



Department
for Environment
Food & Rural Affairs

Report of the Joint Government and Industry Slurry Management and Storage Project

November 2013



Department
for Environment
Food & Rural Affairs



Rural Payments
Agency

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Ministerial Foreword

Dan Rogerson MP, Parliamentary Under Secretary of State for Water, Forestry, Rural Affairs and Resource Management

I am pleased to publish this report from the Joint Industry and Government Working Group for the Slurry Management and Storage Project. The project was set up to consider several slurry-related issues and to develop practical approaches for farmers to build resilience and continue to contribute to rural growth. It fulfils a commitment the government gave in August 2012 following the consultation on implementing the Nitrates Directive.

A key feature of the project has been the collaborative working by government and industry. This is joint policy development, as recommended by Richard Macdonald's Farming Regulation Task Force, in action. I very much welcome that all members of the group have endorsed the clear and meaningful conclusions, and look forward to this successful model of working together being used in other areas. Success in this initiative can only be achieved by a collaborative approach.

Fundamentally this report is about protecting the water environment, which remains a high priority for the government. It is a long term project with a long history and some long-standing rules and policies. It is right, every now and then, to ask whether those existing rules and policies are still serving a useful purpose, whether they can be improved upon, whether they are even needed at all. It was particularly important to review the SSAFO¹ rules, now over 20 years old, and whether it might be possible to introduce greater flexibility to the closed periods set by the Nitrates rules². I am pleased that the review of these issues, and the others the group considered, indicates that our general approach is still sound. However, both the industry and our aims have moved on over 20 years, and I welcome the recommendations for specific changes that the group has made.

Joint working will not stop with this report. We intend to implement its recommendations as part of a wider programme of collaborative work - the Water Quality and Agriculture Project. This aims to develop, with industry, a coherent plan to reduce the impact of agriculture on the water environment whilst maintaining a sustainable and competitive farming industry.

The challenges of the future (for example from climate change) are significant. Industry and Government need to continue to work together to encourage actions and innovation to

¹ The Protection of Water (Silage, Slurry and Agricultural Fuel Oil) Regulations 1991 which became The Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) Regulations 2010 as amended

² The Nitrate Pollution Prevention Regulations 2008, as amended

improve longer term resilience in the farming industry to meet these challenges. I look forward to building on the constructive partnership approach taken through the Slurry project.

Dan Rogerson MP

Executive Summary

Background

The 29 million tonnes of livestock slurry produced in England annually represents a valuable source of crop nutrients for farmers. It can also be a serious source of environmental pollution if not stored and managed properly.

This project reviews the framework of requirements, advice, access to capital and enforcement within which farmers manage slurry, and makes recommendations as to where these might be improved in order to:

- Improve the resilience, competitiveness and sustainability of livestock farming;
- Protect and improve the environment;
- Ensure regulation is proportionate and appropriate to a progressive farming industry.

This work is in keeping with the recommendations of the Farming Regulation Task Force and the ongoing Government commitment to reduce regulatory burden on business. Recommendations are based on the latest evidence available. Recommendations were developed and agreed by a working group (“the Group”), drawn from the livestock farming industry and Government organisations, on an ‘in principle’ basis. The group understands that Ministerial agreement to these recommendations is necessary, that additional development will be necessary on some recommendations and that any proposed changes to regulations will be subject to the normal consultation mechanisms. A full list of recommendations is on page 7.

Issues and findings: Requirements

Evidence suggests the Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) Regulations 2010 (the SSAFO Regulations) have reduced the number and severity of pollution incidents involving slurry, silage and fuel oil. However, they were originally drafted over 20 years ago for an industry whose structure and production practices were very different from today.

The importance of tackling ‘diffuse’ pollution in policy making has increased in recent years because it now poses a major threat to meeting the requirements of the Water Framework Directive (WFD). It also represents a loss in fertiliser value and purchased inputs for farmers. The Group considers the SSAFO Regulations remain very important but require updating. Recommendations are made for improvement and harmonisation with other legislation and with the current review of the CIRIA 126 standards (which are technical standards for construction of storage facilities) being led by the Environment Agency (EA). One finding is that the capacity, rather than the age of SSAFO infrastructure is the key issue for preventing pollution. Age is not a reliable indicator of condition and further work would be required to demonstrate fitness for purpose by ‘condition assessment’, without adding to the regulatory burden.

A common methodology for calculating the rainfall element of storage requirements should apply across the Nitrates and SSAFO Regulations based on high resolution data that is appropriate and available to all farmers and advisers. Harmonisation will help reduce regulatory burden and ease understanding and implementation.

Closed Periods, a requirement of the Nitrates (Pollution Prevention) Regulations 2008 (as amended), restrict the application of livestock slurries to land within a Nitrate Vulnerable Zone (NVZ) to periods where the risk of nitrate leaching is lowest. This constrains management regimes and represents a substantial investment cost for farmer because of the consequent need to provide slurry storage. Industry suggested that such 'farming by the calendar' is counterproductive and asked whether it would be possible to introduce flexibility into closed periods.

The Group supports the concept of flexibility in principle. However, the evidence shows that it is currently not possible to create a working model for flexible closed periods and that a flexible approach is not feasible at present. It was recommended that Industry and Defra continue to monitor the situation and review any new relevant evidence, including research from other Member States, that might inform different arrangements in future. As a result, the need for the development of additional methodology to deal with extreme weather events will be kept under review.

Issues and findings: Advice

The project reviewed the advice available on slurry management with specific evaluation of the South West Slurry Initiative of Winter 2012/2013, linking with recent reports on advice provision from Government and from the industry.

There is clearly no 'one-size-fits-all' solution to improving slurry management in England through advice. Advice needs to be tailored to the needs of an individual farmer and is best delivered by trusted advisers within an integrated package that focuses on the value of slurry to business and on improving financial performance and resilience. One-to-one advice can be very effective and can represent better value for money than has been suggested. Advice on minimising volumes of slurry e.g. by diverting clean roof water, can be very productive and can often improve performance at lowest cost. Developing advice packages to be delivered through the industry is recommended. Overall, industry and Government need to continue to work in partnership to streamline and improve advice and guidance about slurry and promote tools that support and deliver them.

Issues and findings: Access to Capital

Evidence suggests that cost is one of the barriers for farmers in ensuring they have sufficient slurry storage. The project explored whether market failure is causing difficulty in accessing capital.

Many farmers face financial pressure due to poor cash flow or profitability, particularly after the problems caused by bad weather in 2012. These issues are being considered by representatives of banks, charities and industry in working groups set up by the May 2013 'banking summit' chaired by the Secretary of State.

However, evidence indicates that agri-borrowing is currently increasing and there is generally (across the whole agricultural sector) no market failure, though tenant farmers and new entrants can have difficulty raising capital due to lack of equity in land. However, where capital is available, it is often being used to finance short-to-medium-term cash flow. There are competing demands for available capital, often based on an individual's priorities. Issues of succession, for example can be a significant barrier to investment. It is important that mechanisms providing funding, private or public, are targeted to support sustainable slurry management and water quality outcomes (e.g. Catchment Sensitive Farming grants, Rural Development Programme for England grants and also privately funded initiatives such as water company catchment projects).

Issues and findings: Enforcement

Evidence presented suggests that non-compliance with rules on slurry storage and management can pose risks in terms of environmental protection.

The EA and Rural Payments Agency (RPA) have interlinked roles in enforcing compliance but the difference between these roles may have been poorly communicated to and understood by farmers. Any enforcement policy needs to be transparent, proportionate and consistent if it is to embed the desired behaviour change and support the sustainability of the industry while meeting legal obligations.

The Group understands and accepts the revised enforcement framework proposed by the EA and the rationale behind it. They highlight the communications effort that will be required and recognise the role of industry in this. They recommend the framework is reviewed after a period of operation and that the EA and RPA improve their communications to farmers to foster better understanding of what each organisation does and why and that enforcement will be applied consistently. A key recommendation is that the RPA and EA ensure that, after an inspection, a farmer is left with a clear understanding of the outcome and any financial implications.

Legacy

It is recommended the Group is kept informed and consulted as appropriate to help implementation of recommendations and resulting developments or new evidence.

Introduction

Livestock farmers in England are responsible for managing around 29 million cubic metres of slurry every year (65% dairy, 25% beef and 10% from pigs).

While slurry is a valuable source of nutrients for crops, it can also be a significant pollutant if not stored and applied carefully (as are silage effluent, agricultural fuel oil and fertilisers). There are therefore regulations and guidance, including the Code of Good Agricultural Practice, which govern its storage and management.

In recognition of the importance of good slurry management and storage, and the range of complex issues preventing industry from maximising the benefits, and minimising environmental harm, a short project was initiated in January 2013 to consider:

- The requirements on farmers in relation to silage, slurry, and agricultural fuel oil (SSAFO) management and storage;
- The financial support and advice available and provided to farmers in relation to meeting the requirements on slurry management and storage;
- Enforcement of slurry management and storage as an integral part of wider Water Framework Directive (WFD) delivery.

The core conclusions of the Farming Regulation Task Force, which reported to Government in May 2011, set out that controls for slurry need to be fit for purpose.

Reflecting the Farming Regulation Task Force recommendations for co-designing policy with the industry, Ministers asked officials to work in partnership with the farming industry. This report, like the project, has been prepared and agreed in partnership between Government and industry. A list of the organisations participating in the project is at Annex A.

Key drivers for the project included:

- A Government commitment in the *Government Response to the Consultation on Implementing the Nitrates Directive* to review the SSAFO Regulations and Nitrogen Vulnerable Zones (NVZ) Closed periods;
- Requests from industry to understand the evidence of the pollution caused by slurry, and to develop a clearer, more coherent approach to regulation and enforcement of slurry requirements;
- The Defra priority to support rural growth and competitiveness;
- The Defra priority to improve the environment and meet the requirements of the WFD;
- The Government's commitment to reduce regulatory burden where possible;

- The need for resilience across the farming industry as more extreme weather conditions, such as the prolonged wet weather in 2012, are predicted to become more common;
- The issues around non-compliance with regulations, and evidence that agriculture is causing around 60% of nitrate and 25% of phosphorus contamination of water systems.
- The need for fair, proportionate and consistent enforcement;
- The need to enable a more joined up approach to the issues around nutrient management across a wide range of related policy and legislation and to deliver co-benefits where possible;
- Meeting regulatory (EU & domestic) targets for reducing GHG emissions and ammonia emissions.

The project

Project aim

To encourage better use of agricultural nutrients to improve sustainability and farm competitiveness, whilst protecting and enhancing the environment. To be achieved through the development of an improved framework for managing and storing agricultural slurries and manures.

Outcomes

- Improved water quality through reduced pollution caused by poor slurry and silage management or storage.
- Improved understanding of the benefits and use of agricultural nutrients.
- A more coherent and well-communicated framework of requirements on farmers, advice and support available to farmers underpinned by effective enforcement.
- Improved competitiveness of the livestock sector (accepting this will mean difficult decisions for Government, the sector and individuals).

