there is a strong probability of continuing in the same line of production. Aid from Defra could be restricted only to those farmers who had completed an approved assessment that showed the need for investment and had gained the support of an adviser. Short term investment and other costs are likely to arise both on farms and in the regulatory system as it is reinforced to meet the goals of a more integrated approach at a time when farmers will need to familiarise themselves with new (and in some cases more demanding) standards and systems and to adapt as necessary.

Providing capital grants to farmers and land managers in need of help raises questions of fairness with respect to those farmers who have invested already at their own cost as well as

⁵² Water with Integrated Local Delivery

⁵³ See: <https://www.southwestwater.co.uk/environment/upstream-thinking/>

⁵⁴ See: <https://www.wyeuskfoundation.org/news/environment-secretary-comes-to-see-foundations-work>

departing from the public money for public goods principle. However, other forms of aid, such as low or zero interest loans, may be a reasonable compromise given the public interest in achieving the transition to sustainability without driving large numbers of smaller farms out of business.

6.6 More efficient monitoring and controls

There are several ways in which inspections and monitoring can be made more efficient. Amongst these is the enhanced use of new technologies. For example, the Environment Agency is using satellite imagery and mobile devices to identify individual fields where the risks of soil and nutrient run off into watercourses is particularly high. Data from Sentinel 2 in space feeds into a computer programme allowing the identification of bare fields without crops with a slope of more than 6%. Combining this with hydrological and soil data allows the identification of fields where the risks of pollution are highest or have occurred already, allowing ground staff to prioritise these sites for field visits⁵⁵.

It is a priority to establish the extent to which new technologies will allow better and perhaps cheaper, less intrusive forms of monitoring and inspection on farms. This is a fast-moving field. One approach would be for Defra to conduct an evaluation of the potential role, cost and reliability of new technologies such as remote sensing in monitoring different aspects of land management and environmental performance on farms and launch a consultation exercise to gauge views on this issue. Outside the EU the UK will be free to use a different approach to many aspects of farm monitoring and inspection but it is not yet clear how far new technologies should be built into a fresh system from the outset and the issues that could arise, for example in relation to the use of drones and satellites.

Another priority raised in the FIRR report is a proposal to create joined-up data sets and systems that all regulators can access and utilise. This would be valuable and requires planning and investment by the regulatory agencies in the near future. As well as drawing on public funds this could be financed partly by fees charged for land registration, if these were to be introduced.

There is a clear case for building up towards a system of farmland registration to fill major gaps in regulators' knowledge, as proposed in the FIRR report. However, a robust assessment of the costs and timetables for such an exercise should be undertaken before it is put in place and assurances secured that the budget would not be at the expense of funding for an enhanced scale of environmental ambition of the kind outlined in this report. It is important not to prejudice the effort required on farms already on the regulators' radar, which are likely to account for a large proportion of English farmland.

6.7 Allocating sufficient resources

If a delivery system is to be put in place to involve more advice and engagement that has been the case hitherto, then it will be imperative to marshal sufficient resources to operate a system that is capable of delivering results, both in the short term and for the next 25 years.

⁵⁵ Environment Agency 2017 *Using satellite imagery and mobile device technology tackle diffuse pollution from agriculture*. EA July 2017

This means reversing recent trends of funding cuts to enforcement agencies, such as the EA and NE.

A fresh approach to costs and the best use of resources in delivering public goals for agriculture should be an integral part of a withdrawal from the CAP. In recent years there has been a strong drive to reduce expenditure within Defra, often focussing on staff costs, both centrally and in the different agencies. Whilst the overall results to be obtained from the totality of spending on agriculture policy might be better if more was spent on advice, information, research, pilot projects and more finely tuned agri-environment schemes, nearly all these costs have to be met from national funds and are not reclaimable from the EU. The costs of administering agriculture policy is not reclaimable from the UK's fixed CAP budgetary envelope. By contrast the full cost of BPS and other Pillar 1 payments can be reclaimed from the CAP allocation⁵⁶. This skews the net cost to the public purse of administrative costs relative to payments to farmers. Outside the CAP, this bias against administrative and support costs should no longer apply, at least in principle and it would be timely to review the costs of achieving certain environmental goals via well administered regulation and enhanced support for farmers alongside the cost of incentives for voluntary measures. Public expenditure on improved delivery may be much more cost-effective than it appears now.

