



Catchment Sensitive Farming

Working together for a healthy environment



Catchment Sensitive Farming Partnership Delivery Report

April 2018 - March 2021

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Foreword

We are delighted to see Catchment Sensitive Farming (CSF) partnership delivery highlights in this report. It shows the wide range of partnership activities and work with farmers and land managers to achieve our shared environmental outcomes.

We fully support the recently announced continuation of the partnership. Seeing it grow from strength to strength over the years; since it's humble start as an initiative in 2006, is inspiring and demonstrates the benefits of an inclusive partnership approach to tackling big environmental changes.

Both this and the CSF Evaluation Report in 2019, show that when partners work closely with customers and bring their skills and knowledge together - we can achieve greater environmental gains.

We would like to express our thanks and gratitude to all staff, partners and stakeholders for your continued commitment and hard work.

Maggie Telfer, National Operations Director, Natural England

**Jan Dixon, Deputy Director (Jobshare), Water Quality,
Department for Environment, Food and Rural Affairs**

**Bill Parish, Deputy Director, Air Quality and Industrial Emissions,
Department for Environment, Food and Rural Affairs**

**Kevin Austin, Deputy Director, Agriculture, Fisheries and the Natural
Environment, Environment Agency**

Introduction

This report covers Phase 4 CSF delivery from April 2018 to March 2021 and demonstrates the partnership's positive impact on improving water and air quality in agriculture. This report builds on previous delivery work^{1,2} and captures the accumulative benefits on water quality from 2006.

During this time, CSF has:

- Adopted Countryside Stewardship as a key incentive tool and introduced ammonia reduction measures to improve air quality.
- Improved water quality by working with a wide range of partners, stakeholders and farmers.
- Developed new solutions to support customers during Covid-19 lockdown and continued implementation of environmental measures.

The developments also contribute to CSF Phase 5, starting from April 2021, which actively support Defra's Agricultural Transition Plan³. This includes helping farmers and partners meet new challenges, as well as supporting Natural England with new farm advice approaches and tools. CSF will do more for nature recovery and protected sites through advice and existing and new schemes.

Bob Middleton, CSF Programme Manager

¹ [Catchment Sensitive Farming Phase 3 Delivery Report - CSF157 \(naturalengland.org.uk\)](https://naturalengland.org.uk)

² [Catchment Sensitive Farming Phase 3 Delivery Report Update - CSF158 \(naturalengland.org.uk\)](https://naturalengland.org.uk)

³ [Agricultural Transition Plan 2021 to 2024 - GOV.UK \(www.gov.uk\)](https://www.gov.uk)



What we do

CSF works together with farmers and organisations in priority areas across England to improve the quality of our water and air.

The partnership provides local expert advice, training, and grant support to enable farmers to take voluntary action to improve the environment and their farm business.

Catchment Sensitive Farming (CSF) is led by Natural England in partnership with Defra and the Environment Agency. Since 2006, CSF has worked with around 20,000 farms and helped farmers take more than 70,000 positive actions to reduce pollution.⁴ 92% of the farmers CSF has worked with are satisfied with its one-to-one advice.⁵ CSF and farmers have achieved reductions in agricultural pollutants - nitrogen levels down by 4%, phosphorus levels down by 8%, and a 12% reduction in sediment.⁶

In 2018, as part of Defra's Clean Air Strategy, the Government committed an additional £3 million to CSF, focussing on working with the agricultural industry to improve air quality.

CSF operates to support sustainable farming practices, to improve environmental outcomes, and contribute to nature recovery and the reduction in carbon emissions from farming.

Our partnership provides key advice to help deliver our 25 Year Environment Plan goals.

For more information visit [gov.uk/catchment-sensitive-farming](https://www.gov.uk/catchment-sensitive-farming)

⁴ [Catchment Sensitive Farming Evaluation Report – Water Quality Phases 1 to 4 \(2006-2018\) - NE731 \(naturalengland.org.uk\)](#)

⁵ Farmer Telephone Survey (not published)

⁶ [Catchment Sensitive Farming Evaluation Report – Water Quality Phases 1 to 4 \(2006-2018\) - NE731 \(naturalengland.org.uk\)](#)



Programme highlights

CSF evidence

The [Phase 4 Evaluation Report](#) assessed CSF benefits since 2006 to 2018 and informed the decision to invest and expand CSF in Phase 5. It showed:

- Focused CSF delivery leads to a reduction in pollution incidents - 17% decrease in 'serious' incidents across Phase 1 and 2 Target Areas
- Grants are a significant 'enabler' of action increasing behaviour change and encouraging investment: the Capital Grant Scheme (CGS) directly accounts for 2-20% of CSF pollutant reduction and greater than 50% of CSF reduction (FIO and dissolved P) is from CGS farms.
- CSF has a key role in supporting Agri-Environment Schemes (AES): 4-8 times greater pollutant reduction on AES farms also implementing CSF advice
- The Agricultural Land Environmental Risk Tool (ALERT) will be used routinely in planning future farm advice visits. During COVID-19 lockdown it was invaluable in using remote sensing data, which helped Catchment Sensitive Farming Officers (CSFOs) visualise farms and catchment areas to target on-farm mitigation measures

Working together

Through Farm and Land Management Advice (FaLMA) we achieved more by helping identify farmer and land manager needs and providing specialist, unbiased, confidential, and free advice.

- Forty advice contracts, valued over £3M, were procured via FaLMA, despite the impact of COVID-19 restrictions in 2020/2021
- 2,662 1:1 on-farm technical advice visits across England
- 776 soil and manure sampling batches
- 76 group events with 1,388 participants

Partnership working at national, catchment and collaborative levels has enabled bigger and better results:

- Collaborative projects have provided a flexible approach to recruit CSF roles and build capacity in key target areas.
- CSF worked with Water Companies to invest in catchment solutions through the Water Industry National Environment Programme
- CSF's Stakeholder Advisory Group provided invaluable support and endorsement of CSF and Phase 5 continuation.

CSF/LEAF project delivered a series of video case studies on good farm practice:

- [Improving soil structure through strip tilling and cover cropping](#)
- [Rainwater harvesting from cattle housing:](#)
- [Improving nutrient use efficiency:](#) Events with Championing the Farmed Environment

Enabling and supporting others

CSF achieved greater on-farm investment in water and air quality through approval of 6,758 Countryside Stewardship agreements.

CSF built brand profile and messaging to enable farmers through Defra Campaigns: National Agricultural Show programme, Clean Air Strategy, Code of Good Agricultural Practice (CoGAP), CSF Air Quality Launch, Great Farm Challenge (GFC), CSF Evaluation Report and Countryside Stewardship 2021.

- Total of 52,108 page views of CSF GOV.UK page (9% increase from previous 3 years, total 47,361)
- Total page views of contact list for local Catchment Sensitive Farming Officers 21,634 (93% increase compared to previous 3 years, which totalled 11,200)

Introduction of new internal communication programme for staff including trials of 3 e-campaign management systems resulting in adoption of eShot in early 2021.

