



Department  
for Environment  
Food & Rural Affairs

# Consultation on new basic rules for farmers to tackle diffuse water pollution from agriculture in England

## **Summary of responses**

November 2017



© Crown copyright 2017

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v.3. To view this licence visit [www.nationalarchives.gov.uk/doc/open-government-licence/version/3/](http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/) or email [PSI@nationalarchives.gsi.gov.uk](mailto:PSI@nationalarchives.gsi.gov.uk)

This publication is available at [www.gov.uk/government/publications](http://www.gov.uk/government/publications)

Any enquiries regarding this publication should be sent to us at: [farmingandwater@defra.gsi.gov.uk](mailto:farmingandwater@defra.gsi.gov.uk) or you can write to: Water Quality and Agriculture Team, Area 3E, Nobel House, 17 Smith Square, London SW1P 3JR

[www.gov.uk/defra](http://www.gov.uk/defra)

## Contents

A. Introduction.....	1
Summary.....	3
B. Answers to consultation questions and government response .....	4
1. If we introduce new basic rules to reduce diffuse pollution from agriculture do you agree with the key principles? .....	4
2-5. Questions on the list of proposed new basic rules.....	5
Comments on the proposed rules .....	6
6. Do you have any comments on the proposed approach to verification?.....	16
7. Are there any additional rules or good practice which you feel should be added? ....	17
8. Do you agree or disagree with the proposed approach to compliance and enforcement? .....	18
9. Do you agree or disagree with the proposed approach to streamlining regulation? ..	19
10. Do you have any further evidence it would be helpful for government to consider as this policy is developed further? .....	20
C. Final set of rules and next steps .....	22
How consultation has shaped the final set of rules .....	22
The final set of rules practical and risk based to prevent and reduce agricultural pollution.....	22
Annex 1: Clarification note on remote sensing .....	26
Annex 2: Organisations who responded to the consultation.....	27

## A. Introduction

This document describes the outcome of the consultation on new rules (referred to as “basic rules”) for farmers in England to tackle diffuse water pollution from agriculture. It summarises the responses received and the changes we will be making as a result.

The response to this consultation has helped to inform the final decision by government. **The decision is to introduce a new set of rules for farmers through legislation by April 2018.** We will assess the success of the new rules and whether this new approach to regulation might be suitable for future measures that benefit water quality, air, soil health and biodiversity.

We have published the final rules – farming rules for water – as a separate policy paper setting out what we will do and when the rules will come into effect.

The government is committed to promoting sustainable agriculture and improving the environment through a range of tools, including advice, incentives, regulation and best practice. We need a combination of different actions designed to overcome the unique challenges of diffuse water pollution from agriculture and to keep farming profitable and sustainable. Some of this will happen as a result of advice and incentives through agri-environment schemes or through industry-led or water company action. Other actions will come from regulation or through innovation. With the publication of the latest River Basin Management Plans we have clear objectives for improving our water environment. The government will be publishing a 25 year plan for the environment in line with its manifesto commitment.

On 23 June 2016, the EU referendum took place and the people of the United Kingdom voted to leave the European Union. Until exit negotiations are concluded, the UK remains a full member of the European Union and all the rights and obligations of EU membership remain in force. During this period the government will continue to negotiate, implement and apply EU legislation. The outcome of these negotiations will determine what arrangements apply in relation to EU legislation in future once the UK has left the EU.

The new rules are a first step towards a new more holistic way of regulating the agriculture sector that we might adopt more widely in the future, with rules that are practical and risk based to prevent and reduce agricultural pollution. They will set a baseline of good practice for all farmers. By requiring farmers to adopt good practice the rules should benefit the environment and also yield cost savings – they will reduce fertiliser and top soil losses to water courses and reduce costs to industries that depend on clean water such as water companies, tourism, bathing beaches and the shellfish industry.

The consultation on a new set of rules for farmers was held from 29 September to 24 November 2015. It gathered views on the proposed introduction of the rules through legislation to reduce diffuse water pollution from agriculture with a focus on phosphorus (in all its forms). The rules were intended to be clear, simple to understand and supported by

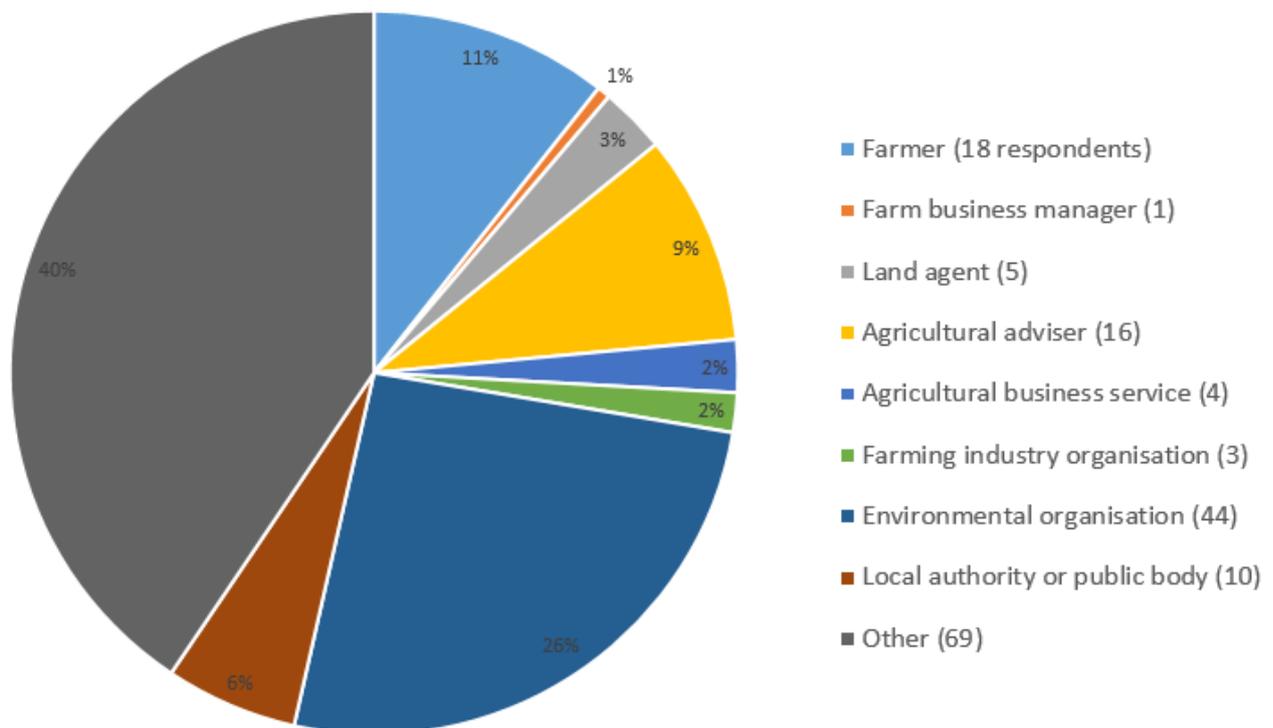
advice. They would not be part of cross-compliance rules for farmers who claim the Basic Payment Scheme farm payments.