A feasibility study could delineate the key characteristics of a new model of the kind outlined above relatively quickly. Clearly, costs would be one important consideration. The SEPA initiative, including catchment walks, farm visits and inspections has involved an average of about 12 staff per annum over the last 10 years. Over time costs can be expected to fall with increasing compliance and higher productivity within the team. It would be useful to scale up this or an equivalent approach at a more developed England wide level and to estimate the costs.

A recent study, focussing on water and soils only, estimated that the annual cost for enforcement of relevant regulations would be £5.8 million per year for a five-year period, at which point costs would reduce considerably. The same report estimated the costs of an increased advisory presence at an additional £3.2 million per year⁵⁷. Extending this calculation to all relevant environmental regulation on farms, even taking into account the additional investment required in resources required to deliver more advice, it would be surprising if it were not possible to achieve a significant step forward for considerably less than the £50 million per annum that Defra currently sets aside for potential disallowance payments under the CAP. A holistic evaluation of costs and benefits is required but significant investment in the delivery system looks affordable.

6.8 Concluding remarks

Given the consequences of Brexit, the potentially stronger ambitions for the rural environment, and the shortcomings of the present system there is both an opportunity and a need to introduce a new regulatory framework and accompanying delivery system.

⁵⁶ Bearing in mind the complicating factor of the UK's budgetary rebate

⁵⁷ WWF-UK, The Angling Trust, The Rivers Trust (2018) [Saving the Earth, a sustainable future for soils and water](#), WWF-UK

Some of the proposals outlined will entail relatively small adjustments, others more extensive change and a longer-term perspective. Key will be to move towards a more outcome focussed system, with an emphasis on improving rates of compliance and active contribution towards environmental goals. This in turn requires clearer environmental objectives to be set and a much stronger emphasis on dialogue and information sharing, both between regulators as well as between regulators and land managers. To achieve this, a significant increase in resources for delivery is essential.

7 Summary of recommendations

Below is a summary of the key recommendations proposed in this report for developing an environmental regulatory regime for agriculture in England post EU-Exit.

A. Setting a clear overarching framework for environmental regulation:

1. ***Strong environmental principles should be embedded in English law:*** The environmental principles, currently in place in the EU treaties, should be established in English law to maintain the current position and avoid moving backwards. A new principle of ‘non-regression in environmental standards and obligations’ should be added to secure the current environmental baseline.
2. ***Establish clear objectives for England’s environment:*** New long-term binding commitments for the environment need to be set in UK/English legislation, including quantitative targets. The particular roles of the agriculture and land management sectors in contributing to these targets should be set out given that environmentally friendly farming is a key means of achieving the outcomes identified. A ‘Roadmap’ should be developed, showing how the range of policy mechanisms (regulation, financial support and advice) will be used to support objectives for the sector in a systematic way over time.
3. ***Secure a strong set of environmental regulations and standards in English law to act as a baseline for all those managing land.*** This includes:
 - a. *Securing the full suite of EU based environmental regulations and standards into English law* to provide continuity and enough certainty in a period of transition, confirming the commitment to existing environmental standards and objectives;
 - b. *Updating and extending the current regulatory framework to fill gaps and support new priorities*, such as those relating to soils, pesticides and IPM, climate and landscape features.
 - c. *Considering increasing the role that assurance schemes and other private sector initiatives play in achieving environmental objectives.* There may be scope to extend this role if the environmental integrity of voluntary schemes can be guaranteed and other conditions met. They should not replace existing environmental regulation.
4. ***Strong scrutiny of the implementation of environmental regulation is essential:*** Public bodies should continue to report on the implementation of environmental regulations in a transparent way (as they do now to the European Commission). These reports should be scrutinized by an independent body. Public bodies should also be held to account to ensure that environmental regulations relating to agriculture are implemented and enforced effectively. These are both roles that the new Office for Environmental Protection (OEP) should play and it must have sufficient powers and resources to do so.
5. ***Compliance with environmental regulations should apply to all farmers irrespective of whether they receive public funding,*** thereby removing the separate inspections and penalty regime currently required for cross-compliance under the (CAP). Since cross-compliance currently is used as a key means of incentivising compliance with

environmental regulations, its removal will require more active programmes of legal enforcement by regulators.