Since 2011, over 1,300 young farmers have engaged with the Great Farm Challenge leading to increased understanding of sustainable farming

- Number of regional finals events increased from three to six
- Colleges participating increased to eighteen. This included colleges from the Midlands, North West, North East, Yorkshire and Anglia
- Water companies supporting the project increased to eight

Staff learning and development investment enhanced the delivery of the CSF programme:

- 232 staff attended introductory learning and development courses: air quality, fertilisers, pesticides, soils, farm business management and nutrient management
- 38 staff trained in BASIS Fertiliser Advisers Certification and Training Scheme (FACTS), Soil & Water training, and FACTS annual refresher
- Introduction of new CSF Essentials training webinars

Seizing new opportunities

CSF contributed to several different new pilots and schemes.

Through Defra's Air Quality pilot, CSF achieved:

- 30% increase in number of farms receiving air quality advice including
- Adoption of CSF air quality objective in CSF and Countryside Stewardship
- Two new specialist advice specifications in FaLMA; Natural Flood Management and Woodlands for Air and Water

Delivered support to local flood mitigation pilots within 5 catchments – Cumbria, Somerset, Evenlode, Alconbury and Piddle which led to the adoption of flood mitigation as a primary objective in Phase 5 of CSF.

Approach developed for Environment Agency's Flood and Coastal Innovation Programme (FCRIP) pilots on farm advice for flood resilience - blending funding and cost recovery partnerships with private sector and other government funding sources.

Planning for Phase 5 included:

- CSF Brand research and refresh
- On-farm data capture tool for Catchment Sensitive Farming Officers
- Interactive farmer engagement app
- Online training platform to enhance CSF training data recording

A continuous programme of enhancements and upgrades on CSF Reporter; the main system for recording information about CSF stakeholder engagements and advice delivery:

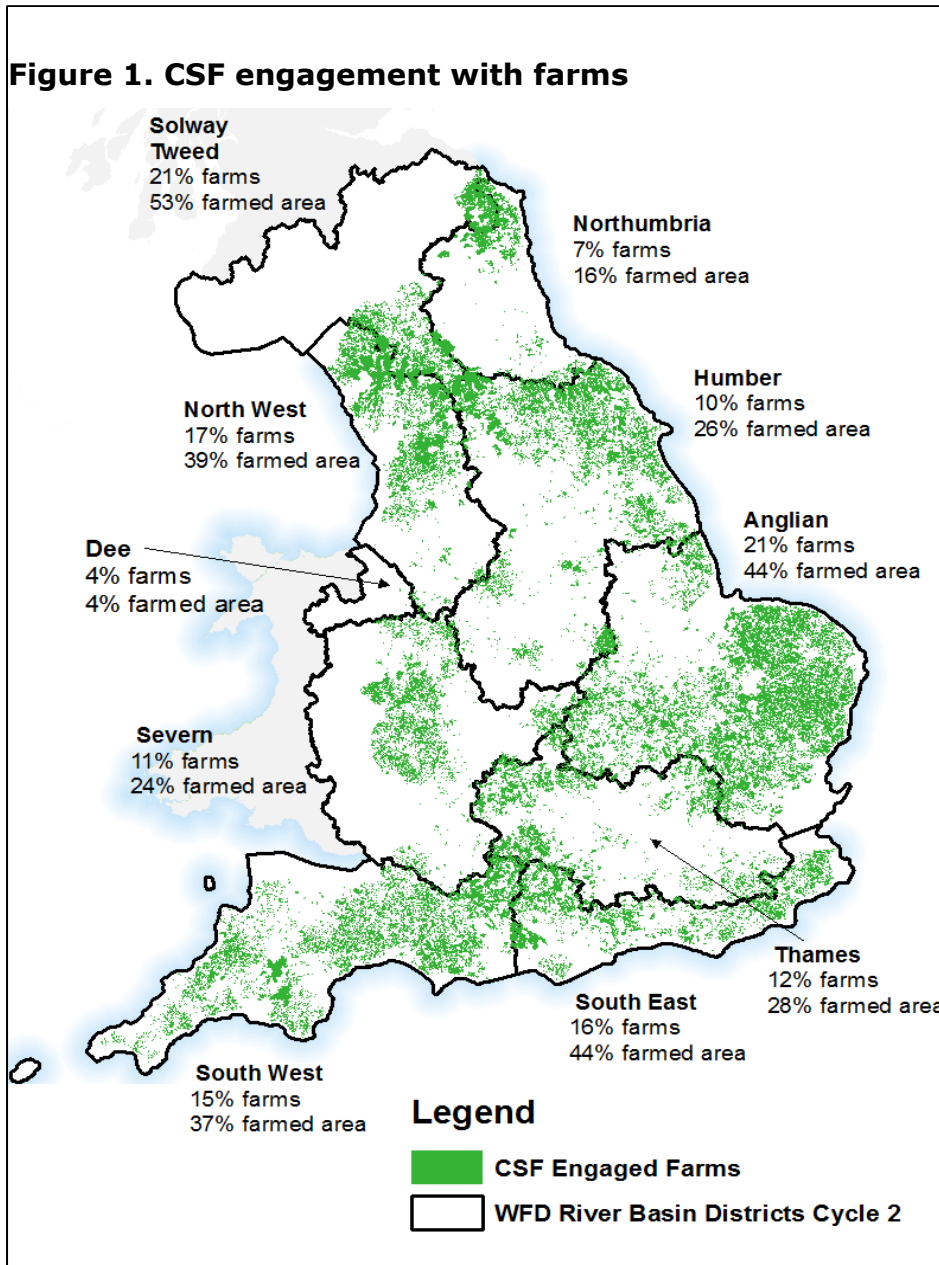
- Successful migration to a new hosting platform; in liaison with Defra's Digital Data Technical Services (DDTS) and the developers (ATOS)
- Creation of a guidance library
- National CSF user network to train staff, help with general queries and user test any upgrades



CSF evidence

From 2006, CSF's Evidence team in the Environment Agency has focused on building a 'weight of evidence' to evaluate CSF. This has underpinned the programme's design, targeting, delivery and evaluation.

The programme outcomes, reported in the 2019 Evaluation Report⁷, highlighted the positive impact of CSF advice to farmers on water quality across England:



⁷ [Catchment Sensitive Farming Evaluation Report – Water Quality Phases 1 to 4 \(2006-2018\) - NE731 \(naturalengland.org.uk\)](#) Note: this covered water quality only. Air quality and other priorities will be included in future evaluation.