In total we received 183 responses from a wide range of groups, see figure 1. Most respondents indicated that they had an agricultural interest (47 respondents) followed by environmental organisations (40 respondents). There were also 11 replies from the water and sewerage industry and 10 from local authorities.

Other interests included angling (22 respondents), academics or researchers (10 respondents), some were retired (7 respondents) or had environmental/conservation interests (also 7 respondents), some had farming interests or were smallholders (5 respondents) and others were involved in catchment management (4 respondents).

Figure 1 (below) shows the distribution of respondents by their stated category of interest.

**Figure 1. Consultation respondents by category of interest**



The consultation paper presented the proposed rules as two options. Option one included seven new rules and option two included the same seven with two additional rules and two good practice actions. Comments were invited on each of the rules and whether each of them should become mandatory.

The consultation then described the proposed approach for implementing any new rules. This would be an advice-led approach with clear communications provided by government, the agricultural industry and NGOs working in partnership.

## Summary

Overall, there was a positive response to the principle of introducing a small set of new rules for farmers. Many, but not all, respondents from within the farming industry supported the proposal.

About 76% (137 out of 183 respondents) supported the proposal that the rules be mandatory. Those who disagreed either thought that no new regulations were necessary or that the proposed new rules would not go far enough to protect the water environment.

Some farming organisations opposed a regulatory approach and considered that existing voluntary initiatives supplemented by advice could deliver the water quality improvements needed. However, of the farmers who responded more than two-thirds agreed or partially agreed with the proposed new rules.

The main issues raised were that some rules might be challenging for small scale farmers, enforcement might not be strong enough and that communications would need to be clear and concise so that all farmers would understand what they need to do.

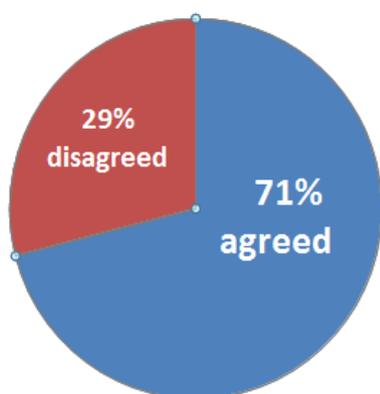
Looking at the specific rules, support was strongest for the rules about manure management, spreading manure and fertilisers at high risk times and preventing soil erosion and runoff. The rules that were less popular included using a feed planning system and the two proposed good practice measures (incorporating manures into the soil within 24 hours and excluding livestock from watercourses).

There was widespread support for an advice-led approach to introduce any new rules, noting the constraints of public funding. Some respondents wanted to see the rules brought in as part of cross compliance rules whereas others favoured separate legislation so that all farmers must comply and not just those claiming the Basic Payment Scheme. Others thought that relevant rules such as manure storage should also apply to equestrian businesses.

## B. Answers to consultation questions and government response

This section summarises the response from consultees to each question and the government response.

### 1. If we introduce new basic rules to reduce diffuse pollution from agriculture do you agree with the key principles?



The consultation introduced the following key principles:

- maximise benefits and minimise any costs for farmers
- maximise benefits for the economy as a whole
- maximise reductions in diffuse pollution and benefits to the wider environment
- focus on advice to introduce any new rules
- define clear and practical rules based on industry good practice
- create a fairer system with a clear minimum standards for all

Overall, there was strong support for the principles with comments from 147 respondents. Many expressed a desire to rank the principles in order of importance with 'protecting the environment' the highest priority for most.

Many respondents gave their support for the full range of proposed rules to become mandatory whereas others focused on how the rules should be introduced with clear definitions and advice that also explains any benefits to farming.

There were some concerns about the availability of resources to deliver effective advice and whether some farmers who have historically not followed advice would now change. It was suggested that farm inspections would need to robustly address any non-compliance with the proposed rules, making efficient use of the limited resources available.

Some respondents questioned whether smaller scale farms could afford to comply with certain rules and suggested that any additional costs should be minimised.

**Government response:** Any rules will be introduced according to these key principles. We will focus in particular on providing clear communications and making the most efficient use of available resources.

## 2-5. Questions on the list of proposed new basic rules

Respondents were asked which of the proposed basic rules or best practice should be introduced as new regulations, for comments on each of the rules and on the approach to implementation. They were also asked if any extra rules or good practice should be added.

Table 1 shows which rules respondents most wanted to become regulations and which should be good practice.

**Table 1. Respondent preferences for each proposed rule to become regulation**

Proposed Rule or Good practice*	Should be regulatory	Should be good practice
Act to prevent soil erosion and runoff	129 (81%)	30 (19%)
Store manure 10 metres from water	127 (80%)	32 (20%)
Avoid severe poaching	125 (78%)	35 (22%)
Spread fertiliser and manures accurately	125 (78%)	35 (22%)
Do not spread, high risk times	124 (78%)	35 (22%)
Livestock feeder positioning	118 (74%)	42 (26%)
Spreading limits, slurry, manure	109 (68%)	51 (32%)
Fertiliser recommendation system	105 (66%)	55 (34%)
Exclude livestock from watercourses	101 (64%)	58 (36%)

Incorporate manures within 24 hours*	91 (57%)	69 (43%)
Use a feed planning system	79 (50%)	80 (50%)

## Comments on the proposed rules

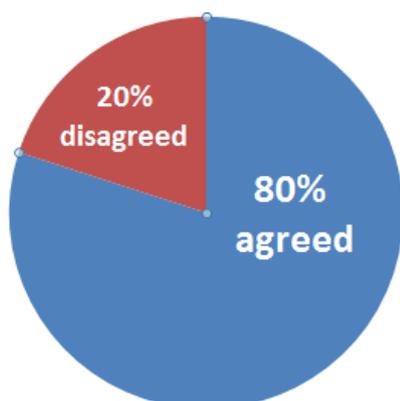
Each of the proposed rules attracted between 79 and 115 comments, which are summarised below. The pie charts show the proportion of respondents who agreed or disagreed with each rule becoming regulation.

### Consultation Option 1

This option comprised seven proposed rules.

#### ***Proposed rule 1: Locate field manure storage at least 10 metres from a watercourse.***

Purpose: to reduce the risk of polluting rivers through surface runoff and leaching.



Many respondents (38) questioned whether a distance of 10 metres was enough to prevent pollutants reaching rivers through surface runoff and leaching. It was suggested that steep fields, flow pathways and a lack of crop cover might also increase this pollution risk. Respondents suggested the separation distances should be from 20m to 50m with 30m the most common value suggested. Some respondents also thought that manure should not be stored near boreholes, wells and springs and that the rule might include wetlands as well as watercourses.