For practical reasons, the Project was organised into the following workstreams. However, the Project took a holistic view to the inter-related and often inseparable issues.

Requirements	1. Review of closed periods in Nitrate Vulnerable Zones (NVZs) 2. Review of The Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (England) Regulations. (The SSAFO Regulations)
Advice	3. Implementation and evaluation of the South West Slurry Storage Advice Initiative. 4. Mapping and evaluation of existing advice.
Support	5. Review and recommendations on farmers' access to capital for slurry storage and infrastructure.
Enforcement	6. Review and development of a coherent approach to enforcement of slurry requirements.

The work has been supported by a research project (WT1058) (See Appendix to the Report) undertaken by ADAS UK Ltd following a competitive tender, who were tasked as follows:

- To investigate the contribution of slurry management practices (storage and land spreading) to agricultural point-source diffuse pollution and water body failure under the Water Framework Directive. (Work Package 1)
- To investigate the feasibility of adopting a 'flexible' approach to the setting of closed-spreading periods for high readily available N manures in relation to soil type, climate, farming system and weather. (Work Package 2)
- To investigate the existing SSAFO regulations and evaluate their effectiveness in minimising pollution from slurry, silage and agricultural fuel oil. (Work Package 3)
- To evaluate the availability, accuracy and effectiveness of advice on slurry storage and land application strategies to minimise diffuse pollution from agricultural systems. To map and evaluate the sources of capital available for improving slurry storage capacity. (Work Package 4)

Next steps

Following consideration by Ministers, Defra and Industry will work on implementation of the recommendations in this report, and subsequent updating of the SSAFO regulations during 2014.

Summary of Recommendations

Closed Periods

1. The evidence does not support creation of flexible closed periods at present.
2. Industry and Defra to continue to monitor the situation and review any new relevant evidence, including research from other Member States that might inform different arrangements in future. The need for the development of additional methodology to deal with extreme weather events will be kept under review.

The Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (England) Regulations. (The SSAFO Regulations)

3. The SSAFO Regulations still have a role to play in controlling both point source and diffuse pollution and should be retained. The SSAFO Regulations should be updated to include the standards for design and construction being developed under the EA/CIRIA 126 project, subject to these being agreed before draft legislation is prepared. The following should also be addressed:

3a. a common methodology for calculating the rainfall element of storage requirements should apply to NVZs and to SSAFO regulations based on high resolution data that is appropriate and available to all farmers and advisers.

3b. several definitions used within the Regulations need to be improved and clarified as described in conclusions above:

‘dirty water ‘

‘substantially enlarged, reconstructed or modified’

‘yard’

‘leakage’ from manure heaps.

Further work with industry will be needed to test definitions, assess the implications for industry that changes may have, and agree changes to include in amended regulations.

3c ‘constructed wetlands’ should not be included within the SSAFO Regulations at this time.

3d. The Group recognises that ‘constructed wetlands’ may have a role in integrated management of slurry and especially in reducing environmental risk and management costs: it is recommended that work is commissioned to evaluate their potential and use, and that more informed advice is made available to farmers and advisers.

3e. Regulations need to be reviewed to include new materials e.g. plastic tanks; and techniques e.g. slurry bags, high dry matter silage. Appropriate standards are

needed. These should be covered under CIRIA 126 Review. Requirements around silage in particular need reviewing.

4. The condition of and risk posed by any slurry, silage or fuel store should be assessed by a regular 'condition review'.

4a. further work is required to develop this concept and investigate how this could be achieved in a meaningful way for all stores and become standard practice. Particular emphasis should be paid to minimising the regulatory burden and to identify opportunities for implementing an earned recognition approach.

4b. In addition, this work would need to investigate where self-assessment templates could be used, how more formal accreditation (if required) could be made available and who might be able to provide this (again, being mindful of burdens).

5. To improve resilience, when farmers are creating new or 'substantially enlarged, reconstructed or modified' slurry stores they should in future ensure that an overall minimum of 5 months storage capacity is available for that (or to that) farm after the works have been completed. This should be enforceable under SSAFO Regulations, unless the producer can make a justifiable case to the Regulator for managing their slurry in alternative ways in line with current regulatory principles applying to existing SSAFO and Nitrates Regulations. (It should be made clear that on farms where slurry is produced, but there are no or inadequate storage systems present, the EA can still require, subject to existing appeal mechanisms, provision of storage, or alternative ways of managing slurry, where there is a risk of pollution to controlled waters.)

6. Minimisation of slurry produced e.g. by limiting rainfall entering stores, should be promoted through all grants and advice available to farmers. This could be delivered through and involve:

- Rural Development Programme for England;
- Catchment Sensitive Farming;
- Advice provision, for example by the Farming Advice Service, Campaign for Farmed Environment, AHDB, Tried & Tested and other advice services.

7. The regulatory framework sets minimum slurry storage capacity but this is no guarantee of resilience. Building resilience and contingency planning into a slurry and manure management system is desirable. Systems must ensure slurry is managed as an integral part of the business allowing for business growth and external factors such as increased rainfall. Better awareness of the need for resilience could be promoted to farmers through several means. These include through contacts with regulatory authorities during the storage planning phase, through other relevant advice streams and through formal interactions around slurry storage such as farm inspections. This approach could also be promoted by industry bodies, commercial advisers and incorporated in to the Farming Advice Service activity.

8. Regulation of agricultural fuel oil should remain within scope of the SSAFO Regulations.

8a. 'Capacity' of fuel stores should be used consistently as the trigger level for regulation, as 'volume of oil in storage at any given time' frequently changes;

8b. a minimum capacity for a fuel tank to be regulated would need to be set. Some further work to assess any implications for farmers and impacts from previous spills is needed.

8c. revised regulations should clearly distinguish between 'double skinned' and 'fully bunded' tanks and that the requirement is for the latter in all cases.

9. The SSAFO Regulations could be appropriate to elements of the regulation of anaerobic digestion, particularly as to the 'appropriate standards' specified in environmental permits, or where feed stocks are grown on farm or derived solely from agricultural manures.

9a. SSAFO Regulations already cover storage of ensiled feedstock but this and other relations to AD must be made very clear in revised Regulations.

9b. This is an area of work that needs to be further developed by:

- Defra Waste Policy teams
- Environment Agency permitting team
- The CIRIA 126 review project.

Advice

10. Advice on slurry works best when integrated with other advice. Slurry management and storage advice should therefore be embedded within related guidance and information ensuring a 'whole story approach' across a wide network of related subjects and initiatives (e.g. nutrient management, manure management, soil quality, air quality and ammonia emissions, water quality, fertilisers, biodiversity, CAP, RDPE, Catchment based Approach, CSF, Farming Advice Service, Campaign for the Farmed Environment, Tried & Tested).

11. Key messages from previous work on advice and guidance are applicable in relation to slurry and recommendations from previous work (e.g. improving guidance, open-sourcing advice) should be pursued. Use should be made of the 5 Principles of Advice.

12. The value of slurry as an asset (resource management/ efficiency) should be stressed (using the same message as the Tried & Tested tool). Building resilience into management systems should also be a key element. Advice should focus on these changes to behaviour.

13. Advice has the greatest impact when delivered by trusted advisors. Work through the Industry/Government Advice Forum, to facilitate communication through trusted advisors, support and advice networks (e.g. Farming Advice Service, rural hubs).

14. The Advice Forum to work to ensure that advice is more coherent and better co-ordinated between Government and the advice sector, more generally and to provide support for a focus for slurry and related topics.
15. Industry and the Advice Forum to coordinate to develop a training package for professional advisors, covering slurry management and storage requirements and SSAFO, possibly with support from AHDB.
16. AHDB and Industry to look at options to increase the use of and widen the scope of tools such MANNER-NPK and Slurry Wizard to optimise slurry management.
17. The Advice Forum, CSF and FAS should investigate feasibility of offering farm audits and tailored financial advice to farmers as part of a package.
18. Given the benefits seen from the relationships built up between Catchment Sensitive Farming Officers and farmers, during the next revision of the CSF Project, consideration should be given to more closely aligning CSF geographic areas with NVZs.

Access to Capital

19. Evidence from this Project should be fed into the work being undertaken by the Secretary of State's Banks Summit to build a fuller picture. This can then be used to target any further action effectively.
20. Slurry measures should be considered as part of the design of the new RDPE. Water quality should be recognised as a priority within the next RDPE and in revisions to the Catchment Sensitive Farming (CSF) Project and Capital Grants Scheme.
21. Further work is undertaken to understand the economics of slurry storage, handling and utilisation to understand the costs and benefits for farmers in different circumstances and develop Knowledge Transfer streams from this.

Enforcement

22. The revised approach to enforcement needs to be communicated over an extended period of time. Industry has a part to play in this too. The regulators must ensure that the legal and regulatory frameworks are explained in a clear and coherent way. The regulators should also improve the way they explain their roles.
23. At the end of every inspection, farmers should be told what is going to happen next in terms of referral to another organisation and the likelihood of a penalty.
24. EA and RPA inspectors to work together more effectively and consistently. Training and guidance to officers in each organisation should give more emphasis on the respective roles.
25. The Project Group should reconvene after the revised enforcement framework has been rolled out in order to check progress and suitability and ensure that the approach is being applied in a fair and proportionate way, as intended.

The “Requirements” work stream

The Regulatory Framework

The storage, management and spreading of agricultural livestock slurries in England are governed by a framework of regulations and guidance. It is important that this framework:

- protects the environment from potential pollution during all stages of slurry management;
- supports the resilience, economic performance and sustainability of farming businesses;
- is proportionate and appropriate to a modern, progressive farming industry;
- is as streamlined, flexible and simple as possible while still meeting the previous requirements.

The key regulatory elements of this framework are:

- Water Resources Act 1991

The fundamental underlying principle is that production, storage and application of manures to land should not give rise to water pollution: The unconsented discharge of poisonous, noxious or polluting matter to controlled waters is prohibited. The legislation addresses both acute/point source and chronic/diffuse pollution.

- Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) Regulations (SSAFO Regulations) 2010 (as amended 2013)

These regulations are made under the Water Resources Act and require any person who has custody or control of slurry, silage or agricultural fuel oil that is being made or stored to keep such materials in appropriate storage and to take precautions for preventing pollution of waters by these materials.

- Nitrates (Pollution Prevention) Regulations 2008 (as amended)

Under these regulations parts of the country where nitrate levels are high or rising are designated as Nitrate Vulnerable Zones (NVZ). Within the zones action programme measures are specified, which include the requirement not to spread slurry in designated “closed periods” and to have a minimum storage capacity.

In their response to the Consultation on Implementing the Nitrates Directive in August 2012, the Government made a commitment to review the SSAFO Regulations and whether it would be possible to introduce flexible closed periods in NVZs. These have therefore been the primary focus of the review of requirements.