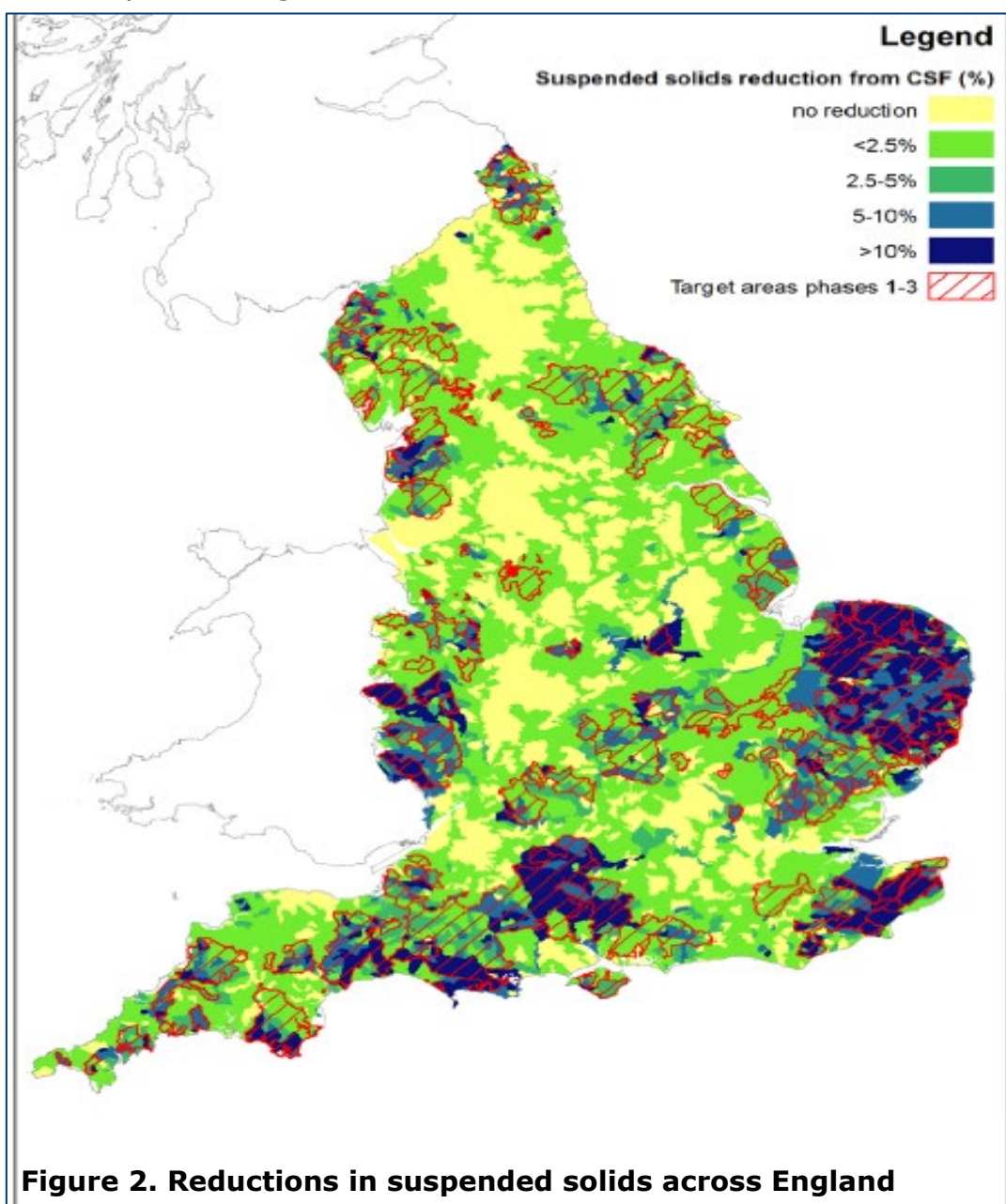
1. CSF is building and maintaining farmer relationships - 19,776 holdings covering 34% of England's farmed area.
2. Advice delivery is vital for farmers to action environmental measures - 128,691 mitigation measures were advised through on-farm one-to-ones of which 59.6% were taken-up (with uptake increasing with repeat advice).
3. 87% of mitigation measures are "mostly effective": there is a strong association between farmer understanding of mitigation measures and their implementation.
4. Farm pollutant losses reduced: average 4-12% reductions in Nitrogen, Phosphorous, Sediment and Faecal Indicator Organisms⁸ (N, P, Z, FIO) across Phase 1 Target Areas.
5. Water quality improvements:
 - Average 1-6% reduction in (N, P Z, FIO) across Phase 1 Target Areas validated with monitoring data (P, Z, FIO)
 - 34% reduction in pesticide samples exceeding 0.1µg/l (micrograms per litre) across 4 river catchments with long-term monitoring
6. Focused CSF delivery leads to a reduction in pollution incidents: 17% decrease in 'serious' incidents across Phase 1 and 2 Target Areas.
7. CSF is changing behaviours - CSF farmers give greater priority to water pollution and want to do more to reduce it.
8. More robust groundwater assessment is needed: improving trends are evident across fast-response aquifers but no clear link to CSF advice delivery has yet been made.
9. No statistically significant improvement of in-river ecology, although further pollutant reductions are expected to lead to an ecological response over the longer-term.
10. Environmental benefits go well beyond water quality and include air quality; biodiversity; provision of animal products and materials; erosion

⁸ where specifically targeted

control; reduced flood risk; natural pest control and beneficial insect pollination.

11. Capital Grants and Agri- Environment Schemes:

- Grants are a significant 'enabler' of action increasing behaviour change and encouraging investment: the Capital Grant Scheme (CGS) directly accounts for 2-20% of CSF pollutant reduction and greater than 50% of CSF reduction (FIO and dissolved P) is from CGS farms
- CSF has a key role in supporting Agri-Environment Schemes (AES): 4-8 times greater pollutant reduction on AES farms also implementing CSF advice.



CSF delivered

- CSF Phase 4 Evaluation Report
- Peer-reviewed scientific journal papers detailing our environmental monitoring and modelling approaches and results:
 - Water quality benefits from an advice-led approach to reducing water pollution from agriculture in England - ScienceDirect
 - A New National Water Quality Model to Evaluate the Effectiveness of Catchment Management Measures in England (mdpi.com)
- Agricultural Land Environmental Risk Tool (ALERT) tool, using remote sensing data, helping CSFOs visualise farms and catchment areas to target on-farm mitigation measures
- CSF Evidence Prospectus updates, providing an evidence base to support farm advice delivery
- Annual assessments of farm advice uptake
- Farmer Awareness and Attitude Surveys
- Environmental monitoring (water quality, ecology, and sediment fingerprinting) and modelling of land and water
- Updates to Key Performance Indicators (see Annex 1)

Lessons learnt

CSF has a long-standing process of Continuous Improvement using the lessons from the programme evaluation and from other reviews and reports of CSF activity. In the period of this report an Improvement Plan (Annex 2) was implemented using the results of the 2019 Evaluation Report; preparation for Phase 5 from the CSF Futures work; internal and external reviews and research from Defra's Demonstration Test Catchments.


Department
for Environment
Food & Rural Affairs



**A clear solution
for farmers**
CATCHMENT SENSITIVE FARMING


Rural Payments
Agency



BASIS



Working together

Through partnership working CSF has shown we can achieve more, supplementing CSF advice with contracts, partnerships and stakeholder support.

Contracted advice

Catchment Sensitive Farming Officers (CSFOs) provide direct farm advice including Nutrient Management Plans and Farm Infrastructure Audits, which help farmers and land managers understand their pollutant risks and adopt mitigation measures.

Through the Farm Advice Framework (FAF) and the subsequent Farm and Land Management Advice (FaLMA) Framework, CSF has been able to contract more advice and additional specialist advice which has helped farmers and land managers address key local issues.

CSF delivered

- 40 advice contracts, valued over £3M, procured via the advice frameworks, despite the impact of COVID restrictions and limitations on farm visits in 2020/2021.
- 2,662 1:1 on-farm technical advice visits
- 776 soil and manure sampling batches
- 76 group events with 1,388 participants
- 12 air quality advice case studies
- Technical CSFO support for Countryside Stewardship Mid-Tier
- Support to Water Companies to achieve catchment objectives
- Flexible capacity and depth of advice when needed

Lessons learnt

Capacity and delivery can be impacted where several tenders are procured at the same time.

Partnerships

Partnership working is critical to CSF's success – enabling bigger and better results. We work with a range of partners, including water companies, local authorities, agricultural and environmental bodies.