For consistency and ease of understanding, it was also suggested that the rule might be aligned with a similar rule for nitrates, using the same terms and distances (10 metres).

Three respondents thought that this rule, and others of relevance, should also apply to other land uses such as where horses are kept.

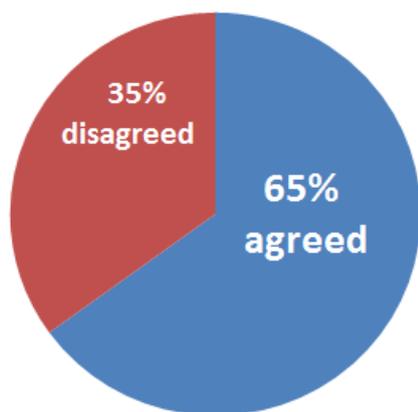
Concerns were raised by some about how easily this rule might be monitored or enforced and that the cost of creating alternative manure storage might impact most significantly on small holdings.

**Government response:** Given the significant support for this rule, it will be introduced as new regulation. For consistency with farmers in Nitrate Vulnerable Zones, manure must not be stored within 10m of inland fresh water or coastal waters. To protect springs, wells or boreholes, manure storage must not be within 50m of such features.

The rules will not apply to equestrian businesses except for horses that are owned by farmers and kept on agricultural land. Government considers that any relevant rules should instead be adopted by horse keepers as good practice for now and, when the policy is reviewed, we will consider whether to extend the rule to equestrian businesses.

***Proposed rule 2: Use a fertiliser recommendation system taking into account soil reserves and organic manure supply.***

Purpose: to reduce diffuse pollution to surface water and groundwater by planning crop nutrient requirements and spreading no more inorganic and organic fertilisers than a crop (including grass) needs.



Although many respondents commented that farmers, particularly on arable farms, already use fertiliser recommendation systems there were concerns about the complexity of the process and the need for specialist advisors. Some thought there was a risk that farmers might just use the system but not act on the results so it might become a paper exercise.

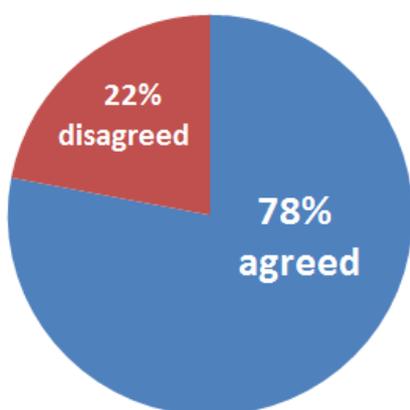
It was noted that this rule would be less relevant for farms that pose minimal risk to water quality such as grassland farms that use little if any manure or fertiliser or those with limited numbers of livestock.

Respondents considered that this rule should be robustly enforced (12 responses) and about half as many (7 responses) asked for incentives or support to help farmers comply. The most commonly suggested barrier to compliance was farms with insufficient slurry storage to cater for spreading restrictions at certain times.

**Government response:** Given the concerns about the complexity of using a fertiliser recommendation system and that it could become simply a paper exercise, this rule has been amended. Instead, farmers will need to test their soils at least every five years and apply manure and fertilisers according to soil and crop needs. This should secure cost savings to farmers by avoiding the loss of fertilisers not taken up by the soil or crop. Soil testing will only apply to cultivated land.

***Proposed rule 3: Spread fertilisers and manure accurately, e.g. by using calibrated and maintained machinery.***

Purpose: to reduce diffuse pollution by ensuring that the spreading of fertilisers accurately meets crop nutrient requirements, minimising the amount of residual fertiliser or manure that might be lost to water courses.



Respondents generally supported this rule on fertiliser spreading noting that most farmers already do this as good practice and to save money. Others thought there was scope for more farmers to recognise the value of manures as a resource rather than a waste product.

In terms of costs, some people thought that there would be significant potential costs in purchasing new, more accurate spreading equipment though others suggested it was more a matter of better calibrating existing machinery and ensuring an even spread. The relatively high additional cost for smaller farms was also a concern.

Some questioned how easily this rule might be monitored or enforced. Definitions of spreading accurately would need to be established and it was suggested that it might be difficult to verify from visual inspection or spreading records whether a farmer had complied.

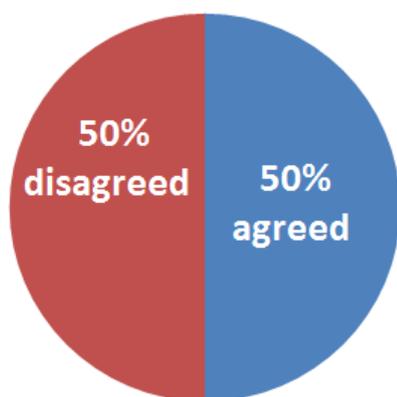
There were some suggestions on how to define the required standards with some respondents suggesting that the Agricultural Engineers Association's spreader testing scheme could provide an industry standard.

A few respondents commented that complimentary measures should also help to reduce the risk of inaccurate spreading polluting watercourses such as broader buffer strips alongside watercourses.

**Government response:** We recognise the support for this new rule but also the concerns about potential costs for the industry. It was therefore concluded that, as a first step, we should work with the industry to promote the AEA spreader testing scheme to increase uptake on a voluntary basis.

***Proposed rule 4: Use a feed planning system to match nutrient content of diets to livestock feeding requirements.***

Purpose: to match livestock diets to their needs and reduce nitrogen and phosphorus levels in their waste.



This was the only proposed rule which the majority favoured not bringing in as regulation (80 respondents compared with 79).

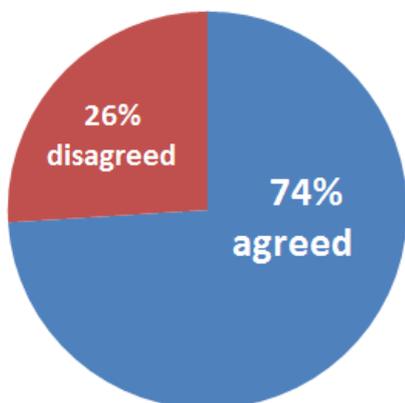
The main reason for resisting the proposed rule becoming law was its complexity. Some suggested that farmers would need training or otherwise have to pay for an advisor to carry out a feed planning analysis for them. Others questioned the additional cost to farmers, particularly those with smaller holdings.

Those in favour of the rule suggested that it should form part of a whole farm approach to resource planning and recognised that by managing feedstuffs more efficiently there could be cost savings for farmers.

**Government response:** Given the concerns raised about the cost and complexity of using a feed planning system, the government has decided not to implement this rule as new regulation. Other rules that require fertiliser application to match soil and crop nutrient needs should reduce the risk of diffuse pollution without controlling the quantity and nutrient content of animal waste at source. However, it is in a farmer's interest to match diets to livestock requirements to avoid waste and to save money and many farmers already do this.