However, there are other regulations and requirements that are relevant to slurry management and have been taken into account during the review where appropriate (this is not an exhaustive list):

- Environmental Permitting (England and Wales) Regulations 2010 (EPR): - Larger pig and poultry units have to comply with the Integrated Pollution Prevention and Control (IPPC) Directive, now recast as Industrial Emissions Directive (IED) which has a requirement to apply Best Available Techniques (BAT) to prevent, or reduce, emissions to air, land and water from these activities. This is currently implemented through the Environmental Permitting Regulations introduced in 2008 and applies to larger pig and poultry farms. Anaerobic Digestion (AD) is also subject to EPR permitting: this is relevant as some AD units are sited on farms, use slurry and silage as feedstock and spread the resultant digestate to land.
- Cross Compliance: Compliance with the NVZ regulations forms part of the Cross Compliance obligation Statutory Management Requirement (SMR) 4. Cross Compliance is the set of obligations farmers must abide by when claiming certain payments under the Common Agricultural Policy (CAP), such as the Single Payment Scheme or certain rural development schemes. Reductions to these payments can be made for failure to comply with the NVZ regulations which constitute a breach of Cross Compliance. Cross Compliance also covers obligations to maintain land in Good Agricultural and Environmental Condition (GAEC). GAEC 19 sets 'no spread' zones near surface water, boreholes, wells and springs. This requirement is separate from SMR 4, though it does reflect some of the same rules about spreading. GAEC 19 applies across the whole of England.
- The Government's Carbon Plan (presented to Parliament in Dec 2011): <https://www.gov.uk/government/policies/reducing-the-uk-s-greenhouse-gas-emissions-by-80-by-2050/supporting-pages/carbon-budgets> The Carbon plan sets out Government's policies and proposals for meeting the first 4 carbon budgets. It updates and supersedes the 2009 Low Carbon Transition Plan. (Industry's Greenhouse Gas Action Plan is also relevant).
- Ammonia and transboundary reductions: Directive 2001/81/EC of the European Parliament and the Council on National Emission Ceilings for certain pollutants (NEC Directive) sets upper limits for each Member State for the total emissions in 2010 and thereafter of the 4 pollutants responsible for acidification, eutrophication and ground-level ozone pollution (sulphur dioxide, nitrogen oxides, volatile organic compounds and ammonia).

Review of NVZ Closed Periods

Background

Farmers within Nitrate Vulnerable Zones (NVZs) must manage inorganic fertilisers and organic manures/slurries according to regulations implementing the EU Nitrates Directive. Requirements cover both application and storage. 'Closed Periods' when livestock slurries may not be applied to land, can add pressure to management regimes and capital investment may be required to ensure storage facilities comply with the requirements for construction standards and capacity. The project has considered if a more flexible approach to closed periods is possible or not, given the variability in soil type, climate, farming systems and weather across the country.

Issues

It has been suggested that closed periods deliver an arbitrary 'farming by the calendar' approach which does not reflect in-year weather patterns and that weather patterns are different each year. Others have queried the evidence base for the current closed periods. Other issues often put forward include:

- Cost of storage.
- Concentration of spreading activity immediately before and after closed period: this could concentrate environmental risk and public nuisance, especially if weather or ground conditions are not ideal.
- Lost opportunities to spread during suitable windows within the closed period i.e. when weather and ground conditions might appear to suggest little risk to environment.
- Whether there should be a 'force majeure' provision to override the regulations in extreme adverse conditions.

Findings and Conclusions

The ADAS research (Appendix 2) examined:

- existing and emerging evidence concerning the impacts of slurry spreading during various weather and soil conditions and at various times of year;
- practices in European countries with comparable agri-climatic zones;
- potential methods to predict 'safe' periods within a closed period when spreading might be carried out with reduced risk.

The research gave the Group a good basis to make their recommendations. Key findings include:

- Autumn application timings generally increase the potential for nitrate leaching losses on all soil types, because crop N uptake during the autumn/winter period is generally low and there is sufficient over-winter rainfall to wash manure-derived nitrate beyond crop rooting depth.
- Spring and summer application timings are likely to minimise nitrate leaching losses, because of low drainage volumes and rapid crop uptake of manure-derived N following application.
- On medium/heavy soils, there is potential for ammonium, phosphorus and microbial pathogen losses in drain flow (and surface runoff) waters where slurry applications were made to 'wet' soils (<20 mm soil moisture deficit) and sufficient rainfall occurred in the 10-20 day period after application to generate drain flow (and surface runoff).
- Soil moisture deficit profiles (using typical climate data) on arable land indicated that slurry applications are could lead to ammonium, phosphorus and microbial pathogen losses generally in winter/spring.
- A flexible approach to setting closed periods for minimising nitrate leaching losses following high readily available N manure applications would be difficult to implement; and is not supported by current scientific evidence, (ADAS Work Package 2 Report, Appendix 2 gives details).
- All other countries in the EU have fixed closed spreading dates for organic manure and manufactured (chemical) fertiliser applications.

The Group supports the concept of flexibility in principle.

The Group supports the concept of flexibility in principle. However, the evidence shows that it is currently not possible to create a working model for flexible closed periods and that a flexible approach is not feasible at present. It was recommended that Industry and Defra continue to monitor the situation and review any new relevant evidence, including research from other Member States, that might inform different arrangements in future. As a result, the need for the development of additional methodology to deal with extreme weather events will be kept under review.

They also agreed that the concept of 'open periods' (i.e. times when spreading is permitted) as opposed to 'closed periods' was helpful and would be useful to promote in future advice and support to industry. There is still some work to be done to consider how 'open periods' vary across the country and between years when seasons do not follow averages.

However, the Group agreed that the weight of evidence indicated clearly that:

- There is currently no methodology available to create a working model for flexible closed periods.
- A general flexible approach is not feasible at present and is not supported by current scientific evidence. However in terms of future resilience, for example the weather leading to late harvests, it was important to consider any new research and

evidence eg through work on adaptation to climate change. In the meantime, farmers should be encouraged to consider their resilience as part of their business planning.

- A Defra proposal to the European Commission for a flexible system is unlikely to be accepted unless a credible and clearly evidence-based working model/methodology could be developed.

Recommendations

1. The evidence does not support creation of flexible closed periods at present.
2. Industry and Defra to continue to monitor the situation and review any new relevant evidence, including research from other Member States, that might inform different arrangements in future. The need for the development of additional methodology to deal with extreme weather events will be kept under review.

Review of the SSAFO Regulations

Background

The Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) Regulations 2010 (SSAFO Regulations) were first made over twenty years ago for a farming industry and farming practices very different to those of today. Over the past twenty years, the trend towards larger herds, fewer farms and more intensive production have transformed the livestock sector. The type of pollution the Regulations were designed to address, namely serious 'point source' incidents, is rarer now and so it is reasonable to investigate the need for the Regulations. The Regulations also need to reflect that the policy and legal framework and requirements to reduce diffuse pollution and emissions have also moved on.

The capital cost of slurry storage is high and, for many, a critical factor in the viability of their business. This, in addition to the findings of the Farm Regulation Task Force, and ongoing Government commitment to reducing regulatory burdens on farming where possible, means it is appropriate to examine if and where the Regulations might be improved, simplified or reduced.

Issues

Pollution and SSAFO

As noted previously, slurry and silage effluent are highly polluting materials in terms of N and P and also due to their high Biochemical Oxygen Demand (BOD) when in water and the pathogens they carry. They can cause tremendous damage to rivers, streams and lakes; bathing water failures; shellfish failures; and cryptosporidium outbreaks, as well as damaging other downstream interests, including drinking water supplies and use by other farmers. As well as the impact that a pollution incident can have on the environment, it can have a direct financial impact on the farmer, with the EA charging for their costs - which can be considerable - on top of any penalties incurred.

Regulation of storage structures, whether for slurry, silage or agricultural fuel oil, can reduce pollution (or the risk of pollution) in three key ways:

- Specified construction standards help to reduce the risk of structural failure or leakage and provide quality products with longevity.
- Location restrictions (10m from a watercourse etc.) help to reduce the impact of any incident arising as a result of leakage or failure of a store.
- Increase the flexibility of timing of land application and therefore reduce the risks associated with spreading in inappropriate conditions leading to pollution incidents, diffuse pollution and damage to farmland.

Standards of design, materials and construction are fundamental in ensuring that a store containing materials that are potentially harmful to humans, livestock and the environment is fit for purpose and safe. *CIRIA 126, Farm waste storage: guidelines for construction;*

1992 provide guidelines for construction standards for infrastructure covered under SSAFO Regulations. As many processes, materials and agricultural techniques have changed since the original SSAFO Regulations were drafted, CIRIA 126 standards are currently being reviewed.

It is timely that these standards are currently being reviewed and updated as part of an Environment Agency project that also is assessing levels of compliance with current regulations. The project will assess and report on:

- types of slurry stores that exist,
- their capacity, the structural condition and
- levels of compliance with SSAFO and NVZ Regulations.

The project is due to report in Autumn 2013 and there is obviously a synergy between the two projects.

Air quality is another concern. One of the key mitigating activities that has been identified as reducing ammonia emissions from agriculture is slurry storage and management; low emission spreading techniques, covers on slurry tanks or lagoons and low emission floor systems would all greatly contribute to lowering ammonia emissions which is important for improving air quality and decreasing levels of air pollution.

Almost 90% of UK ammonia emissions come from agriculture; emissions have decreased since 1990, but at a slower rate than for other major air pollutants. Current evidence suggests that emissions may increase over the 2020-2030 period driven by increases in the use of urea fertiliser and increased animal numbers and there is an emerging risk from spreading of digestate from anaerobic digestion. In view of these significant potential risks to human health and sensitive ecosystems it will be important to address Ammonia emission when improving slurry management techniques.

Age of stores

The failure of slurry stores can have a significant impact on the surrounding environment especially if the slurry enters a watercourse. Evidence suggests that many stores were built around or before the introduction of SSAFO Regulations and are therefore over 20 years old. SSAFO Regulations themselves require a minimum 20 year 'design life' with proper maintenance. It has been argued that this makes these a greater risk to the environment, although no strong evidence was available one way or the other.

This concern was heightened by the interpretation of Regulation 6 of the SSAFO Regulations, that stores built, or in construction, before 1991, are exempt from the requirements of SSAFO Regulations: it was therefore suggested by some that older stores pose a higher risk. There is also an argument that perhaps the exemption should be removed.

Where the EA becomes aware that any store poses an unacceptable risk of pollution, it can use its regulatory powers to address the situation as necessary.

Slurry Storage Capacity

SSAFO Regulations require slurry stores to provide capacity for a minimum of four months production, including 'likely' rainfall (interpreted as 1 in 5 year event).

For farms with no storage or storage built before 1991, it is not clear whether this regulatory minimum volume applies. In addition, it is unclear whether a store that was compliant becomes non-compliant if the slurry production increases without an increase in capacity.