National partnerships

National partnerships have provided greater reach and delivered joined-up, cost-effective, high-quality tools and events.

- CSF/LEAF project delivered a series of video case studies on good farm practice:
 - [Improving soil structure through strip tilling and cover cropping](#)
 - [Rainwater harvesting from cattle housing:](#)
 - [Improving nutrient use efficiency:](#) Events with Championing the Farmed Environment
- Collection of [Learning from your land](#) videos with Innovation for Agriculture (IFA) and Ernest Cook Memorial Trust featuring Natural England Soils Specialist Matthew Shepherd
- Events with Soil and Water Management Centre
- Created the 'Check it Out tool' with Voluntary Initiative (VI)

Catchment partnerships

These partnerships have enabled CSF to increase engagement in catchment priority areas including:

Catchment partnership	Local partners
Rivers Nene and Welland	Environment Agency
Isle of Wight	Isle of Wight Area of Outstanding Natural Beauty (AONB) and Environment Agency
River Nidd	Nidderdale AONB and Yorkshire Water
Yorkshire Dales	Yorkshire Dales National Park Authority
River Loddon	Affinity Water, Hampshire and Isle of Wight Wildlife Trust

Examples of delivery include:

- The Yorkshire Dales catchment partnership worked with the Countryside Stewardship (CS) Facilitation Fund for Natural Flood Management to deliver bigger and better results on-farm
- The Loddon catchment partnership extended CSF's reach using novel soil benchmarking approaches, blackgrass trials and a pesticide amnesty

Short-term collaborative projects

Enabled CSF to pilot innovative approaches with a range of partners. For example:

- Eden Rivers Trust tested Natural Flood Management approaches
- Farming and Wildlife Advisory Group (FWAG) South East, South East Water, farmers and agronomists used cover crops to improve water quality and produced a [video of farmers' experiences of cover crops](#)
- West Cumbria Rivers Trust delivered 16 ammonia farm visits

Lessons Learnt

- Smaller environmental Non-Governmental Organisation (NGO) partners sometimes struggle to match-fund and manage retrospective payments
- Weighting of different partners' objectives and farm holding prioritisation needs care
- Access to Natural England IT systems and data is challenging.
- Recognition of CSF partnership resource required to support CSF expansion in CSF Phase 5
- Partnerships can provide a more cost-effective way of delivering farm advice across England
- Collaborative projects provide a flexible approach to innovation and additional CSFO resource in key target areas

Water company partnerships

The CSF business development strategy positioned CSF's Water Company offer and our Discretionary Adviser Service partnerships with Water Companies.

CSF delivered

- Increased awareness of the role of Water Companies with Defra to increase investment in CSF and Natural England products and services while also encouraging Water Companies to co-invest in farm advice and incentive programmes

- Avoided competition with third sector organisations for Water Company investment
- Water Company partnerships co-investment in products and services such as exploration of new markets, mechanisms for blending private and public sector funding and co-design of local projects with food supply chain companies
- A trusted partnership network of business and government interest in the Cambridge Institute of Sustainability, [Catchment Leadership Network](#) which successfully advocated for greater investment in catchment solutions
- Developed a strong profile for CSF with Water Companies through active membership of the Catchment Declaration Leadership group and co-design of innovative business development projects
- Nurtured Water Companies to invest in catchment solutions through the next round of the Water Industry National Environment Programme
- Established new planning terms and conditions for future Water Company collaborations in readiness for Phase 5

Lessons learnt

- Each area team approach the opportunities for CSF business development differently. A flexible offer and plan is key
- Farmers are increasingly interested in entering into innovative partnerships with water companies with trusted farm advisers. This is probably the biggest business development opportunity to achieve CSF objectives
- CSF needs to develop organisational understanding of CSF value in meeting wider objectives with focused cost recovery water company partnerships

CSF Advisory Group

This is the national stakeholder group that provides essential feedback from a mix of key sector leads on new policy or delivery. Through the group our partners have provided invaluable support and a variety of perspectives that help us to deliver CSF advice now and into the future.



Enabling and supporting others

CSF's success has been enhanced through using incentives, communication, and engagement to enable and support others to learn, adopt and improve the environment.

Countryside Stewardship

The scheme is delivered by Rural Payments Agency (RPA) supported with technical advice and recommendations by Natural England (NE) and Forestry Commission (FC).

CSF approves specific Mid-Tier and CS Capital Grant Scheme measures and supports high priority applications through:

Technical advice to applicants or representatives.

- Advice to RPA on scheme issues and prioritization of applications
- CSF approval and support documents for applicants.
- Provisional score and record on CSF Reporter database
- Application reviews sent from RPA requiring endorsement

CSF delivered

- 6,758 CS agreements - greater on-farm investment in water and air quality
- Engagement with many hard-to-reach farmers
- Inclusion of air quality as a scheme objective

Challenges

- The increase in customer enquiries and demand from CS applicants for CSF support, especially in 2020

Achievement

- Evaluation has shown that combining CSF advice and CS grant support leads to greater environmental gains

Customer engagement

To support CSF's strategy and drive national and regional programme aims, the customer engagement team expanded to three full-time equivalents in 2018 to:

- Raise CSF's brand profile within the sector
- Engage farmers to improve water and air quality
- Encourage voluntary take-up of on-farm measures by farmers

The CSF partnership's communication strategy is underpinned by aligning communications with Natural England, Defra, and the Environment Agency through the 25 Year Environment Plan.

Internal communications

CSF recognised the importance of its staff as advocates and advisers and the need to update staff and partners with relevant, frequent, and consistent messaging to inform, demonstrate value and equip.

CSF delivered

- Trials of 3 e-campaign management systems (Send in Blue, Maxemail and eshot) and adopted eshot in early 2021
- 132 CSF InBriefs (48 issues annually) – a weekly, news e-alert to all CSF staff and partners. Increasing open rate and click-throughs from 22% to 45%, peaking at 61% during key farming or scheme announcements
- 12 CSF quarterly e-bulletins (4 issues annually) to all staff and partners achieving 37.44% open rate (2020 figure)
- 18 bi-monthly programme webinars (6 annually) achieving attendance of between 60 to 110 staff at each webinar.
- Engagement and communications toolbox with guidelines, templates, content packs, articles and case studies to enable CSF teams including:
 - Content packs for Groundswell, Cereals and UK Dairy Day
 - Newsletter templates to create and send printed newsletters to farmers
 - 'Working with Maize Growers Association' case studies to share best practice
 - River Basin District mailboxes and national and regional Eventbrite and Zoom accounts to improve ease and effectiveness of customer communications

External communications

CSF built communication networks and harnessed relevant stakeholder and Defra campaigns; maximising synergies to create a 'CSF external voice' to reach key customers.

CSF delivered

- External campaigns with key partners including National Agricultural Show programme, Clean Air Strategy, Code of Good Agricultural Practice (CoGAP), CSF Air Quality Launch, Great Farm Challenge (GFC), CSF Evaluation Report and Countryside Stewardship 2021; to raise awareness and understanding of CSF
 - Total unique views of CSF GOV.UK page 27,040 (7% increase from previous 3 years)
 - Total of 52,108 pageviews of CSF GOV.UK page (9% increase from previous 3 years, total 47,361)
 - Total page views of contact list for local Catchment Sensitive Farming Officers 21,634 (93% increase compared to previous 3 years, which totalled 11,200)
- More than 20 national agricultural shows including virtual shows; engaging over 1000 customers and the announcement of a new series of videos with Innovation for Agriculture (IFA).