However, those farmers receiving public money (e.g. via ELMS) should be compliant with those particular items of environmental legislation that are relevant to the objectives of the schemes in which they are participating. If not, then they would either not be eligible for or be at risk of losing some or all the incentive payment they otherwise would be due, in addition to any penalties imposed for the breach itself.

B. Establishing a new delivery system for the agricultural sector in relation to environmental regulation:

6. *Set out clearly the purpose of environmental regulation with specific reference to the agricultural sector.* It is proposed that this could be:

To attain a baseline level of required performance set in regulations, acting in concert with other policy levers such as advice and incentives, to achieve targeted outcomes in an effective, fair and timely way, avoiding disproportionate economic cost to the farming and related sectors or the public purse.

7. *Targets should be set at both strategic and farm level to measure achievement against outcomes.* Rather than seeking to reduce the number of farm visits, as now, it is proposed that targets would be set to measure, for example, the number of farmers compliant with a particular environmental requirement by a certain date. SEPA experience illustrates this.

8. *A new delivery model should help build a more collaborative and long-term relationship with farmers and land managers.* This requires striking a better balance between information, advice, enforcement and incentives than is currently the case. Substantially greater enforcement effort should be accompanied by enhanced and ongoing advice, tailored to individual farms, as well as increased investment in publicity to raise awareness of environmental regulatory requirements amongst the farming community.

9. *There is a case for transitional and time limited financial support to help farmers achieve higher standards where required.* For equity reasons, this could be provided as soft loans which could be restricted only to those farmers who had completed an approved assessment showing the need for investment and with the formal support of an adviser.

10. *Opportunities to make inspections and monitoring more efficient should be harnessed,* for example through increasing the use of new technologies, such as satellite imagery and mobile devices where appropriate. The potential role, cost and reliability of new technologies such as remote sensing in monitoring different aspects of land management and environmental performance on farms should be assessed, for example through a Defra contract, followed by a consultation exercise to gauge views on this issue.

11. *Sufficient public resources should be allocated to operate a delivery system that involves more advice and engagement than previously,* increasing Defra agency budget

allocations to take account of potential revisions to their enforcement responsibilities, given more ambitious targets and potentially the removal of cross-compliance. An holistic assessment of costs and benefits is required and possible new revenue streams for regulators, such as farm registration charges, should be considered. The costs of poor compliance are likely to be higher than investment in a more effective and farmer-sensitive system.

12. ***The case for an integrated, specialist farm regulating body and accompanying machinery, as advocated in FIRR, does not look attractive in environmental terms.*** There are a number of reasons for this, not least the specialist environmental expertise required and the high value of maintaining functional interlinkages between environmental regulations and financial incentives for public good provision. Perhaps more fundamentally, the need for long-term strategic prioritisation to achieve sustainability in the sector may be put at risk in a single regulator whose attention may be diverted to address emergencies in other areas, such as livestock health. However, **improved coordination of the enforcement bodies dealing with environmental regulation in relation to the agricultural sector is required**, both in terms of farm visits, but also data sharing and exchange.

Annex 1 Environmental legislation relating to agriculture

Table A1-1: EU environmental legislation relevant to agriculture

Environmental issue	EU Directives & Regulations	Statutory Instrument to transpose into English law (pre-Brexit)	Requirement under CAP cross-compliance?
Water	Water Framework Directive	Water Environment (Water Framework Directive) England and Wales Regulations 2017	No
	Nitrates Directive	Nitrate Pollution Prevention Regulations 2015 (S.I. 2015/668)	SMR 1 / GAEC 1
	Groundwater Directive	The Environmental Permitting (England and Wales) Regulations 2010 (S.I. 2010/675)	GAEC 3
Pesticides	Sustainable Use of Pesticides Directive	Plant Protection Products (Sustainable Use) Regulations 2012	No
Conservation of nature, wildlife and habitats	Birds Directive Habitats Directive	Conservation of Habitats and Species Regulations 2010/17	SMR 2 and 3
Air	National Emissions Ceiling Directive NB: Requirements derive from international commitments under the UNECE Gothenburg protocol	National Emissions Ceiling Regulations 2018 (2018/129)	
Climate:	No legislation specifically focused on agriculture. NB: The UK is subject to (GHG) emissions reduction targets from the Kyoto Protocol, the EU target to meet KP targets		
Environmental Permitting	Industrial Emissions Directive - applies to larger agricultural units	Environmental Permitting (England and Wales) Regulations 2010 (S.I. 2010/675)	
	Environmental Liability Directive	Environmental Damage (Prevention and Remediation) (England) (Amendment) Regulations 2017	
	Environmental Impact Assessment Directive	Environmental Impact Assessment (Agriculture) (England)(No2) Regulations 2006 Environmental Impact Assessment (Forestry) (England and Wales) Regulations 1999	GAEC 6
Soils	No EU legislation relating to agricultural soils		GAEC 4, GAEC 5, GAEC 6
Landscape features	No EU legislation relating to landscape features		GAEC 7