Within NVZ designated areas (which cover around 58% of England), farms need to have higher minimum storage capacity – 5 months slurry production for dairy/beef and 6 months for pigs including average rainfall. (This means the calculation of the capacity needed may be marginally greater than in SSAFO which uses 'likely rainfall', depending on which four months are considered for the SSAFO calculation.)

The methods for calculating the rainfall element of storage requirement differ between the SSAFO and Nitrates Regulations. It has been argued that this is confusing and perhaps a common methodology or indeed a common storage requirement might be advantageous.

Definitions and terminology

There are several definitions and terms in and around the SSAFO Regulations that are known to confuse farmers and cause problems with compliance:

- The discrepancy between the understanding of the term 'dirty water' within an NVZ and outside;
- The definition of 'substantially enlarged' and 'substantially reconstructed' within SSAFO;
- The definition of 'yard' within SSAFO and the NVZ Regulations
- 'Drainage from manure heaps' is slurry in some circumstances and needs defining.

In addition, 'constructed wetlands' are often suggested as a method of treating water contaminated by manures but it is not clear whether such constructions could be defined and regulated under SSAFO.

Silage

Silage-making techniques have developed since the SSAFO Regulations were originally drafted, with silage becoming drier and therefore producing less effluent. This may allow a reduction in the size of silage effluent tanks to be considered.

Agricultural Fuel Oil

The suitability of SSAFO to regulate fuel oil storage on farm has been questioned, and specifically whether regulation of agricultural fuel oil would be best amalgamated into the Control of Pollution (Oil Storage) (England) Regulations 2001 and thereby simplify regulation overall.

The volumes of fuel oil used on farm, and the size and type of tanks used to store them have changed markedly since SSAFO Regulations were drafted: it would seem sensible to assess whether current SSAFO standards are adequate.

For example, the drafting of the regulations implies that controls only apply when the actual quantity stored of oil exceeds 1500 litres regardless of the size of the tank the fuel is in. This leads to difficulties - where it is claimed the actual quantity on farm on any given day may not exceed 1500 litres, even though the store capacity is clearly much higher.

Anaerobic Digestion (AD)

Some AD units use ensiled crops as feedstock but many operators do not understand that the storage of such feedstock is subject to SSAFO Regulations.

It has been suggested that SSAFO Regulations might supply standards that could be utilised within the EPR permitting system.

Findings and conclusions

Pollution and SSAFO

The ADAS research (Appendix 1) examined the contribution of slurry management practices to point-source and diffuse pollution. It noted:

- The EA National Incident Reporting Scheme (NIRS) data reveals that the number of pollution incidents involving slurry has fallen steadily over 20 years although land run-off problems remain of particular concern. Serious pollution incidents are relatively rare with an average of 148 reported incidents per annum between 2003 and 2012 from the 8700 dairy and 2000 pig producers in England. In this respect, it seems that the SSAFO Regulations have helped reduce such problems.
- Pollution from slurry stores and infrastructure covered by the SSAFO Regulations does not appear to be as significant a cause of either direct or diffuse pollution as might be anticipated.
- Analysis of this data shows the most common pollution incidents recorded (48%) are associated with spreading or overtopping of stores. In contrast store failure, e.g. catastrophic collapse, accounted for only around 5% of incidents in the period 2001–2012.
- Overall, manure management is believed to account for around 20% of diffuse pollution from agriculture, mainly from spreading, while only a small percentage is due to incidents arising from poor structural integrity.
- Common sense suggests that insufficient storage capacity, and therefore the inability to delay spreading to times when risks to the environment are lower, could be a much more important cause of both point source pollution incidents and diffuse pollution than structural or infrastructure issues.

The Group considered that a better explanation of the consequences of spreading in inappropriate conditions could be useful.

Age of stores

50-60% of stores are reported to be exempt from the requirements of the SSAFO Regulations as they were constructed before 1991 (although verifying construction dates is sometimes difficult).

However, there is poor correlation between the age of the store and its condition: evidence from the EA/CIRIA project, Catchment Sensitive Farming and ADAS, shows that condition of/environmental risk from stores is not reliably related to age alone. The frequency of inspection and maintenance are also key factors.

The evidence suggests that the condition of a store cannot be judged on the grounds of its age but requires individual assessment.

Given the risks posed by materials stored, some type of assurance/assessment is considered necessary. Some form of 'Condition Review' assessment of a slurry store could provide the assurance of its structural integrity and level of risk to the environment, and meeting Health and Safety requirements. (ie be standard practice)

There could be elements of either or both self-assessment and third-party (ie by a suitably qualified person) assessment (if required).

It is important that such a scheme would not unduly increase the regulatory burden on the farmer as this would be contrary to Farm Regulation Task Force recommendations, other Government initiatives and Government's efforts to reduce the burdens on business.

This work should also investigate the feasibility of industry and regulators developing training and a qualification, perhaps similar to BASIS or FACTS, that would enable a person so qualified to provide the necessary inspections and accreditation; this could provide opportunities for diversification and rural growth.

There is also potential for beneficial interaction with farm assurance schemes and/or insurance, where there is scope to:

- work on risk reduction tools/indicators
- explore opportunities for earned recognition around where risk can be shown to have been reduced e.g. through a condition review of stores

There is also a need to increase farmers' awareness around specific risks from SSAFO related pollutants and the need for adequate liability cover.

This idea is a starting point for further development. It does not rule out at this stage any options for delivering a system that would provide the necessary assurances in terms of environmental risk, health and safety etc in a meaningful way for all stores (including those currently exempt). It could provide the basis for earned recognition for farmers through demonstrating their stores are fit for purpose, do prevent pollution and therefore reduce environmental liability risk. There is potential to consider how insurance could play a role.

Slurry Storage Capacity

The proportion of farmers whose stores meet the construction standards and volume requirements in the SSAFO Regulations and the storage aspects of the Nitrate Vulnerable Zones Action Programme measures (NVZ-AP) (i.e. who are compliant with the Regulations) appears to be between 50 and 80%.

30-65% outside NVZ are likely to have sufficient storage to meet SSAFO requirements and 50 -70% of farmers inside NVZ are likely to meet the Nitrates requirements (conclusions from ADAS research – see Appendix 3).

This indicates that there are still significant numbers of farmers who lack the slurry storage capacity required by regulation and to build resilience into their management system.

The Group agreed that in an ideal world the total storage capacity available to the farm including currently exempt structures, should have at least the minimum storage required under SSAFO. However, given the current low level of profitability in livestock farming, the cost of installing storage, and the specific problems experienced by some segments (e.g. new entrants, tenant farmers), they believed that this should not become mandatory in any amendment to the SSAFO Regulations. The Group did agree that new or substantially enlarged or modified stores should provide a minimum 5 months storage capacity for the farm (ie become standard practice) unless the producer can make a justifiable case for managing their slurry in alternative ways in line with current regulatory principles applying to the existing SSAFO and Nitrates Regulations – for example through a Farm Waste Management Plan.

The Group considered that there are cost effective ways of reducing volume to be stored that farmers can take, for example by ensuring that clean roof and yard water is diverted away from the slurry system. This may involve re-routing of existing clean drains, the construction of new clean or dirty drains and the repair and replacement of rainwater goods such as downpipes and gutters. The roofing of open yard areas, manure heaps and silage clamps can also substantially reduce volumes to be stored, or potentially the need for a new store, but at more significant cost. Farmers can ensure their manure management plan is up-to-date and reflects their current business model, and (in suitable locations) consider adjusting their grazing periods to reduce the time livestock are housed.

Reducing the addition of 'clean' water to storage should be the first action in slurry management strategy and facilitating regulatory compliance. Advice streams available to farmers should support this. Grant schemes may continue to support this in future though this is still to be determined as they are reformed. Similarly, these types of measures have been supported by CSF and RDPE grants and have been shown to help farmers reduce water entering slurry stores unnecessarily.

Recent extreme weather has seen even well designed and compliant stores/systems unable to cope. It is critical that measures to reduce the volumes of 'clean water' entering stores are able to cope with the extreme weather conditions that are predicted to become more common.

The concept of resilience and supporting contingency planning is critical and has to be promoted. More consideration and planning are needed to ensure that storage capacity

fits the needs of the farm's business model and meets regulatory requirements. For example prioritising which slurries to store and those to spread first. Keep capacity for the more polluting by not adding very dilute slurries to the store but spread these first. The use of swales could be considered to take intermittently lightly contaminated or very lightly contaminated surface run-off to reduce volumes. This could be encouraged through industry and Government advice.

NVZ and SSAFO Regulations should use the same method of calculating the rainfall element of storage requirements: having different methods is confusing and unnecessarily complicated, further work is needed to understand the impact of changing the methodology. Harmonisation will help reduce regulatory burden and ease understanding and implementation.

Definitions and terminology

'Dirty water' needs clarification as it is technically slurry and causes confusion and problems for farmers. In terms of the definition of dirty water the new NVZ approach of "lightly fouled" should be adopted.

Leakage from manure heaps on solid surface is also technically slurry and definition needs strengthening.

'Substantial' enlargement or modification is too vague and confuses farmers: it needs precise definition. A formal definition of the terms could be useful, but might also lead to 'boundary stretching' and difficulty in enforcement. For example, it might be feasible to enlarge by a carefully calculated specified capacity less 0.5%. More work is needed on these definitions and the implications of changing these in relation to any requirement for 5 months storage.

The definition of 'yard' within SSAFO and the NVZ regulations: yard has been taken to mean a concrete or otherwise impermeable surfaced area within a farmstead. ADAS recommend that:

"The definition should be formalised and extended to include areas where livestock are confined on a regular basis, this would then encompass unsurfaced but semi-permeable areas such as cattle lodge floors and straw or woodchip corrals."

Constructed wetlands or swales are measures farmers can take to treat lightly fouled water and may receive some financial support to build these through the New Environment Land Management Scheme, however there is a variable understanding among farmers and advisers of what they are. The Group did not consider that constructed wetlands should be regulated under SSAFO, although more informed advice should be made available.

Further work will be needed to assess the implications for changes in definitions before agreeing whether it would be appropriate for these to be included in draft legislation.

Silage

New techniques in silage making need to be investigated and regulations amended if necessary e.g. if volumes of effluent stores are inappropriate.

Agricultural Fuel Oil

The safeguards provided under the Oil Storage Regulations (OSRs) are generally similar to those within the SSAFO Regulations. However the requirement for bunding whether within or outside a building, and the 10m clearance rule within the SSAFO Regulations appears to afford greater environmental protection than the OSRs; conversely, the exemption for pre-1991 stores does not exist in the OSRs, and the OSR volume threshold is lower.

Double skinned oil tanks are not the same as bunded tanks.

The Group suggested that better understanding of the SSAFO Regulations could help, for example by reminding farmers of the existing requirements for all oil tanks to be bunded and for the risk from hoses outside tanks to be addressed.

On balance, the Group felt that environmental protection is likely to be best served by retaining the controls on the storage of agricultural fuel oil within the SSAFO Regulations, though some amendments to take account of the increased use of plastic tanks and the impact of fuel theft are recommended.