CSF Phase 5 readiness

- Harnessed the strength of the partnership brand and key partners: Natural England, Defra and the Environment Agency and recognised Natural England as the lead partner
- Built on the partnership brand values through its messaging and content - local, trusted farm advisers
- Supported CSF Futures development work on the new vision 'Working together for a healthy environment', brand research, refreshed CSF branding and developed a business case for resource to harness new digital and traditional solutions

Key achievements

- Investment in communication skills and experience to improve communication strategy, planning, tools, reach and impact; and enable other staff
- Introduction of internal communication programme for staff
- Raising brand profile and integrating key messages through Defra Campaigns and CSF national campaigns (Air Quality Launch, Great Farm Challenge and Evaluation Report 2019)

Lessons learnt

- Greater customer engagement capacity needed to increase customer focus - building communication content throughout the partnership to increase awareness across the whole of England

- Appoint champions and develop CSF communications network to drive and connect national and regional joint initiatives and messaging
- Target key customer groups to ease and speed transition of customer journey

Great Farm Challenge (GFC)

GFC nurtures the next generation of sustainable farmers by educating agricultural students through sharing on-farm best practices to improve the environment. Led by CSF and supported by water companies, the Environment Agency and agricultural colleges, GFC has inspired hundreds of agricultural students across England to see the impact of their farming choices on the environment.

CSF delivered

- Delivered a programme of national one-day interactive events and farm walks; providing young farmers with information about agricultural diffuse water and air pollution
- In 2019, the number of regional finals events increased from 3 to 6
- An increase in 2019 of the number of colleges participating to 18, including colleges from the Midlands, North West, North East, Yorkshire and Anglia
- From 2019, the number of Water companies supporting the project increased to 8
- Due to COVID-19 Lockdown all 2020 regional final events and the planned expansion of interactive events to the South West were cancelled

Key achievements

- 644 young farmers have engaged with the GFC leading to a greater understanding of sustainable farming
- Support from the farming industry including National Farmers Union (NFU), Young Farmers Club (YFC) and Linking Environment and Farming (LEAF) including motivational talks and prize giving at the regional finals events

Lessons learnt

- Due to student workloads, it was a challenge for some students to submit written reports and attend finals. As a result, CSF are reviewing the current offer to increase engagement

Learning and development

Increasing the training team enabled CSF to develop a new accredited training programme to compliment CSF's farm advice growth, reaching 3 full-time equivalents by March 2021.

CSF delivered

- Catchment Sensitive Farming Officer skills profile and competencies to identify profile for River Basin Co-ordinators (RBCs) and the National Team
- CSF Essentials webinars; mandatory training on the 10 key delivery mechanisms for CSF
- 22 training events - digital and face to face; including introductory, industry recognised and specialist training
- 57 staff attended the new CSF induction training programme
- 232 staff attended introductory courses: air quality, fertilisers, pesticides, soils, farm business management and nutrient management
- 38 staff trained in BASIS Fertiliser Advisers Certification and Training Scheme (FACTS), Soil & Water training, and FACTS annual refresher
- Annual 2-day CSF national staff training conferences:
 - 2018: Reflecting the Changing Environment
 - 2019: Delivering Now and Shaping the Future for Water, Air and Soil
- Initiated work with BASIS and Harper Adams on an accredited training qualification – Certificate in Farm Advice

Key achievements

- Investment in staff training to enhance performance
- Introduction of the new CSF Essentials Webinars
- Significant development towards the accredited qualification in farm advice

Lessons learnt

- Not all training could take place due to financial and staff resource limitations
- Managing staff expectations after the introduction of the skills profile as budget and staff resources limited the amount of training that could be implemented
- Adapting to online training due to COVID-19 restrictions did not work for all staff due to a range of reasons including IT, access and adapting to new ways of working



Seizing new opportunities

CSF continues to expand with new developments such as the introduction of air quality in 2019 and CSF's development work with the Flood and Coastal Resilience Innovation Programme (FCRIP) and Landscape Enterprise Networks (LENs).

Air quality

Improving air quality by reducing ammonia emissions from agriculture was added to CSF's objectives as part of a pilot running from 2018-2021. This formed part of the Government's plan for tackling air quality as set out in the Clean Air Strategy. To deliver the air quality pilot resource was increased to provide national technical support and 8 Catchment Sensitive Farming Officers were also appointed in River Basin District teams specifically to lead on air quality.

CSF's remit was to:

- Demonstrate the role of farm advice in the uptake of air quality mitigation measures by farmers
- Demonstrate uptake of air quality measures on farm and benefits for reducing ammonia
- Show the role of existing measures on the reduction of ammonia and the gaps in existing provision
- Show the benefits of integrating water and air advice

CSF delivered

- 9 national awareness events together with tailored local events
- 10 case studies highlighting on-farm techniques for reducing ammonia emissions
- One-to-one advice through CSFOs and contractors on topics including slurry storage, nutrient management, low emission slurry spreading and tree planting
- 30% increase in number of farms receiving air quality advice
- Countryside Stewardship scheme amendment to include air quality as an objective
- Expansion of existing Countryside Stewardship items; for example: slurry store covers can now be used on anaerobic digestate stores
- New Countryside Stewardship items; for example: Automatic floor scrapers, low emission flooring and tree planting for ammonia capture
- Guidance on how to consider ammonia emissions in agricultural planning applications for CSFOs, consultants and local planning authorities which

led to Devon and Cornwall Planning Authorities adopting supplementary planning guidance to cover the topic

Key Achievements

- Successfully introduced and embedded air quality objective and ways of working in CSF
- Contributed to the development of the new range of incentive schemes contained in the Agricultural Transition Plan
- Contributed to the development of policy options for reducing agriculture's impact on air quality

Lessons learnt

- Need to broaden engagement on agricultural ammonia in Natural England and with new partners
- Valued project management approach to introducing air quality and regular liaison with Defra policy team

Sustainable water management

Farmers and growers are key to sustainable water management as they are primary users and managers of landscape and water - especially for flood risk mitigation and water resource management.

For Flood Mitigation we delivered

- CSFO delivery guide on Natural Flood Management from Flood Risk pilots
- CSF Diffuse Water Pollution practices and Countryside Stewardship options to help manage flood risk
- Two specialist advice specifications (FaLMA): Natural Flood Management and Woodlands for Air and Water
- Support to local flood mitigation pilots within 5 catchments – Cumbria, Somerset, Evenlode, Alconbury and Piddle
- Assessed the case for flood mitigation for CSF Phase 5 with policy holders, partner organisations and sponsors
- CSF support with Flood and Coastal Risk Innovation Programme (FCRIP) leads and promoted farm advice role to FCRIP potential bidders
- Flood Risk approach approved and included as a new objective for CSF Phase 5

For Water Resources we delivered

- Innovative solutions to address unsustainable abstraction in Water Resources Priority Catchments
- Pilot work with farmers and partners, including water companies.
- Specialist advice for water resources audit specification
- Water Resources Audits with ten pilot farms in each of the Water Resources Priority Catchment
- Abstraction reform training to CSF staff in Water Resource Priority Catchments and identified risks and opportunities

Lessons learnt

- Need for resilient and skilled leadership in new area of work
- Range of specialist skills needed for Phase 5 roll-out
- Pilots revealed benefits increase when we work at catchment, sub-catchment, and farm level

Flood and Coastal Resilience Innovation Programme

Investing resource in business development enabled CSF to build flood resilience farm advice capacity through the Flood and Coast Resilience Innovation Programme (FCRIP).