**Proposed rule 5: Livestock feeders must not be positioned within 10 metres of any surface water or a wetland.**

Purpose: to reduce pollution by stopping animals poaching and excreting close to rivers or wetlands. Poaching is the trampling of soil by livestock resulting in compaction.



This proposed rule was strongly supported.

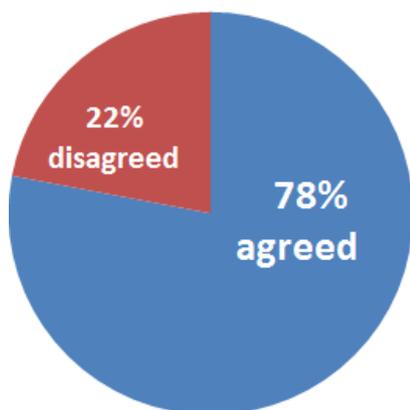
By far the most common issue raised was whether separation of 10m would be enough to prevent pollutants reaching a watercourse. Some suggested that animal poaching and vehicle tracks around feeders could significantly increase the risk of pollution, while others said that consideration should also be given to soil type, compaction and seasonal/weather conditions.

Turning to the desired outcome of the rule, some respondents wanted to know whether surface water would include canals and whether wetlands would mean that much of the Fenlands would be included. Clarity on this point was requested and respondents suggested that this would require a pragmatic approach by the regulator.

**Government response:** This proposed rule will be implemented as a regulation but will relate to inland freshwaters or coastal waters. The regulations and guidance will explain more precisely to which specific waters the rules will apply.

**Proposed rule 6: Avoid severe poaching where likely to pollute a watercourse (compliance achieved if already meeting GAECs 4 & 5<sup>1</sup>).**

Purpose: to reduce pollution through surface runoff by not allowing livestock to compact and erode soil where pollutants can flow quickly to surface water.



This rule was again strongly supported by respondents.

Some suggested that it should be enhanced to require active measures to avoid all poaching. Others questioned the value of this proposed rule (as well as proposed rule 7 below) which is already required by cross-compliance, although it was noted that this this would allow such rules to apply to all farmers with proportionate enforcement.

Some respondents suggested that installing fenced buffer strips should help farmers to continue important practices such as out-wintering livestock.

In terms of securing compliance some respondents wanted to see rigorous policing once definitions of 'avoiding' and 'likely to pollute' had been agreed. Others thought that persistent offenders should be targeted rather than farmers who experience unforeseen poaching problems due to, for example, unseasonal weather conditions.

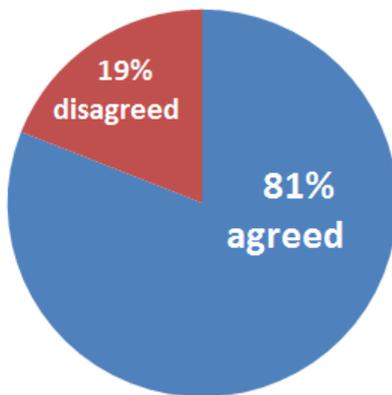
**Government response:** This proposed rule will be introduced as regulation. The rule has been clarified to apply within five metres of a watercourse.

---

<sup>1</sup> The standards of good agricultural and environmental condition (GAECs) are a requirements under Cross Compliance and apply to anyone who receives payments under Single Payment Scheme (SPS) and certain Rural Development schemes. GAEC 4 is about providing minimum soil cover and GAEC 5 concerns minimising soil erosion.

***Proposed rule 7: Take action to prevent soil erosion and run-off from tramlines, rows, irrigation and high risk sloping lands or those lands highly connected to surface water. (Compliance achieved if already meeting GAECs 4 & 5).***

Purpose: to reduce pollution from soil erosion and surface runoff by managing areas from where pollutants can quickly reach a watercourse.



This proposed rule was strongly supported.

Consultees thought that this rule should focus on tracks and roads that act as pathways, on steep hills and should also apply to the choice of crop. For example, high risk crops such as maize or potatoes might be excluded from high risk erosion areas. A number of respondents wanted accompanying guidance to explain to farmers the range of actions they might take to prevent erosion with some specific examples included.

It was suggested that farmers are best placed to understand and target measures to reduce soil erosion and that sometimes areas that on paper appear to be high risk, in practice might not be. Similarly, some consultees asked for a pragmatic approach to enforcement for farmers who act to reduce erosion but do not in the first instance achieve the required outcome.

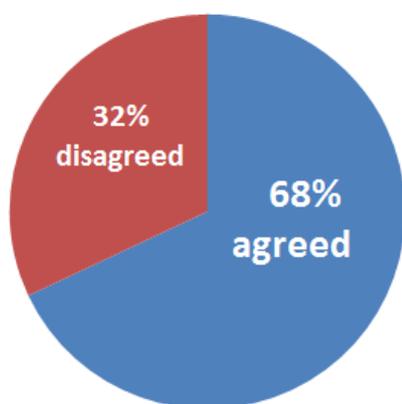
**Government response:** This proposed new rule will be introduced as a regulation. The government maintains that the rules will remain separate from cross compliance. This is because in order to effectively address diffuse water pollution, the rules must be followed by all farmers, not just those claiming the Basic Payment Scheme or signed up to Environmental Stewardship or Countryside Stewardship agreements. We have aligned the rules so that if a farmer already complies with certain rules through other measures, such as GAECs 4 and 5, there is no need for further action. So the vast majority of farmers who meet cross-compliance requirements for the Basic Payment Scheme or in agri-environment schemes will be in a strong position to show that they already comply with the rules.

## Consultation Option 2

In addition to the seven proposed rules in option 1, option 2 added two further proposed rules and two good practice actions.

***Proposed rule 8: Do not spread more than 30m<sup>3</sup>/ha of slurry or digestate or more than 8t/ha of poultry manure in a single application between 15th October and the end of February. No repeat spreading for 21 days.***

Purpose: to reduce diffuse pollution through surface runoff and leaching by not spreading large amounts of fertiliser at times in the year when the risk of water pollution is greatest and crop requirement is least. This reduces waste as there is less crop uptake of nutrients over winter months. Note that sufficient slurry storage capacity or tankering off farm will be required to comply with this rule.



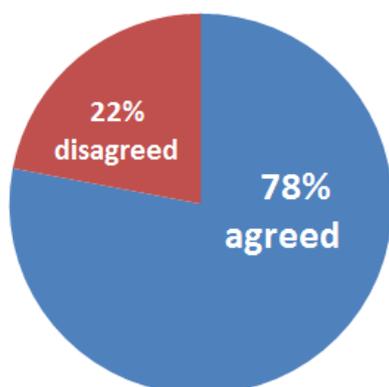
This rule received positive support from two thirds of respondents, although the most common concern was about the inflexibility of fixed timescales for spreading. Some respondents were concerned that fixed dates could not respond to unseasonal or regional variations in weather and soil conditions. A suggested alternative was the use of rainfall alerts.