The volume reference is now out of date and out of step with modern farming. The SSAFO Regulations should consistently refer to 'capacity' instead. Some further work to assess any implications for farmers is needed.

Anaerobic Digestion

Anaerobic Digestion is increasingly seen on farm and requires an environmental permit. However permits generally refer to 'appropriate construction standards' without saying what those are. The Group considered that this may be a gap and that digestate needs to be stored to the same standards that apply to slurry.

Digestate is treated no differently from slurry in practical terms. The AD process makes nitrogen more readily available which is a good thing in terms of the crops but also brings some added pollution risks from emissions of ammonia – the Group noted that research into small AD plants on farms is ongoing. It might be that in future, the SSAFO Regulations could provide the standards to be referred to in permits for its storage. This would seem particularly appropriate where feedstock was based on farm-produced slurry and/or ensiled crops. This might require an extension to the work currently reviewing CIRIA 126, the reference guidance for such standards, with input from EA and Defra Waste Policy teams as well as the AD industry.

Some AD units use ensiled crops as feedstock and many operators do not understand that the storage of such feedstock is subject to SSAFO Regulations. This needs to be addressed.

SSAFO may well offer a vehicle to demonstrate adequate standards in digestate storage, especially on simple systems using only farm-sourced manures and feedstock crops.

More work is needed to develop these themes and should be taken up by relevant policy teams in Defra, with EA together with the AD industry; CIRIA 126 review and the team progressing this should have early input.

Recommendations

3. The SSAFO Regulations still have a role to play in controlling both point source and diffuse pollution and should be retained. The SSAFO Regulations should be updated to include the standards for design and construction being developed under the EA/CIRIA 126 project, subject to these being agreed before draft legislation is prepared. The following should also be addressed:

3a. a common methodology for calculating the rainfall element of storage requirements should apply to NVZs and to SSAFO regulations based on high resolution data that is appropriate and available to all farmers and advisers.

3b. several definitions used within the Regulations need to be improved and clarified as described in conclusions above:

‘dirty water ‘

‘substantially enlarged, reconstructed or modified’

‘yard’

‘leakage’ from manure heaps.

Further work will be needed to test definitions, assess the implications for industry that changes may have, and agree changes to include in amended regulations.

3c ‘constructed wetlands’ should not be included within the SSAFO Regulations at this time.

3d. The Group recognises that ‘constructed wetlands’ may have a role in integrated management of slurry and especially in reducing environmental risk and management costs: it is recommended that work is commissioned to evaluate their potential and use, and that more informed advice is made available to farmers and advisers.

3e. Regulations need to be reviewed to include new materials e.g. plastic tanks; and techniques e.g. slurry bags, high dry matter silage. Appropriate standards are needed. These should be covered under CIRIA 126 Review. Requirements around silage in particular need reviewing.

4. The condition of and risk posed by any slurry, silage or fuel store should be assessed by a regular ‘condition review’

4a. further work is required to develop this concept and investigate how this could be achieved in a meaningful way for all stores and become standard practice. Particular emphasis should be paid to minimising the regulatory burden and to identify opportunities for implementing an earned recognition approach.

4b. In addition, this work would need to investigate where self-assessment templates could be used, how more formal accreditation (if required) could be made available and who might be able to provide this (again, being mindful of burdens).

5. To improve resilience new and 'substantially enlarged, reconstructed or modified' slurry stores should in future provide an overall minimum of 5 months storage capacity for that (or to that) farm, enforceable under SSAFO Regulations, unless the producer can make a justifiable case to the Regulator for managing their slurry in alternative ways in line with current regulatory principles applying to existing SSAFO and Nitrates Regulations. (It should be made clear that on farms where slurry is produced, but there are no or inadequate storage systems present, the EA can still require, subject to existing appeal mechanisms, provision of storage, or alternative ways of managing slurry, where there is a risk of pollution to controlled waters.)

6. Minimisation of slurry produced e.g. by limiting rainfall entering stores, should be promoted through all grants and advice available to farmers. This could be delivered through and involve:

- Rural Development Programme for England;
- Catchment Sensitive Farming;
- Advice provision, for example by the Farming Advice Service, Campaign for Farmed Environment, AHDB, Tried & Tested and other advice services.

7. The regulatory framework sets minimum slurry storage capacity but this is no guarantee of resilience. Building resilience and contingency planning into a slurry and manure management system is desirable. Systems must ensure slurry is managed as an integral part of the business allowing for business growth and external factors such as increased rainfall. Better awareness of the need for resilience could be promoted to farmers through several means. These include through contacts with regulatory authorities during the storage planning phase, through other relevant advice streams and through formal interactions around slurry storage such as farm inspections. This approach could also be promoted by Industry bodies, commercial advisers and incorporated in to the Farming Advice Service activity.

8. Regulation of agricultural fuel oil should remain within scope of the SSAFO Regulations.

8a. 'Capacity' of fuel stores should be used consistently as the trigger level for regulation, as 'volume of oil in storage at any given time' frequently changes.

8b. A minimum capacity for a fuel tank to be regulated would need to be set. Some further work to assess any implications for farmers and impacts from previous spills is needed.

8c. Revised regulations should clearly distinguish between 'double skinned' and 'fully bunded' tanks and that the requirement is for the latter in all cases.

9. The SSAFO Regulations could be appropriate to elements of the regulation of anaerobic digestion, particularly as to the 'appropriate standards' specified in

environmental permits, or where feed stocks are grown on farm or derived solely from agricultural manures.

9a. SSAFO Regulations already cover storage of ensiled feedstock but this and other relations to AD must be made very clear in revised Regulations.

9b. This is an area of work that needs to be further developed by:

- Defra Waste Policy teams
- Environment Agency permitting team
- The CIRIA 126 review project.

The Advice Work stream

Background

Advice is generally more personal and is tailored to individuals' circumstances; guidance is generic and written. Webinars or Apps are already useful tools, as are other digital media such as texting.

The advice landscape relating to the management and storage of slurry (and indeed silage and agricultural fuel oil) is complex. Over the past two years much has been done to simplify access to advice and coordinate through Government initiatives such as the Farming Advice Service (FAS) which incorporates regulatory and best practice advice. There has been significant effort for Government and industry (e.g. the Campaign for the Farmed Environment) to work together.

The South West Slurry Storage Advice Initiative was instigated at the request of a previous Minister of State, the Rt. Hon. Jim Paice MP following a visit to the South West. The initiative offered a suite of advice products including an infrastructure audit, a manures and slurry management audit, followed up by tailored financial advice from third party professionals.

Issues

A wealth of technical, practical and regulatory guidance (generic, published advisory information) on the storage and utilisation of slurries and manures has been produced over many years, often backed up with Government and industry initiatives to deliver this advice and guidance.

For example air, soil and water quality, regulatory compliance and sustainable farming initiatives all have connections with slurry and have produced advice and guidance. In addition, advice is delivered frequently through commercial and industry sponsored routes e.g. consultants, advisors and constituent organisations within Agriculture and Horticulture Development Board (AHDB).

However the effectiveness of this advice is in question and it is not clear that those most in need are accessing advice, or acting on it.

Findings and conclusions

The project identified links and dependencies with a number of projects and ongoing work which identify some very positive ways in which advice can be streamlined, for example:

- Review of environmental advice, incentives and partnership approaches for the farming sector in England-Defra, April 2013.

<https://www.gov.uk/government/publications/review-of-environmental-advice-incentives-and-partnership-approaches-for-the-farming-sector-in-england>

This report sets out Defra's plans to deliver a more streamlined framework of advice, incentives and partnership approaches to deliver the Governments priorities for land management.

Evidence indicates the current provision of advice is complex and fragmented - around 80 advice initiatives/channels were identified. The review concluded:

- a variety of delivery approaches is preferable;
- schemes need to be targeted at clear goals and objectives;
- delivery at local level by trusted sources works;
- robust monitoring and evaluation is key;
- incentives are more effective if coupled with advice;
- partnership working in advice delivery between Government, industry and other stakeholders can provide real benefits.

One of the recommendations was to establish a new Government and Industry Advice Forum. It also identified the following principles for advice:

1. Advice should be flexible and designed to manage and account for short and long-term change;
2. Advice is interpreted as part of a wider set of influences on behaviour, including economic incentives and/or regulatory sanctions, and must be designed and delivered with this in mind;
3. Advice should be specific, targeted and encourage a response from the farmer/land manager;
4. Advice should only be provided by sources who are trusted and seen as credible by the farmer/ land manager;
5. Understand and exploit the role that social networks play in shaping messages.

The review also assessed the role of partnership approaches in delivering the Government's objectives around land management. It concluded that voluntary/partnership approaches continue to have a key role to play but will not replace regulation in ensuring legal requirements are met and other wider objectives achieved. They can however operate alongside regulation and incentives to add value, meet specific needs and embed good practice.

- AIC, AICC and CAAV Value of Advice Report
<http://www.farmingfutures.org.uk/blog/value-advice-report>

The Project developed an understanding of how the commercial sector, including the agri-supply industry, delivers professional advice to farmers.

The report proposes a 'ring of confidence' model across the UK's farming activities whereby professional advisers - ranging from agronomists to vets and from feed advisers to seed representatives, play a vital role in delivering practical advice on farm.

- Smarter Environmental Regulation Review (SERR) Pilot Project on Nutrient Management Guidance <https://www.gov.uk/government/publications/smarter-environmental-regulation-review-phase-1-report-guidance-and-information-obligations>

The SERR Review proposed to design a new structure for environmental regulatory guidance that makes it much easier for businesses to find succinct information on their obligations: the 'find and follow' principle. The project will reduce duplication and remove obsolete material while clearly distinguishing between what is required and what is voluntary good practice.

The new single government website www.gov.uk will be the platform through which this guidance is provided.

The new model structure has been tested on a few areas of environmental regulatory guidance (including on nutrient management), and a prioritised plan for applying it across other areas by March 2014 is being developed.

The ADAS report (Appendix 4) maps and evaluates sources of advice for farmers.

Advice is a vital component in delivering the environmental outcomes and in improving competitiveness. Advice linked with an incentive and/or explaining possible penalties is generally more effective in encouraging behavioural change. Guidance (which is more generic) can provide a useful baseline, but often, specific, tailored advice is needed.

The effectiveness of advice depends very much on who is providing it. Evidence shows that farmers are much more likely to seek and act on advice if it comes from a trusted source. That source can be from Industry or from Government, but in all cases, it takes time to develop trust.

Both guidance and advice need to be tailored to the needs of a segmented target audience. A "one size fits all" approach does not work given the industry's diversity. Farmers are more receptive to advice on slurry if given as part of a wider topic and possibly if linked to the availability of financial support e.g. CSF grants or where it relates to profitability or resilience of the business.

Succession is a major issue in farming at present and farmers are much less likely to accept advice or invest in better slurry management if they have nobody to succeed them.