CSF delivered

- Business case to support FCRIP programme to secure Natural England Investment Committee approval
- A go-to-option for RMAs to engage with farmers over flood resilience
- Funding through the pilots - FCRIP CSFOs through Discretionary Advice Service Cost Recovery arrangements.
- Guidance materials for Risk Management Authorities (RMA) bids on how to engage with farmers and landowners using the CSF approach. Adapting our Discretionary Advice Service partnership arrangements with Water Companies to use with RMAs

Lessons learnt

- Support for RMAs to understand and value farm advice for long term flood resilience measures
- Multiple criteria used to assess pilot bids led to fewer Natural Flood Management (NFM) pilots in the farmed landscape being chosen

- CSF is now integral in FCRIP and over the six-year pilot will gain greater knowledge to inform our Phase 5 Flood Resilience work

Achievements

- CSF approved farm advice mechanism for effective uptake of Flood Resilience measures by farmers and landowners
- Our contributions to FCRIP pilots will help us develop our thinking with respect to farm advice for flood resilience, blending of funding and cost recovery partnerships with private sector and other government funding sources

Landscape Enterprise Networks (LENS)

LENS are mechanisms for encouraging private sector investment in long term environmental outcomes through farm system change.

To test the LENS approach, CSF facilitated local trials with colleagues, farmer groups and Water Companies.

The approach and 'live trials' showed how to:

- Gain additional private and public funding for farmers
- Maximise farmer commitment and long-term buy-in
- Build confidence and support from policymakers
- Identify opportunities for CSF to increase resource

Lessons learnt

- The private sector favours investment in non-government organisations and farm advice products and services rather than government farm advice
- Blended farm incentives require unified farm plans and holistic performance metrics
- Single issue incentives such as targeting of molluscicide can act against other environmental objectives

Achievements

Increased Defra's insight in private sector funding. Blending private finance is a central principle for environmental land management schemes.

Planning – Phase 5

CSF always improves through listening to feedback, horizon scanning and embracing new technology. CSF values testing new approaches to improve the customer journey and achieve better environmental outcomes.

CSF's expansion business case⁹ looked at both scope and scale to deliver nature-based solutions through the CSF farm advice brand. This included the following:

Brand value and positioning

CSF researched and examined the strength of the CSF brand with customers and stakeholders discovering:

- An established and trusted brand within the farming community and sector
- Positive CSF brand perception adds value to government farm advice delivery

Digital solutions

CSF identified delivery tools by working with colleagues, farmers, and stakeholders:

- On-farm data capture tool for Catchment Sensitive Farming Officers
- Interactive farmer app to help farmer engagement
- Online training platform to enhance CSF training data recording

The above concepts will be evaluated as part of the Phase 5 implementation plan.

ELM Test and Trials

Co-design farmer trial on the role of advice in a Land Management Plan (LMP) enabled:

- Capture of complex data in a simple and visually dynamic way

⁹ Announced in the Agricultural Transition Plan November 2020 and approved at Natural England's Investment Committee, March 2021

- Farmers/land managers to interact with how it considered environmental activities on the farm
- Farmers/land managers to identify delivery of public goods and show farm advice is key

Lessons learnt

- Time is needed to develop new ideas and tools and seek internal approvals
- External expertise is sometimes needed to develop new ways of doing things
- Never be afraid to get something wrong - all projects are learning curves and they all inform the result

CSF Reporter (CSFR)

CSFR is the main system for recording information about stakeholder engagements and advice delivery. It also allows CSF to analyse and evaluate the CSF national programme.

CSF Reporter offers...



Achievements

- A continuous programme of enhancements and upgrades
- Successful migration to a new hosting platform; in liaison with Defra's Digital Data Technical Services (DDTS) and the developers (ATOS)

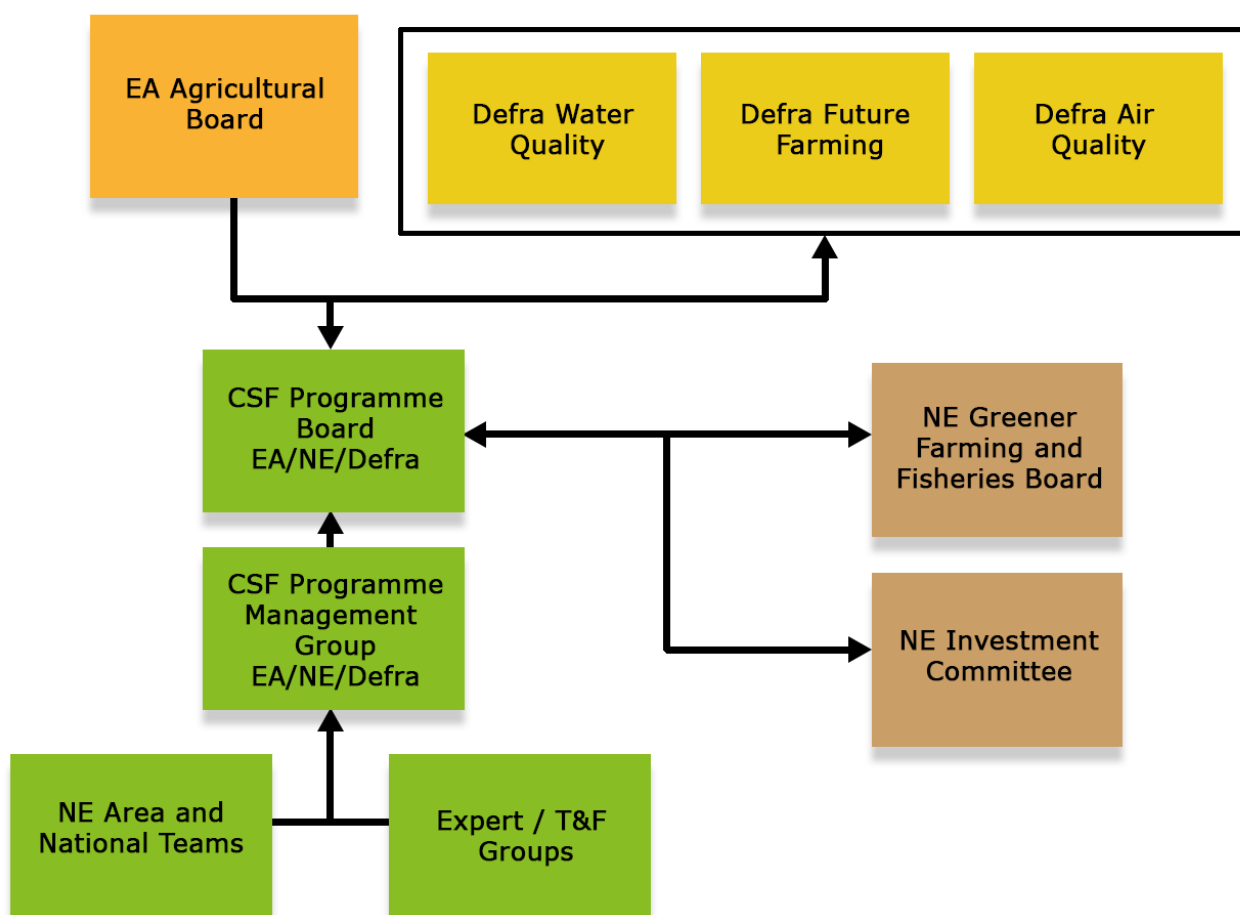
- Updated user manuals and creation of a guidance library.
- National CSF user network to train staff, help with general queries and user test any upgrades



About the CSF programme

The CSF partnership has shared governance with 3 key partners; Natural England, Environment Agency (EA) and Defra and covers strategic and operational decision-making and a clear framework for escalation of issues and risks. The CSF Stakeholder Advisory Group provides bi-annual steer on strategic programme issues.