The cost to farmers of paying for an increase in slurry storage capacity was raised by a number of respondents, some stating that they would also need sufficient time to invest in new or upgraded stores. There was particular concern about the cost implications for dairy farmers of investing in additional slurry storage.

**Government response:** Given the concerns on fixed dates, this rule will not be brought in as regulation. However spreading slurry, digestates and manures when they will not be taken up by the crop but lost to the water environment is neither good for the farmer nor our rivers. As such, the proposed rule 9 (below) has been amended to describe the weather and soil conditions during which fertiliser applications should be avoided. It is then for the farmer to decide if is safe to apply fertilisers and avoid significant risk of water pollution.

**Proposed rule 9: Do not spread manufactured fertiliser or manures at high-risk times or in high-risk areas.**

Purpose: to reduce pollution by not applying fertiliser when or where pollutants can be easily and rapidly transferred to surface water or groundwater. Avoid weather and soil conditions (e.g. high rainfall or frozen ground) that favours quick transfer to surface runoff or drains, or when crops cannot take up nutrients. Note that slurry storage capacity is also relevant.



On this proposed rule the key issue raised was how the high risk times and high risk areas should be defined and by whom. Several suggested that consideration should be given to proximity to water courses and the risk of overland flow or surface runoff. The presence of slopes was also likely to be a key factor, meaning that some significant areas of farmland might be affected by this rule.

Some respondents thought the rule should be extended to include slurry and digestates and should not allow the use of dribble bars. Others suggested that no nutrients at all should be applied outside the growing season.

In terms of applying the rule some thought that farmers might need training and improved awareness of spreading risks following periods of wet weather. Clear guidance would need to accompany the rule and the example of the equivalent Scottish General Binding rules was cited as good practice.

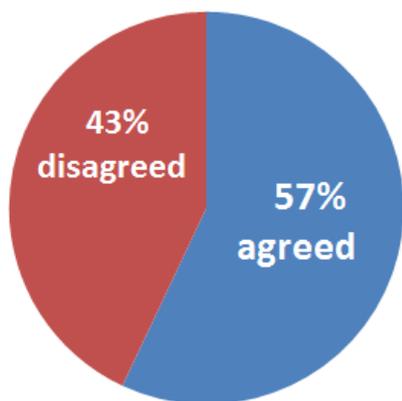
**Government response:** This rule will be introduced as a regulation. The emphasis has been changed so that the farmer can decide where and when it is best to apply fertilisers based on assessing some risk factors. Minimum distances from certain water bodies also apply. To clarify more clearly what is meant by high risk times and areas, the rule has been split into three parts; see final rules 3, 4 and 5 in part C.

We recognise that some farmers might need to manage any excess slurry in order to comply with this rule on applying fertilisers and manures. Many farmers will already have sufficient slurry storage or will arrange to transport excess supplies off farm, but others may need to invest in additional storage. As recommended by respondents, a proportionate approach will be taken to enforcement, giving farmers reasonable time to

adapt their practices to the new rules through the advice-led approach, for example investing in new or upgraded stores.

***Proposed good practice 10: Incorporate manures into soil as soon as possible and within 24 hours after application at the latest.***

Purpose: to reduce pollution through surface runoff and drains by increasing the surface roughness of manure. Ammonia emissions are also reduced as there is less contact between the manure and air.



Although proposed as good practice the majority of consultees wanted this action to be introduced as a rule. However, the main issue of concern was whether it should apply to grassland, stubbles, direct drilled or minimum tillage cultivation.

A number of responses questioned the practicality of requiring manure incorporation within 24 hours of application. Some were concerned that the availability of machinery or contractors would hinder their ability to achieve this. Others were concerned that unexpected weather conditions might make working the soil inappropriate. It was noted that the cost to dairy farmers could be significant.

**Government response:** There are substantial benefits from rapidly incorporating manures applied to cultivated land within 24 hours and even greater benefits from incorporating manures within 12 hours. Applying this measure to all cultivated land would help to protect water from runoff, improve soil organic matter, avoid ammonia emissions (of which agriculture accounted for 81% in 2015) and retain valuable nutrients for uptake by crop.

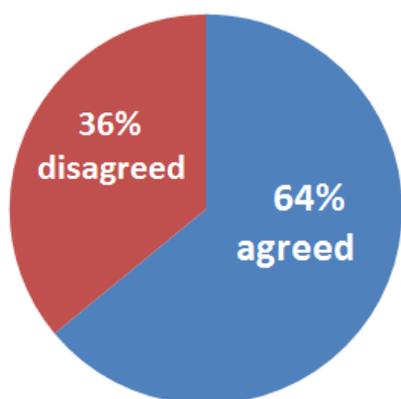
We are committed to improving our air quality by reducing ammonia emissions which impact on health and biodiversity and have agreed emissions reductions targets for this pollutant. This is one of the most cost-effective measures for reducing ammonia emissions and very widespread adoption of the 12 hour incorporation requirement is likely to be needed by 2030 to reduce ammonia in line with international commitments.

We recognise that a notice period would be needed before introducing this measure to allow farmers and contractors time to gear up to applying this practice widely. However, we consider that where it is reasonable and practical for a farmer to incorporate manures

quickly, then that would be a suitable precaution the farmer could take to prevent agricultural diffuse pollution.

**Proposed good practice 11: Exclude livestock from watercourses (excluding uplands and common land).**

Purpose: to reduce pollution by stopping excreta dropping into watercourses or avoid river bank erosion leading to more sediment loss.



Although the majority of respondents preferred to see this action brought in as regulation, the proposal also generated a robust debate about the associated environmental outcomes. Many felt that this action alone would contribute most to improved water quality locally. However, grazing river banks would also deliver benefits, e.g. preventing the spread of non-native invasive species such as Himalayan balsam.

Many respondents suggested that this proposed action might be extended to include uplands and, though fewer said so, common land.

The cost to farmers of providing sufficiently robust fencing and of providing an alternative water supply was an issue raised by several respondents.

**Government response:** This action will not be introduced as new regulation but will continue to be promoted as good practice. We recognise the potential cost implications of this proposal and that there are some environmental benefits which must be weighed against the risk of pollution.

## 6. Do you have any comments on the proposed approach to verification?

The consultation paper suggested that compliance with the proposed rules might be checked through existing farm inspections and, where possible, in line with government priorities, through remote sensing. It also suggested exploring opportunities to work in partnership with farm assurance schemes on earned recognition so as to minimise burdens on farmers. These proposals intended to minimise the cost of implementing any new rules.

114 respondents commented on this question. Many asked how remote sensing might be used to verify compliance with the proposed rules. Respondents identified resource implications of capturing and interpreting remotely collected imagery and the limited range of farm activities that could be checked by this method. In particular, respondents thought that verifying the accuracy of spreading and compliance with 'no-spreading' periods would be challenging.