The Group noted that the farmers most in need of advice were generally the ones who were hardest to reach and would be reluctant, unable or unwilling to access it.

There is a lot of advice available, so coherence of messages around slurry management and storage is an issue.

There are many professional advisers who visit farmers on a regular basis, (i.e. who are part of the 'trusted circle of advisers' identified in the AIC/AICC/CAAV report Value of Advice), together with others such as rural hubs, banks and wider support networks.

Much is already being done. Effort needs to continue on an integrated basis across industry and Government. Government advice should become "open source" to enable delivery through trusted sources. A new integrated advice procurement contract for all Government provided advice will ensure government advice will be more joined up and delivered by local, trusted professional advisers. The Group wants to encourage professional advisers to offer advice on slurry management, storage and utilisation as part of a more integrated approach to improving farm business models and practice.

The value of slurry and slurry storage as an asset needs to be emphasised (resource management/ efficiency) rather than simply meeting regulation (this is the same message as Tried & Tested). Building resilience into management systems is key element of advice. Advice should focus on this change to behaviour.

There is a need to demonstrate and promote how further value can be gained from manures and slurries including treatment such as acidification and heat recovery from slurry cooling to reduce ammonia losses. Farmers can be encouraged to go beyond current good practice towards best practice which will make their business more resilient in the future to aspects such as energy and commodity price increases. For example consideration could be given to examining the feasibility of expanding the applications such as MANNER-NPK or Slurry Wizard to consider cost-benefit. Farmers could be encouraged to better understand the nutrient value of their slurry by increased testing.

The perception that advice must be on a 1:1 basis with farmers was challenged: evidence from CSF shows that this was not necessarily the case, especially when seen in the wider context of developing sustainable and competitive farming and improving the efficiency of farm businesses.

South West Slurry Advice Initiative

The South West Slurry Storage Advice Initiative was implemented over the autumn and winter, and concluded at the end of March 2013. This was a short term initiative for farmers in the South West who were in an NVZ for the first time and who may have problems meeting NVZ slurry storage requirements. It made available an infrastructure audit and a manures and slurry management audit, followed up by tailored financial advice.

The Group noted:

- Uptake was disappointing – possibly as a result of the extreme wet weather, and the time requirement (2 days).
- The evaluation endorsed the findings of other work on advice to farmers: the need for a level of trust to be gained before advice will be sought or considered;

profitability; issues of succession; considerations about the perceived enforcement risk; the need to integrate slurry advice with other issues.

- The process of identifying potentially eligible farmers did not work as well as it could.
- Overall the approach would need to be delivered nationally as part of an existing advice service offering rather than as a separate initiative.

Recommendations

10. Advice on slurry works best when integrated with other advice. Slurry management and storage advice should therefore be embedded within related guidance and information ensuring a 'whole story approach' across a wide network of related subjects and initiatives (e.g. nutrient management, manure management, soil quality, air quality and ammonia emissions, water quality, fertilisers, biodiversity, CAP, RDPE, Catchment based Approach, CSF, Farming Advice Service, Campaign for the Farmed Environment, Tried & Tested).

11. Key messages from previous work on advice and guidance are applicable in relation to slurry and recommendations from previous work (e.g. improving guidance, open-sourcing advice) should be pursued. Use should be made of the 5 Principles of Advice.

12. The value of slurry as an asset (resource management/ efficiency) should be stressed (using the same message as the Tried & Tested tool). Building resilience into management systems should also be a key element. Advice should focus on these changes to behaviour.

13. Advice has the greatest impact when delivered by trusted advisors. Work through the Industry/Government Advice Forum, to facilitate communication through trusted advisors, support and advice networks (e.g. Farming Advice Service, rural hubs).

14. The Advice Forum to work to ensure that advice is more coherent and better coordinated between Government and the advice sector, more generally and to provide support for a focus for slurry and related topics.

15. Industry and the Advice Forum to coordinate to develop a training package for professional advisors, covering slurry management and storage requirements and SSAFO, possibly with support from AHDB.

16. AHDB and Industry to look at options to increase the use of and widen the scope of tools such MANNER-NPK and Slurry Wizard to optimise slurry management.

17. The Advice Forum, CSF and FAS should investigate feasibility of offering farm audits and tailored financial advice to farmers as part of a package.

18. Given the benefits seen from the relationships built up between Catchment Sensitive Farming Officers and farmers, during the next revision of the CSF Project, consideration should be given to more closely aligning CSF geographic areas with NVZs.

The Access to Capital Work stream

Background

Slurry storage is expensive and this is cited as one of the main reasons for non-compliance, together with lack of profitability and ability to invest in recent years.

Issues

The project looked to understand the issue of whether capital is available to enable farmers to invest in slurry stores, and research was commissioned to report on any pressures or barriers to doing so.

Some farmers are facing pressures on profitability, due to factors such as adverse weather conditions during 2012, and are experiencing cash flow difficulties which affect their desire or ability to invest. This, of course, goes wider than the inability to invest in slurry storage, and issues are being considered by representatives of banks, charities and industry in working groups set up by the May 2013 'banking summit' chaired by the Secretary of State.

Findings

The evidence from the ADAS report (Appendix 4) shows there are competing demands on available capital and that building slurry stores with adequate capacity, or extending existing stores, is not given a high priority in the context of those demands. There is also evidence to show that farmers sometimes do not understand the need for or benefits of effective slurry management.

The continuing pressure on profitability has led some farmers to look at ways to boost income. In some circumstances, for example, increasing the size of a dairy herd has exacerbated the problems associated with a lack of slurry storage.

The project considered the availability of capital to farmers who are looking to invest in slurry infrastructure. Agri-finance hire purchase companies have been affected by the financial downturn, with at least one ceasing to trade and those who are lending are tightening their criteria, for example, not giving finance on second-hand machinery or on the basis that the extra expenditure is unlikely to improve profitability.

However, despite this, there is evidence from the 2013 NFU Survey of Access to Capital that the trend for agri-borrowing has been increasing: agri-lending over the last 5 years is up 36%, where lending to other industries is down by 24%. This would suggest there is not necessarily a widespread issue of access to finance, but that, where capital is available, it is being used to finance short-to-medium term cash flow issues. Various confidence surveys support this, with a short term confidence drop. There is more optimism about the longer term, but this could mean that farmers defer investment, waiting for profitability to rise.

In addition, where farms are tenanted, there can be difficulties gaining permission from landlords for investment in slurry stores or in getting investment from the landlord. There is also evidence to show that where farms are owned in partnership, disagreements over the level of investment can be an issue.

Sources of funding

There are several avenues to obtain funding to maintain, improve or construct slurry storage facilities. Each has its own criteria, which are explored further in the “Barriers to Funding” section below.

Broadly, funding sources are separated into 2 categories: private and public funding. Examples of private funding are: farmers’ own capital; bank borrowing or other commercial lenders such as the Agricultural Mortgage Corporation; investment from landlords; grant aid from water companies; asset financing (but these are short-term loans generally made to purchase equipment).

There did not seem to be any evidence of market failure, e.g. good businesses not being able to secure loans. Instead banks are able to lend to farmers with good business plans and correctly do not lend to businesses that have little prospect of making repayments.

For public funding, several significant sources of funding cannot be used for slurry stores, additional rings on existing slurry stores, slurry tankers, and muck spreaders. These are:

- The Catchment Sensitive Farming (CSF) Capital Grant Scheme – this is available under Axis 1 of the current Rural Development Programme for England (RDPE), ‘Improving the environment and the countryside’. This is a competitive scheme available each year with a maximum grant of £10K per business in specific catchment areas with a grant rate of up to 50%.
- Funding under the Farming and Forestry improvement Scheme (FFIS). This is available under Axes 1 and 3 of the RDPE: 1) improving the competitiveness of the agriculture and forestry sector and 3) quality of life in rural areas and the diversification of the rural economy. It is aimed at projects that improve competitiveness and take a farm’s performance above normal farm practice.

Other sources of funding are detailed in Appendix 4

Barriers to accessing the available capital (from ADAS report)

Resistance to investment

Lack of financial benefits – little or no return on the investment

Farmers, land agents and landowners generally see the erection or improvement of slurry storage as being a very expensive investment, which produces a very small return on the capital spent.

Storage facilities which are erected specifically to meet the NVZ Regulations mean that spreading can start at the end of the closed period. Real financial benefits from storing

slurries only substantially occur when they are applied in the growing season using either trailed-shoe, injection or trailing hose type machines as this is when Organic N can most effectively replace inorganic N. To achieve this however, means investing in larger storage facilities and equipment which minimises the loss of N when applying slurries, and thus involves larger amounts of capital investment.

Some larger farms, mainly dairy and pig units, have fully taken-up this concept and as a result have significantly reduced inorganic N applications to crops.

Can something else be done to reduce the need for investment?

There is a perception amongst some farmers that they are only making investments to meet regulatory requirements and that they can reduce the need for investment by extending the grazing season, out-wintering young stock and therefore reducing the size of the slurry store required. Manures and slurries are still seen by some as a waste product not an asset. Sometimes these other actions such as out-wintering and using large machines at the wrong time can also have unintended consequences.

Farms outside NVZs

Outside of NVZ areas there are many uncovered feeding areas which produce large volumes of slurries and there can be inadequate or very little storage. This means these slurries are applied throughout the winter period when ground conditions are poor leading to run off and thus pollution.

Inability to gain finance

Private finance

Bank unwilling to lend

This can be due to several factors which, individually or combined, can be a reason for rejection for increased borrowing: the business is already too highly geared; is unprofitable; lack of security; extra expenditure will not improve profit; ability to service debt; track record is poor or accounts don't show the business's true financial position.

Partners unwilling to lend/borrow

Within businesses there can be several individuals who have an input on investment decisions and while some may want to invest others may not want to and if this happens to be the senior individual then the investment will not take place. The factors affecting this decision are very varied.

Asset financing – inability to gain finance

Finance not available for several reasons: sometimes no finance on second hand machinery; reduction of lenders in the market; interest rates are too high; effect on cash flow.

Water company grants (see Appendix 4)

Not in the area where grants are available; cannot meet the conditions in the covenant; landlord will not give consent; business cannot raise private element of capital.

Public Funds

CSF Grants – inability to gain grant

Reasons for not obtaining grant: not within the 79 priority catchments; inability to raise the private 50% of investment due to competition for investment capital; bank will not lend; don't want to sign the declaration; don't want to meet the specified standard; competitive – farmer has not scored sufficient points; unwilling to let the EA on to the farm; not within target areas within catchment and funding not available for specific issue.