CSF governance process



CSF Objectives & Key Performance Indicators (KPIs)

CSF is focussed on improving water and air quality through helping farmers to implement positive measures on farm to reduce pollution.

Since 2006, CSF has developed the CSF water quality offer.

A new CSF air quality objective was introduced in 2018 to test the role of farm advice in reducing ammonia emissions from agriculture and to support the governments Clean Air Strategy¹⁰. In addition, CSF tested the role of farm advice in natural flood management.

CSF Objectives

- Encourage voluntary action to help achieve Water Framework Directive (primarily for Protected Areas), National Emission Ceilings Directive and SSSI targets
- Raise awareness amongst farmers and land managers of the impacts of diffuse water and air pollution from agriculture.
- Encourage farmers and land managers in catchments to take voluntary action to mitigate diffuse water and air pollution from agriculture
- Facilitate synergy and integration with related programmes and mechanisms to tackle diffuse water and air pollution from agriculture, ensuring CSF is embedded within River Basin Management and the framework for diffuse pollution mechanisms

Progress was measured through a set of Key Performance Indicators (Annex:1).

¹⁰ [Clean Air Strategy 2019 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/policies/clean-air-strategy)

Finance

Table: CSF Spend - Phase 4 April 2018 - March 2021

Work Area	2018-19	2019-20	2020-21
Natural England			
Payroll – WQ/GIA	£1,017,508	£1,018,467	£1,111,000
Payroll – AQ/GIA	£135,000	£135,000	£135,000
Payroll – WQ/RDPE	£3,000,000	£2,990,451	£2,794,887
Payroll - AQ/RDPE	£203,219	£518,558	£390,894
Training - GIA	£0	£0	£16,856
Training - RDPE	£78,011	£82,833	£1,025
Partnerships	£261,889	£145,528	£152,484
Direct Advice	£265,663	£147,973	£100,924
Contracted Advice WQ/RDPE	£1,420,193	£1,118,530	£898,408
Contracted Advice AQ/RDPE	£14,400	£0	£0
CSF Future Planning	£0	£0	£21,865
CSF Catchment Projects	£9,529	£2,073	£0

Work Area	2018-19	2019-20	2020-21
Environment Agency			
EA Payroll	£282,032	£311,240	£399,090
EA Evaluation	£744,100	£685,320	£324,280
Total	£7,431,544	£7,155,973	£6,346,713

Descriptor of acronyms used above:

GIA - Grant in Aid

RDPE - Rural Development Programme for England

WQ - Water Quality

AQ - Air Quality

Staffing

Table: shows employment status and number of delivery staff from April 2018 to March 2021.

Work Area	2018-19	2019-20	2020-21
No. of Priority Catchments	80 (including 9 partnerships)	80 (including 9 partnerships)	80 (including 7 partnerships)
Staffing budget	£4,355,727 NE £282,032 EA	£4,662,476 NE £311,240 EA	£4,431,781 NE £399,090 EA
Total Project FTE	122.7	118.8	102.8
RBCs			
Number / FTE	12 (9.5 FTE)	13 (10.1 FTE)	12 (9.5 FTE)
Employment Status	11 Permanent 1 FTA	12 Permanent	12 Permanent
Vacancies (FTE)	0	0	0.6
CSFOs			
Number / FTE	96 (83.3 FTE)	90 (79.4 FTE)	75 (66.7 FTE)
Employment Status	28 FTA /STA 68 Permanent	19 FTA/STA 71 Permanent	1 FTA/STA 74 Permanent
Vacancies (FTE)	5.6	7.1	17
CSF Support			
Number / FTE	9 (4.6 FTE)	6 (4.5 FTE)	7 (5 FTE)
Employment Status	8 Permanent 1 FTA	5 Permanent 1 FTA	7 Permanent

Work Area	2018-19	2019-20	2020-21
Vacancies (FTE)	0.5	1.5	1.2
CSF National Team NE			
Number / FTE	22 (20.7 FTE)	20 (19.2 FTE)	17 (16 FTE)
Employment Status	21 Permanent 1 FTA/STA	19 Permanent 1 FTA/STA	17 Permanent
Vacancies (FTE)	2	2.6	3.6
CSF National Team EA			
Number / FTE	5 (4.6 FTE)	6 (5.6 FTE)	6 (5.6 FTE)
Employment Status	5 Permanent	6 Permanent	6 Permanent
Vacancies (FTE)	0	0	0

Descriptor of acronyms used above:

FTE - Full Time Equivalents

STA - Short Term Appointment

FTA - Fixed Term Appointment

Annex 1: CSF Key Performance Indicators (KPIs)

No	Key Performance Indicators	Annual target
1.1a	To increase each year the proportion of farmers and land managers who feel and understand that agriculture contributes a great deal or a fair amount to water pollution in their catchment area. Covers all farmers in CS High Priority Areas for Water Quality.	5%
1.1b	To increase each year the proportion of farmers and land managers who feel and understand that agriculture contributes a great deal or a fair amount to water pollution in their catchment area. <i>Covers engaged farmers only</i>	5%
1.2	% of targeted farmers to have taken action to make a significant contribution to mitigating diffuse pollution from their farms.	60%
2.1	No Priority Farms engaged that results in advice against agreed profile ¹¹	100%
2.2	% of farmers aware of the link between CSF and CS (based on farmers within the CS High Priority Area for Water Quality who are aware of CS)	5%
2.3	% farmers agreeing that contact with their CSFO helped them make the most of CS	5%

¹¹ [Note: for this KPI the term 'engaged' means at least a discussion has been had with the farmer over local water and air quality issues and what the farmer can do about it in terms of CSF mechanisms.](#)

No	Key Performance Indicators	Annual target
2.4	% of CSF engagements in N2K DWP plan process achieving a 'green' rating. (Green = full engagement in process and delivery of agreed actions planned or underway)	90%
2.5	% Partnerships and collaborative projects meeting their delivery milestones / KPI's	90%
2.6	% Water Co partnerships meeting their delivery objectives to the satisfaction of clients.	90%
3.1	% variation from profiled GIA project spend.	+/-5%