Concerns were also raised that some farmers might feel their privacy might be compromised by remote sensing equipment such as drones and that it could undermine the good rapport between some regulators, advisers and farmers. Some also questioned whether remote sensing might lead to immediate sanctions with insufficient evidence due to limitations in the technology and without due warning.

To explain the government position on remote sensing in this context, an explanatory note was posted on the consultation website and emailed to consultees who had already responded. It explained that current remote sensing technology would not enable the basic rules to be verified, but might be used to pinpoint possible pollution issues. This data might then help to target farm visits where a compliance issue should be investigated. Those who supported the use of remote sensing also suggested that it should form part of farm verification, supplemented by farm visits in person.

There was a strong theme in the responses, demanding more farm inspections but also better advice to help farmers understand the impact of their business on the water environment and so the need to act. Again it was noted that public spending constraints might affect any proposal to increase farm visits or take enforcement action.

**Government response:** We note the overall support for an advice-led approach to implementation and will work with available resources to positively engage farmers. We will look for more efficient ways of carrying out compliance checks including using new technology and cross-referrals between agencies to reduce the number of farm visits overall.

## 7. Are there any additional rules or good practice which you feel should be added?

112 respondents answered this question. The suggested additions could be grouped into rules about soil management, crop choices, manure management, reducing runoff or flood risk and creating more buffer strips. Respondents also commented on the need to engage farmers effectively on measures to secure uptake of any new rules.

On soils there was significant support for more frequent soil testing, some respondents suggesting that this should include analysis of soil organic matter and compaction. Avoiding bare soil during the winter was considered important and some thought that farmers should be encouraged to better manage their soil organic content.

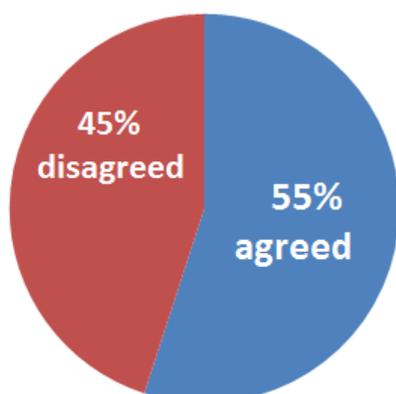
Respondents highlighted that the choice of crop might significantly affect the risk of soil erosion and nutrient run off. Concerns were raised in particular about crops such as maize, which is sometimes grown as a biofuel, and can expose soil layers to erosion. Ten consultees asked for restrictions on growing such crops in high risk areas where there are steep slopes or light soils.

Many respondents suggested that there should be further rules to create more buffer strips especially alongside rivers. Expanding the use of vegetated or tree covered buffer strips was also proposed not only to reduce pollutant losses, but to manage flood risk and for carbon sequestration benefits

A widespread view was that some farmers need to better understand the impact of their business on the environment so that they are better motivated to act. It was suggested that clear communications and advice to farmers would be important, but this should be underpinned by farm visits and enforcement where farmers fail to comply.

**Government response:** We recognise the wide range of additional rules or good practice suggested. The final set of new regulations encompass many of these proposals and we will encourage promotion of other good practice actions, through Countryside Stewardship and other means, to further benefit sustainable farming and the environment. The rules will be reviewed in three years and these additional rules can be considered at that point.

## 8. Do you agree or disagree with the proposed approach to compliance and enforcement?



The consultation described an advice-led approach giving farmers time and support to understand the new rules. The Environment Agency's risk-based approach to regulation would provide the basis for enforcement, focusing on priority catchments. Prosecution would generally only follow more serious breaches or a persistent failure to act on advice. This staged approach was designed to avoid placing a disproportionate burden on farm businesses.

There was a significant variation in views on the proposed approach to compliance and enforcement. Many supported a robust approach to enforcement (55 responses), mindful

of the resource needed to make this happen. The proposed advice-led approach to implementation was supported by the vast majority, with respondents considering that farmers should be given reasonable time to adjust. However there was call for a strict timetable for transition and clear articulation of the approach to enforcement once the transition period had passed.

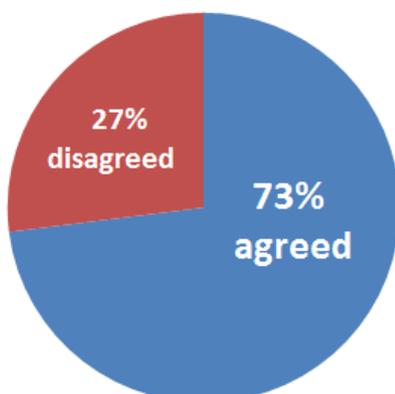
Some of those respondents wishing to see a firmer approach to managing compliance noted that the present system sometimes gave farmers too long to right any wrongs and rarely led to prosecution. It was contested that farms should be treated no differently to other businesses in being expected to address their pollution. Although there was strong support for an advice-led approach, respondents wanted enforcement action to target farmers who fail to comply even after receiving advice. This should encourage persistent offenders to comply and make it fair for the majority of farmers who already meet these rules.

Respondents asked for clear definitions to be provided so that all farmers would be given a fair opportunity to comply.

Nineteen respondents suggested that the rules would secure higher uptake if placed in cross compliance. Others wanted to see separate rules so that farmers were encouraged to act both due to the risk of potential loss of subsidies and possible enforcement action.

**Government response:** We will work with the industry to provide clear communications to all farmers on what is expected of them. The regulations will be implemented through an advice-led approach, supported by civil sanctions and prosecution. Prosecution will generally only be suitable in the most serious pollution offences or where other enforcement measures have failed. The approach to enforcement is explained in more detail in the policy paper.

## 9. Do you agree or disagree with the proposed approach to streamlining regulation?



The consultation document set out proposals to streamline all regulations on agricultural pollution into a single set of regulations. Additional comments were provided by 116

respondents on this issue, with the majority supporting the proposed approach to streamlining regulation.

In terms of implementation, respondents wanted any new rules to be introduced with clear guidance and advice to farmers and, after a period of transition, robust enforcement. Again, some responses questioned the availability of resources to fund farm inspections.

There was a desire for clear environmental outcomes to be defined so that the success of the initiative could be clearly evaluated.

Four respondents commented on the lack of basic rules for pesticides, in particular metaldehyde and other products that require costly treatment or product substitution near drinking water sources.

Overall there was a positive response to simplifying regulation in principle but with the caveat that any new rules should be clearly explained and enforced.

**Government response:** The new Farming Rules for Water will be implemented through clear communications and guidance for farmers. We will work with industry and environmental organisations to help communicate the rules and support farmers in making any changes to their farming practice. The Farming Rules for Water will be reviewed in three years and this will contribute to consideration of further ways of streamlining regulations that relate to preventing agricultural pollution. We will involve stakeholders in that process.

## 10. Do you have any further evidence it would be helpful for government to consider as this policy is developed further?

This question elicited comments from 109 respondents.