FFIS

Inability to raise the private 50% of investment due to competition for investment capital; bank will not lend; will only fund dribble bar not tanker; design has to meet current legislation and be agreed with EA – farmer believes they can do it a cheaper way; landlord will not sign; cash flow will not allow investment; not profitable

REG

Inability to raise the private 60% of investment due to competition for investment capital; bank will not lend etc; will only fund eligible items; design has to meet high specifications; landlord will not sign; cash flow will not allow investment; unwilling to go through the process of a long application and do all the justification required; not profitable

Understanding the scale of the capital and cash flow problems

Confidence in the longer-term prospects for the sector is critical in farmers' and banks' decision-making; succession is also a major issue for many farmers and has significant implications for capital investment. Tenants can have particular problems accessing capital given the perception by some banks that land is the only acceptable form of security.

Public funding and other sources of funding

Stakeholders agreed that funding storage, in particular to meet the minimum regulatory requirements, is not a panacea, not least as experience has suggested this has increased the costs of storage. Stakeholders do agree that the small capital grants available under RDPE are helpful.

Other possible areas to consider were loan guarantees and under-writing (perhaps from Government or land-owners). Payment for Ecosystems Services (e.g. from Water Companies) were also welcome. Consideration of whether any funding for work to demonstrate new slurry technologies, e.g. through pilot farms, should be undertaken through the agri-tech strategy or by levy boards.

Targeting help

There is a wide spectrum of businesses: some are efficient, profitable and do not face issues with capital. There are likely to be some in the middle who are breaking even, who

might, given a little support (financial or advice) be able to invest. At the other end there are farmers who are struggling with unknown or high production costs and low profitability.

Recommendations

19. Evidence from this Project should be fed into the work being undertaken by the Secretary of State's Banks Summit to build a fuller picture. This can then be used to target any further action effectively.

20. Slurry measures should be considered as part of the design of the new RDPE. Water quality should be recognised as a priority within the next RDPE and in revisions to the Catchment Sensitive Farming (CSF) Project and Capital Grants Scheme.

21. Further work is undertaken to understand the economics of slurry storage, handling and utilisation to understand the costs and benefits for farmers in different circumstances and develop Knowledge Transfer streams from this.

The Enforcement Work stream

Background

Effective enforcement activity (or the understanding that action will be taken), is an important component in embedding sustainable behaviour change. The Environment Agency recognise this under the term 'advice in the context of regulation'.

Levels of compliance with the Regulations have been found to be unacceptably low.

Issues

The issues for enforcement in NVZs are complex and interlinked and include high rates of non-compliance with current storage requirements, difficulties for many farmers in accessing capital to build adequate storage (often linked to business viability and profitability), and a lack of understanding about some of the requirements.

If Member States are found not to be enforcing Regulations properly and have high levels of non-compliance, they run the risk that the European Commission could begin infraction proceedings which could result in significant fines.

Industry also identified concerns about the clarity and consistency of the enforcement regimes for the Environment Agency and the Rural Payments Agency (RPA) in relation to the Nitrates and SSAFO Regulations, slurry management, NVZs and Cross Compliance, and the need to develop clear and coherent communication to farmers, explaining what farmers can expect.

Findings and Conclusions

The Group considered that the different roles and drivers of the RPA and the Environment Agency are poorly understood by farmers.

The focus of the cross compliance inspection by the RPA is to check farmers are meeting the range of SMRs and GAECs that they must observe as a condition of receiving Single Payment Scheme and certain rural development scheme payments. Whereas, the Environment Agency's focus is on environmental protection. The work of both regulators around SSAFO/SMR 4 is interlinked and farmers need a better understanding of roles of each organisation and of differences between cross compliance and regulation. The change in competent authority roles for SMR4 was not well communicated, and this has resulted in farmers being unclear about what they can expect from the RPA and from the Environment Agency, regarding the enforcement of the Nitrates Regulations.

The Group supported the principle that any enforcement position should be 'fair' in that it recognises the investment made by those who are compliant, and that it is therefore right that enforcement action be taken against those who are intentionally non-compliant (unless exceptional circumstances have prevented the farmer from coming into compliance). The Group want to ensure that the competitiveness of those farmers who have already made a significant investment in slurry storage is not undermined.

The Group recognised that there are genuine cases where farmers are non-compliant due to exceptional circumstances. Conclusive evidence would be needed from a farmer that they have made every effort to become compliant but not yet achieved it due to these exceptional circumstances. Without ruling out the possibility of other forms of proof/lines of evidence, the Group thought that the evidence a farmer could offer would be written evidence in nearly all cases. This would then inform the Environment Agency's enforcement action.

There is a significant communications challenge to present a clear and consistent message to farmers, to explain the level of penalties and enforcement actions they face. The Group agreed that the enforcement position needs to be actively communicated to industry, and recognised that a "carrot and stick" approach is required to improve levels of compliance.

The Group reviewed the Environment Agency's enforcement approach in Annex B and agreed that it appeared fair and proportionate overall. Constructive dialogue between industry and the regulators has achieved a clearer set of enforcement actions that the Environment Agency may take, and how the RPA and Environment Agency will work together regarding cross compliance and applying enforcement of NVZ regulations consistently.

The Environment Agency have considered how to communicate their approach and as part of the project a Communications Plan has recently been agreed. The Environment Agency intend to start their communications plan over the summer and bring their revised enforcement approach into business as usual operation from September. A number of channels (e.g. the Farming Advice Service newsletter) will be used to communicate information to the industry in support of the Environment Agency.

Recommendations

22. The revised approach to enforcement needs to be communicated over an extended period of time. Industry has a part to play in this too. The regulators must ensure that the legal and regulatory frameworks are explained in a clear and coherent way. The regulators should also improve the way they explain their roles.

23. At the end of every inspection, farmers should be told what is going to happen next in terms of referral to another organisation and the likelihood of a penalty.

24. EA and RPA inspectors to work together more effectively and consistently. Training and guidance to officers in each organisation should give more emphasis on the respective roles.

25. The Project Group should reconvene after the revised enforcement framework has been rolled out in order to check progress and suitability and ensure that the approach is being applied in a fair and proportionate way, as intended.

Annex A List of organisations

(in alphabetical order)

Issues have been discussed and recommendations drawn up jointly with representatives from:

[AHDB](#) ([BPEX](#), [DairyCo](#) and [EBLEX](#) Divisions)

[Central Association of Agricultural Valuers](#)

[Country Land and Business Association](#)

[Dairy UK/Royal Association of British Dairy Farmers](#)

[Farming Advice Service](#)

[National Farmers' Union](#)

[National Pig Association](#)

[Tenant Farmers Association](#)

With officials from:

[Defra](#)

[Environment Agency](#)

[Natural England – Catchment Sensitive Farming](#)

[Rural Payments Agency](#)

[Natural Resources Wales](#)

Annex B The Environment Agency's approach to enforcement in NVZs

The Environment Agency propose, whilst still making enforcement decisions on a case by case basis, they will use the framework below of escalating sanctions/actions depending on the seriousness of the offence.

Any action taken by the Environment Agency will be in line with their published 'Enforcement and Sanctions Statement' and the supporting 'Enforcement and Sanctions Guidance'. The Environment Agency will apply a hierarchy of enforcement measures:

- No action
- Verbal warning – no penalty
- Written warning – no penalty, but would be material to any subsequent action
- Serve notice – failure to comply is an offence punishable by fine
- Formal caution - no penalty, but would be material to any subsequent action
- Civil sanction (subject to limits on use of financial penalties in Cross Compliance regimes)
- Prosecution – Fine in the Magistrates Court, or unlimited fine/imprisonment in the Crown Court.

Enforcement action is time-consuming, and will be prioritised in relation to environmental impacts and site factors such as the shortfall in storage capacity.

Segmentation

- 1 *Fully compliant*
No action needed from these farmers as they are compliant. They are to be praised for their responsible approach, and the business benefits that they have already gained will be highlighted.
- 2 *Partially compliant - storage volume in place, construction standards not met*
The compliance breach is under the SSAFO Regulations. Urgency of action will be dependent upon level of environmental/H&S risk. SSAFO Notice to be used if more urgent action is needed, otherwise written advice/warning.
- 3 *Non-compliant*
 - 3a *scheme committed, i.e. construction contracts let with set starting date, or work underway*
Area team may use discretion over need for a report to RPA. No enforcement action needed, other than to check completion and ensure construction standards are met.
 - 3b *Scheme under active development, e.g. requirements identified, plans agreed, planning permission applied for*

Agree with the farmer an action programme/timescale to complete the scheme, and check delivery. Enforcement action only if agreed programme is not met. Presumption to submit a report to RPA, unless it is shown that issues as in 3c have contributed to delays.

3c Scheme under development (as 3b) but not progressing due to external factors, e.g. planning or landlord/tenant issues

Area team to use discretion over need for a report to RPA, taking account of the validity and impact of the external factor(s) (see below). Lack of finance is not considered to be an external factor in this context. Advise in writing that an action plan to come into compliance must be provided within 3 months. The plan must address farm business alternatives if the external factors are insurmountable. Enforcement action may be taken if this is plan is not produced and implemented.

3d Scheme under development but not progressing by farmer's decision, including lack of finance

Report to RPA. Explore reasons for inaction, and either:

- agree an action programme/timescale to come into compliance; or
- advise in writing that an action plan to come into compliance must be provided within 3 months.

Enforcement action may be taken if this is plan is not produced and implemented.

3e No action taken

Report to RPA and advise in writing that an action plan to come into compliance must be provided within 3 months. Enforcement action may be taken if this is plan is not produced and implemented.

Farmers who have had less than 3 years to prepare

We are aware of situations where farmers have taken over a farm since 2009, where the previous occupier has done nothing towards compliance with this requirement. We will take account of the history, and actions they have taken to comply since taking over in deciding whether action is appropriate in the categories above.

Genuine circumstances beyond the farmer's control

It is unlikely that this will apply in many cases. Circumstances will inevitably have to be judged on a case-by-case basis by the officer carrying out the inspection. Factors will be varied, but can include such things as planning permission, contractor availability, equipment supply and tenancy issues. We will not try to set 'rules' because different factors will have to be balanced. As a guide:

- a farmer who has made a timely approach to the local authority regarding planning permission (say early in 2010) but has not yet been able secure that permission because the process (including appeals) has taken longer than might reasonably be foreseen would probably meet that criterion. The judgement about how much time to allow is case-specific, but should include advice from those with planning expertise.

- If planning permission cannot be obtained after appeal, that itself is not a justification for on-going non-compliance. In that situation, reasonable time should be allowed for the farmer to make the necessary changes, but not necessarily to achieve the optimum solution – for example it could take less time to arrange slurry export agreements than to change from a slurry production system.
- It is the tenant's responsibility to comply with the Regulations³, even where it is the landlord's responsibility to provide farm infrastructure. However, the same considerations as above regarding planning would apply where a landlord has to make the investment. Disputes between tenants and landlords should not normally be a justification for non-compliance, but if a landlord cannot or will not provide the necessary storage, or effectively prevents the tenant from doing so, then it may be appropriate to allow additional time, either to achieve mutual or legal agreement with the landlord or to make changes to the enterprise. Decisions on this will depend upon the specific circumstances, and a key point will be evidence of when discussions were opened, and how actively they have been pursued.
- Business decisions about timing of investments or when it is most advantageous to change agricultural activity are not valid reasons for delaying legal compliance.
- Restrictions on livestock movements (due to TB for example), or other external controls may be considered genuine circumstances, but only if there is no other option available to meet the rules.