Annex 2: CSF improvement plan

Work area	Recommendation	Action
CSF Futures	Standardise branding behaviours and appearance: <ul style="list-style-type: none"> • Brand Audit • Brand Refresh 	New brand and associated toolkit introduced June 2021
CSF Futures	Investigating digital tools	Digital workstream for Phase 5
CSF Futures	Staff training on natural capital / public goods	Delivered through Training Plan
CSF Futures	Water Services – routes to market / who to target / cost & value assessment, building on the Market Testing report.	Continue to develop CSF’s work in water resources and wider sustainable water management
CSF Futures	Explore digital partnership opportunities	Long term work to develop digital offer and associated partnerships
Demonstration Test Catchments review	Involving processing and retailing elements within the supply chain, in a facilitated deliberative group discussion with farmers, could help establish positive discussions concerning the sustainability of the food system, from which new jointly owned and accepted strategies to manage water resources could emerge	Continue to develop CSF's Business development work. into Phase 5
Demonstration Test	Further support localised case studies and	Work underway on developing new case studies. Working

Work area	Recommendation	Action
Catchments review	demonstration sites, facilitated by trusted extension workers working closely with innovative and respected farmers	with AHDB on potential better use of their demonstration sites
Demonstration Test Catchments review	Supporting more farms to act as demonstration sites, building on the experience that this can be a successful way of disseminating local evidence and knowledge of good practice	Working with AHDB on potential better use of their demonstration sites
CSF Evaluation	The overall approach should drive more consistently concentrated and deep advice penetration to deliver the most significant and more consistent outcomes (i.e. 'narrow and deep' vs 'broad and shallow')	Structured approach to securing the implementation of more ambitious measures in Phase 5. Includes piloting approaches to achieve this using existing mechanisms and incentives and ensuring recommendations to farmers quicker. New We will use new mechanisms available through Agricultural Transition to achieve this. Underpinned by new Customer Journey
CSF Evaluation	Ensure CSF water quality advice covers all pollutants relevant to a specific farm (e.g. pesticides + nutrients)	Delivered through Training programme and new On Farm Advice Tool
CSF Evaluation	Consider how CSF can 'better' support uptake of mitigation measures with low current CSF uptake (e.g. measures with high	Structured approach to securing the implementation of more ambitious measures in Phase 5. Includes piloting approaches to achieve this using existing mechanisms

Work area	Recommendation	Action
	upfront costs and/or low farmer practicability)	and incentives and ensuring recommendations to farmers quicker. New We will use new mechanisms available through Agricultural Transition to achieve this. Underpinned by new Customer Journey
Demonstration Test Catchments review	Consider the entire decision process and support interventions at multiple stages to accelerate the process of adoption	Structured approach to securing the implementation of more ambitious measures in Phase 5. Includes piloting approaches to achieve this using existing mechanisms and incentives and ensuring recommendations to farmers quicker. New We will use new mechanisms available through Agricultural Transition to achieve this. Underpinned by new Customer Journey
CSF Evaluation	Ensure Agri-Environment Schemes are supported by CSF advice to maximise effectiveness	Fed into Phase 5 design
CSF Evidence Programme	Identify 'optimal' mitigation measures for different farms to help maximise resulting CSF outcomes	Being developed through 2021 for roll-out into Phase 5
CSF Health Check	CSF Essentials Training	Delivered in 2020 and 2021. Library of presentations and supporting materials developed. Feedback indicates effectiveness
Demonstration Test	Establishing discussion groups to initially build a sub-catchment awareness,	This will be reinforced via the further embedding of Liaison groups across CSF via the

Work area	Recommendation	Action
Catchments review	<p>social capital, and trust. This in turn can develop closer working arrangements between farmers and may result in formal collaborative endeavours</p> <p>Encouraging farmers to initially collaborate on relatively simple activities rather than suggesting complex interventions is likely to result in longer-term receptiveness towards more challenging integrated activity</p>	Essentials packages. This will reinforce the importance of collaborative approaches to achieving this
Demonstration Test Catchments review	Resourcing skilled facilitators well versed in rural sociology, farming systems and DWP mitigation interventions to benefit collaborative or coordinated farmer activities (such as discussion groups). Such facilitators need to be appropriately trained and provided with job security	Delivered through Training programme including the Essentials module on collaborative working. CSF works with existing facilitators including those funded through CS Facilitators
Demonstration Test Catchments review	Communicating the scientific rationale for collaborative or co-ordinated action is crucial to gain acceptance from the farming community; actions taken in isolation will not be appropriate to address the nature and scale of the DWP problem.	Delivered through Training programme including the Essentials module on collaborative working. CSF works with existing facilitators including those funded through CS Facilitators

Work area	Recommendation	Action
Demonstration Test Catchments review	Being trained to effectively facilitate farmer discussion groups	Delivered through Training programme including the CSF Essentials module on collaborative working. CSF works with existing facilitators including those funded through CS Facilitators
CSF Evaluation	Continue to test delivery of an integrated offer (WQ, AQ, WR, NFM) to maximise Natural Capital benefits, managing associated risks (For example: 'diluting / confusing the core message')	This approach is being trialled in the current work. The lessons from this are built into Phase 5
Demonstration Test Catchments review	Tailored interventions for measures are required, acknowledging that the characteristics of measures differ as well as the characteristics of farmers	This is delivered in the current programme but needs to be reinforced in future work through induction and training
CSF Evaluation	One-to-one farm advice should be targeted where most needed to contribute to environmental outcome targets	This is built into the Phase 4 design and ways of working and is retained in the design of Phase 5
CSF Evaluation	Strong links should be retained between advice and capital grants to maximise effectiveness	Fed into Phase 5 design

Annex 3: Glossary

ALERT - Environmental Risk Tool – mapping

CoGAP - Code of Good Agricultural Practice

CSF - Catchment Sensitive Farming

CSFO - Catchment Sensitive Farming Officer

CSF Reporter - Main system for recording farmer and stakeholder information onto a database

DDTS - Defra's Digital Technical Services

DEFRA - Department for Environment, Food & Rural Affairs

EA - Environment Agency

FACTS - Fertiliser Advisers Certification and Training Scheme

FaLMA - Farm and Land Management Advice

FAF - Farm Advice Framework

FIOs - Faecal Indicator Organisms

FTA - Fixed Term Appointment

FTE - Full Time Equivalent

FC - Forestry Commission

FCRIP - Flood and Coastal Resilience Innovation Programme

FWAG - Farming and Wildlife Advisory Group

GIA - Grant in Aid

GFC - Great Farm Challenge

IfA - Innovation for Agriculture

K - Potassium (part of fertiliser)

KPI - Key Performance Indicators

LENS - Landscape Enterprise Networks

LEAF - Linking Environment and Farming organisation

LMP - Land Management Plan

N - Nitrogen (nitrates)

N2K - Natura 2000 Sites

NE - Natural England

NFM - Natural Flood Management

NFU - National Farmers Union

NGO - Non-Government Organisation

P - Phosphorus (phosphates)

Phase 4 - The fourth phase of CSF programme delivery from 2016 to 2021

Phase 5 - The fifth phase of CSF programme delivery from 2021 - 2025

PMG - Programme Management Group

Priority Farms - These are farms that have been identified as a CSF priority; through desk-based modelling to benefit most from CSF help and advice.

RBC - River Basin District Co-ordinator

RDPE - Rural Development Programme for England

RPA - Rural Payments Agency

RMA - Risk Management Authority

SSSI - Sites of Special Scientific Interest

STA - Short Term Appointment

YFC - Young Farmers Club

Z - Sediment (soil run off)

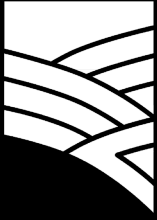
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