A number of respondents provided additional evidence and studies and these have helped to inform the government response to this consultation. They ranged from case studies of diffuse pollution in specific rivers to research into the benefits of excluding livestock from rivers. Most respondents who raised the issue considered that there was already sufficient evidence of diffuse pollution to ask farmers to act.

Many respondents used this as an opportunity to reinforce their views on the proposed new rules rather than provide new evidence. A broader point made by several respondents was the need to take a step back and decide how agriculture might better interact with the natural environment to put it on a more sustainable footing. It was suggested that this should consider use of non-chemical farming practices.

There were a number of comments about how any proposed new rules might be implemented. Key issues for most were an advice-led approach that respects existing local

relationships between eNGOs, advisers and farmers and allows farmers the time to adapt to any new requirements. Some respondents promoted the value of gaining local knowledge of pollution issues by engaging with rivers trusts, wildlife trusts and angling associations.

Respondents provided many local case studies demonstrating how local engagement and catchment based decisions can significantly improve the water environment.

**Government response:** We welcome the wide variety of views and evidence submitted in response to this question. This has helped to ensure that the final proposed option makes best use of the available evidence and will help to develop the advice-led approach.

## **C. Final set of rules and next steps**

### **How consultation has shaped the final set of rules**

We welcome the thoughtful, detailed feedback to this consultation and note that the majority support the proposed rules for farmers. Whilst a minority did not support the proposals, it was agreed that new rules should be introduced.

As explained in part B, the response to the consultation has helped shape the final set of rules. Some rules have been dropped and others adapted so that they are more streamlined and it is clearer what farmers will need to do. They will be introduced as regulations which will take effect from April 2018.

### **The final set of rules practical and risk based to prevent and reduce agricultural pollution.**

Based on feedback from the consultation, the final set of rules has been improved and seeks to provide benefits to farmers such as increased productivity through better resource efficiency. The aim is to help the farming industry to work at an optimum level whilst continuing to protect our natural environment and conserve sensitive areas.

We have set the rules to align them with existing requirements to keep things clear and simple for farmers. The Farming Rules for Water are designed to work with farmers to address pollution risks in a proportionate and collaborative way. Part of the prevention approach is to encourage land managers to take reasonable precautions to prevent diffuse pollution from occurring. Reasonable precautions are actions that a land manager might be expected to do where it is practical and reasonable to do so in order to prevent runoff or soil erosion.

Some of the rules and best practice measures proposed in the consultation could provide wider environmental benefits including air quality and biodiversity. We have listened to feedback from consultees and have decided not to implement proposed rule 4, feed planning for livestock, but to retain it as good practice. Proposed good practice measure 10, incorporating manures within 24 hours of application, would deliver considerable reductions in ammonia emissions as well as protecting water by locking manure into the soil. In due course farmers will need to incorporate manures within 12 hours to achieve the ammonia reductions needed to meet our 2030 commitments. Rapid incorporation of manures is an example of a reasonable precaution that farmers can take now if it is reasonable and practical for them to do so.

The final set of rules are described below with a brief explanation of how we have taken into account views made in the consultation responses. We have published the final rules

as a separate policy paper setting out what we will do and when the rules will come into effect.

<b>Final set of rules and changes from consultation proposals</b>		
<b>Rule</b>	<b>You said – key points raised</b>	<b>We did – changes made</b>
<b>Organic Manures and Manufactured Fertilisers</b>		
<p>1 a) Application of organic manures and manufactured fertilisers to cultivated land must be planned in advance to meet soil and crop nutrient needs and does not exceed these levels</p> <p>1b) Soil testing must be carried out for Phosphorus, Potassium, Magnesium, pH, and Nitrogen levels at least every 5 years, for cultivated land.</p>	<p>Concern about the complexity of a fertiliser recommendation system (proposed rule).</p>	<p>We have adapted the rule to make it more outcome focussed and less prescriptive in the action required. Rather than requiring a fertiliser recommendation system, farmers need to test their soils periodically and apply nutrients to meet soil and crop needs.</p>
<p>2. Organic manures must not be stored on land:</p> <p>a) within 10 metres of inland freshwaters or coastal waters,</p> <p>b) where there is significant risk of runoff entering inland freshwaters or coastal waters</p> <p>c) within 50 metres of a spring, well or borehole</p>	<p>There was strong support for this rule and it was suggested that there might also be minimum application distances from springs, wells or boreholes (not included in proposed rule).</p>	<p>The final rule includes protection for springs, wells or boreholes and a requirement to avoid storage where there is a significant risk of runoff (consistent with the soil management rules).</p>

<p>3. Organic manures or manufactured fertilisers must not be applied:</p> <p>a) if the soil is waterlogged, flooded, or snow covered</p> <p>b) if the soil has been frozen for more 12 hours in the previous 24 hours</p> <p>c) if there is significant risk of causing environmental pollution from soil erosion and run-off</p>	<p>There was concern that the proposed rule might be too inflexible (slurry and manure spreading limits from 15 October to February) and not clearly defined (do not spread manufactured fertiliser or manures at high risk times or in high risk places).</p>	<p>The revised rule puts the onus on the farmer to decide when conditions are unsuitable for applying fertilisers or manures. Risk criteria are provided to help inform this decision.</p>
<p>4. Organic manures must not be applied:</p> <p>a) within 10 metres of any inland freshwaters or coastal waters, except, if precision equipment is used within 6 metres of inland freshwaters or coastal waters<sup>2</sup></p> <p>b) within 50 metres of a spring, well or borehole</p>	<p>This rule gave rise to similar concerns to those above, that the proposed rule was too inflexible (slurry and manure spreading limits from 15 October to February).</p>	<p>We have revised the rule, replacing fixed dates with clear limits for organic manure application and more lenient restrictions where precision spreading equipment is used.</p>
<p>5. Manufactured fertiliser must not be applied within 2 metres of inland freshwaters or coastal waters</p>	<p>Respondents were concerned that the proposed rule did not provide clear definitions of high risk time or areas.</p>	<p>The rule has been amended to specify a clear minimum distance from water bodies for applying manufactured fertiliser.</p>

<sup>2</sup> a. except if precision equipment is used, then organic manure must not be applied closer than 6 metres from inland freshwaters or coastal waters (precision equipment means a trailing hose band spreader or a trailing shoe band spreader, or a shallow injector which injects the organic manure no deeper than 10 centimetres below the surface, or a dribble bar applicator, or other equipment designed to apply organic manures or manufactured fertilisers in an accurate manner.)

b. except livestock manure which can be applied within 10 metres of inland freshwaters or coastal waters if the agricultural land is managed for breeding wader birds or as a species-rich semi-natural grassland under certain restrictions. These are:

i. the agricultural land must be in an agri-environment scheme, or notified as a Site of Special Scientific Interest (SSSI)

ii. the manure is not applied directly onto surface water, and

iii. the total annual amount applied is not more than 12.5 tonnes per hectare.