Source: own compilation

Table A1-2: Environmental regulations operating in England not derived from EU law

Issue	Regulation applying in England	Requirement under CAP compliance? under cross-compliance?
Water	Reduction and Prevention of agricultural Diffuse Pollution (England) Regulations 2018	Some aspects under GAEC 4, GAEC 5
	Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (England) Regulations 2010 (S.I. 2010/639)	
Water Abstraction	<ul style="list-style-type: none"> • The Water Abstraction (Transitional Provision) Regulations 2017 • The Water Abstraction and Impounding (Exemptions) Regulations 2017 • The Water Abstraction (Specific Enactments) Regulations 2017 	GAEC 2
Pesticides	Control of Pesticides Regulations 1986 (as amended)	
Air Quality	Crop Residues (Burning) Regulations, 1993	GAEC 6
Climate	Climate Change Act 2008	
Contamination	Sludge (Use in Agriculture) Regulations 1989	
	Contaminated Land (England) Regulations 2006	
Landscape	Hedgerow Regulations 1997	GAEC 7
	Heather and Grass etc Burning (England) Regulations 2007	GAEC 6
Biodiversity	Wildlife and Countryside Act 1981	
General	Countryside and Rights of Way Act (CROW) 2000	
	Natural Environment and Rural Communities Act (NERC) 2006	

Source: own compilation

Annex 2 The SEPA approach to improving adherence with regulations to tackle diffuse water pollution

One established model for improving adherence with regulation in the water pollution sector⁵⁸ that is gaining increasing attention is the Scottish approach to tackling diffuse agricultural pollution. Through this approach, which started in 2010/11, dedicated priority catchment coordinators were put in place by the Scottish Environmental Protection Agency (SEPA) in 14 priority catchments (known as RBMP1)⁵⁹. Their role is to investigate the issues each catchment faces and liaise with local land managers to implement the measures required where non-compliance is identified. The aim was to achieve full compliance with all GBRs (see Box 1) by 2015 in all priority catchments. The approach was expanded in 2015 to include a further 43 catchments (known as RBMP2). This targeted approach to improving environmental standards in water bodies is complemented by a national awareness and engagement campaign to prevent water bodies from deteriorating in status and make improvements where they are not far from achieving good status.

Both elements are overseen by the Diffuse Pollution Management Advisory Group (DPMAG) for Scotland⁶⁰, chaired by SEPA and involving a wide range of stakeholders.

Box A2-1: Diffuse Pollution General Binding Rules

The following GBRs cover activities posing a risk to the water environment:

- Storage and application of fertiliser (includes manures and slurries) (GBR 18)
- Keeping of livestock (GBR 19)
- Cultivation of land (GBR 20)
- Discharge of water run-off, via either a surface water drainage system or overland flow to water (GBR 21)
- Construction and maintenance of water bound roads and tracks (GBR 22)
- The handling and use of pesticides (GBR 23)
- Operating sheep dipping facilities (GBR 24)

In addition, compliance is required with the Action Programme for NVZs and Cross Compliance rules

In the 14 priority catchments, starting in 2011, 5,835 km of water courses were walked⁶¹, during which 5,169 instances of non-compliance with the GBRs was found, primarily GBR 19 (75%) relating to issues with livestock poaching mainly and GBR 20 (22%) relating to land cultivation. Many other pollution sources were discovered at the same time and all information was digitized. Based on these findings, trained advisers visited 3,221 farms to

⁵⁸ Rural land use activities are covered by the Water Environment (Diffuse Pollution) (Scotland) Regulations 2008, referred to as the Diffuse Pollution General Binding Rules (DP GBRs). All rural land users have a responsibility to ensure they are working in line with the DP GBRs.