Any judgements the Environment Agency make will be based on clear evidence of the farmer's actions towards compliance.

The differing roles of the Environment Agency and RPA

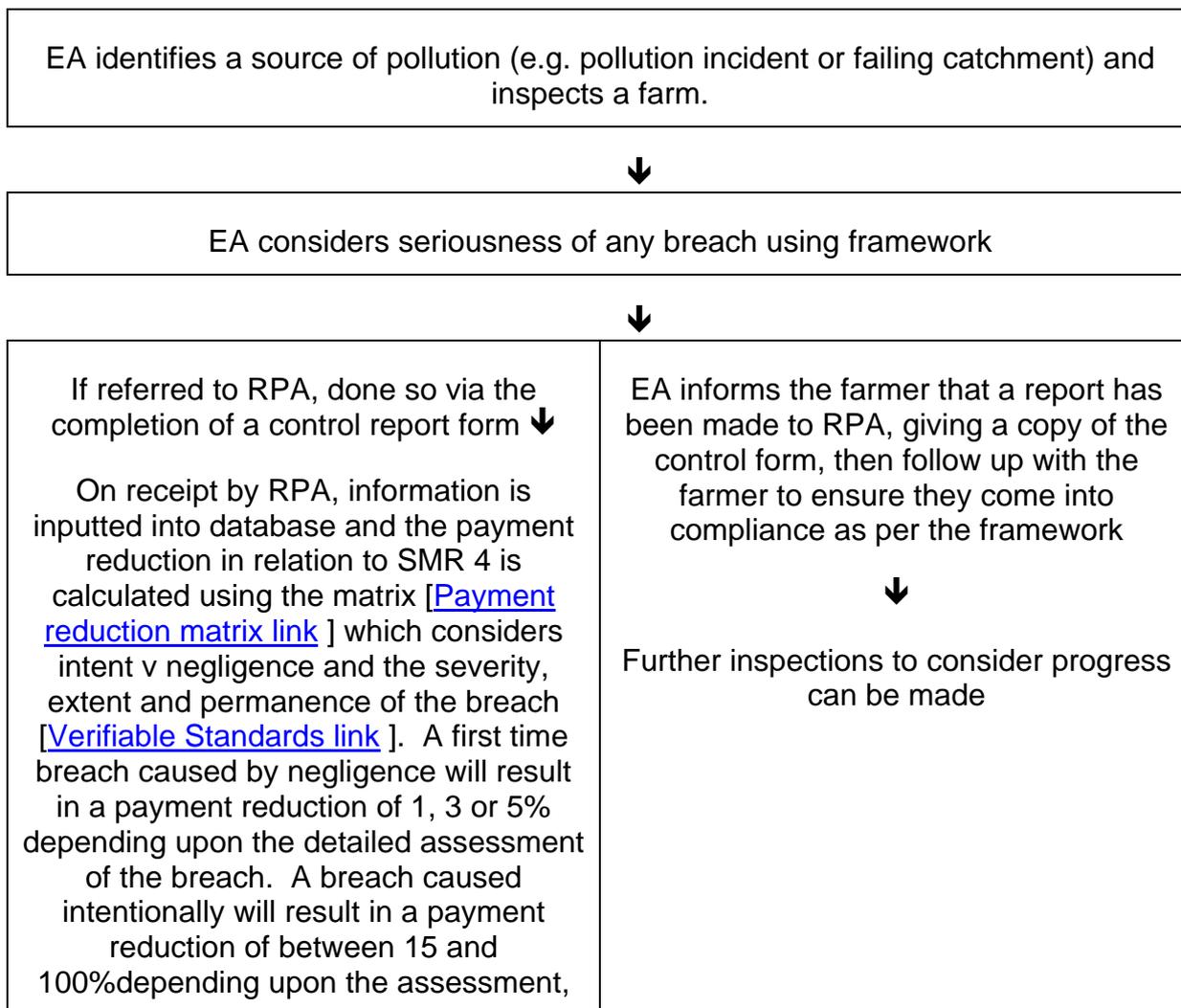
The Environment Agency's responsibility is to prevent and reduce pollution. They have a number of mechanisms available to achieve this, one of which is their role as the Regulatory Authority for *inter alia* the NVZ and SSAFO Regulations. In this role they enforce the law and where breaches are discovered, ensure farmers become compliant within a reasonable timescale. They have discretion about what action if any is needed to bring farmers into compliance.

RPA's role is to carry out cross compliance inspections on a minimum of 1% of farmers claiming Single Payment Scheme payments and/or receive funding through participation in certain rural development schemes. The purpose of RPA's inspection programme, which is required by European legislation, is to ensure claimants' farming activities meet certain agricultural and environmental standards by checking for compliance against a range of Statutory Management Requirements and Good Agricultural and Environmental Conditions. In most cases RPA cannot compel compliance with the Regulations – their key lever to drive improvements when breaches are found is by applying reductions to SPS and rural development payments claimed by non-compliant farmers. RPA has little flexibility in deciding whether a penalty should be applied if a breach is found. Thus any slurry storage breaches found by, or reported to the RPA since 1 January 2012 would have been likely to incur a single payment reduction.

³ Refer to NVZ Guidance: Who is responsible for complying with the NVZ Regulations?

Although both organisations are Defra ‘arms length bodies’, and in this situation they are both enforcing the same legislation, there is no legal obligation that they should share information. However, they operate with a presumption that they will do so.

How the Environment Agency and RPA work together in relation to slurry management and storage



Referrals from RPA to the Environment Agency

All breaches of SMR 4 identified by RPA during its cross compliance control programme are copied to the Environment Agency. RPA provide the Environment Agency with the relevant information from the control report form and in urgent cases RPA inspectors will contact the Environment Agency directly via the Environment Agency Pollution Control Hotline.

Sanctions

Application of formal sanctions

When a farmer breaches the Nitrates Regulations action can be taken under more than one regime for the same offence. This section describes how the regulatory compliance and cross compliance systems interact.

Prosecution under nitrates rules

The Nitrate Pollution Prevention Regulations impose a legal obligation on farmers whose holdings are in NVZs. It is a criminal offence for a farmer not to meet those obligations. If the Environment Agency believes that a farmer has broken the rules, and that the breach is severe enough to warrant prosecution, then they must prove their case, beyond reasonable doubt.

If a farmer is tried and found not guilty of an offence, this means that the Environment Agency has failed to prove its case beyond reasonable doubt.

Cross compliance

The situation under cross compliance is different. In this case the farmer has agreed that by applying for certain CAP subsidy schemes (SPS and certain rural development schemes), s/he will abide by specific requirements. These requirements reflect existing legal obligations, such as compliance with NVZ rules, and good agricultural practice. Cross compliance breaches are tested under civil law principles (i.e. that on the balance of probabilities the rules were broken by the farmer).

Cross compliance sanctions are applied separately from other enforcement measures. For example, whether or not a farmer has committed a criminal offence by failing to comply with NVZ requirements would not prevent the imposition of a penalty if a cross compliance breach has been committed. Also, if a farmer is found not guilty in a criminal court in relation to an alleged breach of a rule also reflected in cross compliance, this would not prevent action being taken against the farmer for the alleged cross compliance breach. This is because cross compliance breaches depend on a lower burden of proof than in the criminal court. They are judged on a balance of probabilities whereas criminal prosecutions have to be proved beyond reasonable doubt.

Certain types of breach may take a considerable period of time to rectify – for example constructing additional slurry storage to meet the requirement in SMR 4. Where the farmer can provide evidence to demonstrate work is in hand to rectify the breach and that this work is being carried out without undue delay, RPA would not apply a 2nd payment reduction to exactly the same breach. However in cases where it is determined that no or insufficient work is being carried out to rectify the original breach, RPA is required to consider the ongoing problem as a repeated non-compliance, which will initially result in a reduction three times higher than the reduction for the first breach. In addition the Environment Agency may also take separate enforcement action.

Consistency

Environment Agency staff have helped to develop and deliver training for RPA inspectors in relation to NVZ requirements following the transfer of responsibility for SMR4, with the intention of ensuring consistency of approach.

Within organisations, inspectors should be acting consistently when faced with similar circumstances. Each have lead inspectors in regions whose role includes ensuring consistency and that standards are maintained. Regular training and conferences take place in both organisations. Inspections are quality assured within RPA. The Environment Agency has a national Operations Technical Services team, whose role is to support field teams, through training and the maintenance of published guidance within an accredited management scheme. As part of this, a Technical Development Framework has been produced describing the skills required for our field officers, which includes visit shadowing until the required competence is achieved, followed by occasional accompanied visits and checks by team leaders. Team Leaders also countersign control reports to say they agree with the assessment the officer has made.

The likelihood of inspection may vary across the country – inspections in both organisations are risk-based, although RPA are required to carry out a proportion of random inspections. So, the likelihood of inspection in a failing catchment will be higher than in one with good status.

Burden of inspections

1. Routine risk based inspections

Each year RPA draws up the list of farms on which a full cross compliance inspection is to be carried out. The minimum inspection target is 1% of farmers receiving cross compliance conditional payments and, where the farm in question is situated within an NVZ, the inspection will include a check for compliance with SMR 4 rules. Selections for the normal inspection programme are made partly by random (between 20% and 25%) and partly by risk. Once a farmer has been selected for an inspection it is only possible to deselect them in exceptional circumstances. The list is shared with the Environment Agency. Where applicable the Environment Agency provide limited information to the RPA (e.g. on whether or not the farm holds a Whole Farm Livestock Manure grassland derogation). If the Environment Agency have already inspected that farm, they provide information on what was checked. The RPA then ensures that it does not inspect the same things.

Other than in exceptional circumstances, the Environment Agency will not visit a farm that has been selected for inspection by the RPA.

2. Inspections following referrals from the Environment Agency to RPA

- RPA do not carry out a further inspection to confirm the breach – they act on the control report form provided by the Environment Agency
- The breach does get recorded and so will impact on the risk rating for that farm. That could affect the likelihood of that farm being targeted for further inspections

- RPA has a wider inspection role than cross-compliance and through its other inspection responsibilities such as livestock identification, agri-environment scheme checks, etc may inspect the same farmer or find ad hoc findings against other farmers as a result of being on site.

3. RPA may notify the Environment Agency of a breach of SMR4 (or other EA regulatory regime). In that circumstance the Environment Agency would record the information and assess the need for a follow-up visit against the environmental condition of the catchment and any previous history of the site. If a visit is made, any action would be judged against the same criteria as described previously.

Transparency and communication to farmers

Both the Environment Agency and the RPA set out their approaches to compliance and enforcement on their websites:

[Environment Agency:](#)

[RPA:](#)