<b>Soil management</b>		
<p>6. Take all reasonable precautions to prevent significant soil erosion and runoff from:</p> <p>a) seedbeds, tramlines, rows, beds, stubbles (including harvested land with haulm), polytunnels and irrigation</p> <p>b) poaching by livestock</p>	<p>This proposed rule to take action to prevent soil erosion and runoff was widely supported.</p>	<p>It has been revised to include a specific, though not exhaustive, list of land management practices that increase the risk of significant soil erosion.</p> <p>An additional requirement to take action to prevent poaching by livestock has been taken from the previous rule to 'exclude livestock from water courses'.</p>
<p>7. Any land within 5 metres of inland freshwaters and coastal waters must be protected from significant soil erosion by preventing poaching by livestock</p>	<p>There was widespread support for this proposed rule to take action to prevent soil erosion and runoff.</p>	<p>The rule has been amended to protect land that is closest to water bodies from poaching by livestock.</p>
<p>8. Livestock feeders must not be positioned:</p> <p>a) within 10 metres of any inland freshwaters or coastal waters.</p> <p>b) where there is significant risk of runoff from poaching around the feeder entering any inland freshwaters or coastal waters</p>	<p>This proposed rule was widely supported noting the small costs of relocating feeders.</p>	<p>This rule has been retained but with the distance from water bodies more clearly stated.</p>

## Annex 1: Clarification note on remote sensing

This consultation referred to remote sensing as a means of verifying some of the proposed basic rules. Remote sensing can range from the simplest GPS in a tractor enabling precision farming right through to satellite data. Any of these approaches may contribute towards improving outcomes on the ground.

Government is keen to explore the opportunities for using remote sensing and other technology to increase efficiency and reduce burdens on farmers. At present, the focus is on satellite and aircraft platforms rather than drones.

Remote sensing was identified in the consultation as a method for checking compliance with the rules. Further research has indicated that it is more likely to be used at a broader scale to pinpoint high risk areas for monitoring. It is unlikely at this stage that the level of resolution is such that compliance with individual actions can be monitored.

The Environment Agency currently uses a combination of aircraft gathered light detection and ranging (LIDAR) data, which supports flood management, and satellite monitoring.

The EU Copernicus programme has launched two satellites (Sentinels) which will provide free data at the point of use; further information can be found at: <http://www.copernicus.eu/>

Defra is seeking to increase the use of earth observation across the whole of Defra as part of our drive to use the best information available to inform policies and operations.

To ensure the most effective use of resources in this area, Defra has recently established the “Earth Observation Centre of Excellence”. This draws together expertise from across Defra, acts as a strategic partner to the business and provides an effective interface with the satellite data supply side.

The Earth Observation Centre will coordinate existing Earth observation skills and resources from across the whole Defra group, making most effective use of existing knowledge and capacity. Further information can be found at:

<https://www.gov.uk/government/news/europes-earth-observation-programme-maximised-by-uk-data-hub>

## Annex 2: Organisations who responded to the consultation

ACT Ltd  
ADAS  
Agricultural Industries Confederation  
Agriculture and Horticulture Development Board  
AGRII  
Anglian Water  
Arundell Arms hotel  
Association of Independent Meat Suppliers  
Azotic Technologies Ltd  
Bedford Group of IDBs  
Bristol Water  
Canal and River Trust  
Cefas  
Central Association of Agricultural Valuers  
Cheshire east Council  
CLA  
Cornwall Catchment Partnership  
Cornwall Wildlife Trust  
Cotswold Rivers Trust, Evenlode Catchment Partnership, Upper Thames Fisheries  
Cranborne Chase AONB  
Crop Protection Association  
Dairy Crest Milk Processor  
Deltares  
Devon Wildlife Trust  
Downs & Harbours Clean Water Partnership (Portsmouth Water)  
East Yorkshire Rivers Trust  
Environment Agency  
Essex and Suffolk rivers trust  
Farming & Wildlife Advisory Group, South West  
Farming and Wildlife Advisory Group  
FG Smith &son  
Free Spirit Films  
Friends of the River Frome  
GAAFFS  
Global Sustainability Institute, Anglia Ruskin University  
Godinton Park Fly Fishers and Restoration Project  
Godinton piscatorials river Stour Kent  
Greater Lincolnshire Nature Partnership  
Greywell Flyfishers  
Grosvenor Estate

Hampshire & Isle of Wight Wildlife Trust  
Heathside Consulting Ltd  
Hertfordshire and Middlesex Wildlife Trust  
Institute of Organic Training and Advice  
JE&FA Bartleet  
Jennie Stafford Rural Advisory Ltd  
Ken Hill farms and Estate  
Kent Wildlife Trust  
Lancaster University  
Launceston Angler's Association  
Lesley Haskins Charitable Trust  
Lincolnshire Wildlife Trust  
Living Soil Consultant  
LLyn Guides ([www.llynguides.co.uk](http://www.llynguides.co.uk))  
Loddon Fisheries and Conservation Consultative  
Lune Rivers Trust  
M.W.Nash and Partners  
Marches LEP  
National Farmers Union  
National Pig Association  
National Trust  
Natural England  
New Forest National Park  
Nidderdale AONB  
Norfolk Wildlife Trust  
Northamptonshire County Council  
Northumberland Rivers Catchment Partnership  
Northumbrian Water Group  
Prince Albert Angling Association  
REDFA  
Ribble Rivers Trust  
River Chess Association  
Rivers Trust  
RJ & AE Godfrey  
Rob Yorke (Associates) Ltd  
RSPB  
S&DAC  
Salmon & Trout Conservation UK  
Savills  
Seafish  
Severn Trent Water  
Shellfish Association of Great Britain  
Shropshire Council  
South Cumbria Rivers Trust  
South West Rivers Association

South West Water  
Southdown Angling Association  
Southern Water  
SPRITE  
Sussex Piscatorial Society  
Sussex Wildlife Trust  
Swiss Federal Institute of Aquatic Science and Technology  
Talk Radio News  
The Allerton Project  
The Piscatorial Society  
The Rivers Trust  
The Services Manor Fishery Ltd  
The Shellfish Association of Great Britain  
The Wildlife Trust for Lancashire, Manchester & North Merseyside  
The Wildlife Trusts (central team)  
United Utilities  
University of Bristol  
Water UK  
Watson Farms  
Welsh Dee Trust  
Wessex Water  
Westcountry Rivers Trust  
Wild Trout Trust  
Wild Trout Trust  
Wildlife and Countryside Link  
Wilton Fly Fishing Club  
Wisdom Systems / eziserv Ltd  
Woodland Trust  
Wrights of Brettenham  
WWF and Angling Trust  
WWT  
Wye & Usk Foundation  
Wye and Usk Foundation  
Wyre River Trust  
Yara UK Ltd  
Yorkshire Farming and Wildlife LLP  
Yorkshire Water Services Ltd