⁵⁹ identified as areas failing to meet environmental standards

⁶⁰ A legal entity under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR)

⁶¹ the five-metre riparian zone for main tributaries in the priority catchments were checked for compliance with the GBRs

discuss the findings with the farmer and to consider solutions designed to benefit both the business and the environment⁶². These individual visits involved:

- a risk assessment of the whole area of the farm (not just the riparian strip inspected during the catchment walk);
- the identification of any issues of non-compliance with GBRs;
- the provision of advice on good practice to avoid such breaches in the future; and
- provision of information on options where financial support was available, such as via the Scottish Rural Development Programme, (SRDP).

This process meant that quite specific issues could be identified. Amongst the most common problems identified were poaching, cultivation too close to water courses, deficiencies in manure and slurry spreading, lack of separation of clean and dirty water and unsatisfactory oil storage, slurry storage and pesticide handling areas.

This initial farm visit was followed up with a letter, a report (with accompanying map) and mitigation advice. Up to three follow up visits are scheduled to check that the issues have been resolved. If after this, the farmer is still non-compliant then SEPA can go down the enforcement route and issue fixed monetary penalties. One of the key findings of SEPA advisers on the first visit was that often breaches of the GBRs were due to a lack of awareness of the regulations, rather than any deliberate intention not to comply. This same process is currently being followed in the additional 43 catchments under RBMP2.

SEPA now has a formal target to ensure more than 75% of non-compliant farmers take up the required actions to alleviate diffuse pollution by the time of the first follow-up visit, usually 12 months after initial engagement with them. It has consistently achieved this target and currently the overall uptake of required actions after the first revisit is 82%. This is a considerable achievement given that initial farmer compliance was low. In the work on the first 14 catchments (RBMP1), only 32% of farmers were compliant with the required actions at the first visit. However, this compliance rate has improved according to data collected for the 43 additional catchments now being visited – up to 57% of farms visited are now compliant at the first visit. In particular, since the start of one-to-one farm visits in 2011, compliance with GBR 20 (diffuse pollution risks from cultivation) has improved significantly in arable catchments such as the South Esk and Tay - from 62% to 94%, following SEPA's visits.

This suggests that the efforts put into awareness raising and advice provision are starting to take effect across a wide area. There has also been an increase in the numbers of farmers proactively contacting SEPA directly to ask for advice on regulations relating to diffuse pollution than had been the case previously.

The progress made by farmers in improving their compliance with the GBRs is considered by SEPA to be due to:

- the strength of the evidence base;

⁶² It should be noted that if non-compliance with cross compliance requirements is found, then these have to be notified to the Scottish Government immediately.

- the willingness of the majority of farmers to engage – the fact that they are given a chance to change their practices before any enforcement penalties are applied makes a difference;
- The support and understanding of farming organisations and the Scottish Agricultural College;
- The commitment and buy in of a multi-organisational partnership steering by DPMAG which has also allowed for consistent messaging;
- The proportionate approach taken by SEPA, focusing on outcomes and providing good guidance; and
- The signposting to the opportunities available for getting public funding for certain actions – i.e. via the SRDP. The most common options suggested have been payments for buffer strips (beyond the compulsory two metres) and capital grants, particularly for slurry storage.

SEPA has recently been given powers to apply fixed monetary penalties⁶³ to land managers that have not improved their compliance with the rules by the third SEPA revisit and will use these alongside other enforcement tools to undertake enforcement action against consistently non-compliant farms.

The resourcing of SEPA’s farm visits, inspections and national advisory campaign has involved an average of about 12 staff (variable) per year over the last 10 years. Allocating sufficient resources to this approach remains a challenge and greater efficiencies are constantly being sought. For the 43 catchments that are currently the focus of the approach, each adviser tries to visit three farms/day, up from two per day previously. It is also hoped that the new powers to issue fixed monetary penalties will mean that the number of follow up visits can be reduced for consistent breaches as penalties will have been imposed. A further challenge that may arise after the UK leaves the EU is likely to be the reduced ability of many farmers to fund the investments required to achieve compliance with the GBRs unless there is sufficient support offered within the post Brexit Scottish agricultural policy regime.

⁶³ £300, £600 and £1,200 depending on the severity of the breach.