

## Box 1. Organisations interviewed

Catchment Sensitive Farming  
Natural England  
Environment Agency  
Rivers Trusts  
Farmer Network  
Seed and fertiliser sales staff  
Independent agronomists  
Feed nutritionist consultant  
Agri consultant companies  
Forestry Commission  
Land agents  
Auction house  
Ex FWAG  
Woodland Trust  
Levy boards  
Wildlife Trusts  
Water companies  
NFU  
Vets  
RSPB

Catchment Sensitive Farming (CSF) is one of a variety of organisations providing individual advice to farmers. Recent research by a PhD student from the University of East Anglia funded by the Demonstration Test Catchments programme has investigated the niche of CSF with regards to the diffuse water pollution from agriculture (DWPA) mitigation measures recommended to farmers.

The research interviewed farm advisors from different organisations and businesses (see Box 1) in three agriculturally contrasting regions of England: East Anglia, North West and South West. Interviews with 81 farm advisors were conducted during September and October 2013, either face to face or over the telephone.

Objectives included:

- What mitigation measures are being recommended by advisors? Do they ever conflict?
- How do recommendations differ between sources of advice? Do they ever conflict?
- Which mechanisms (regulatory, financial incentives, signposting or voluntary approach) are being used to encourage uptake?

Funding ■  
Signposting ■  
Voluntary ■  
Regulation ■

		East Anglia CSFO	North West CSFO	South West CSFO
Infield	Tree planting		■	
	Cover crops	■		■
	Reduce fertiliser application		■	
	Appropriate stock density			
	Timing of field activities	■	■	■
	Cross cultivation			■
	Water for cattle			■
	Machines to use		■	
	Tramline management	■		
	Move feeders			
	Scrub and rush management			
	Bird/flower seed mixes			
	Change rotation			
	Move potato pads			
	Arable reversion			
Muck heap location				
Grassland/habitat restoration				
Field Boundary	Fencing	■	■	■
	Buffer strips	■	■	■
	Moving gateways	■		
	Sediment traps			■
	Track management	■	■	■
	Fixing walls			
	In-stream wooded debris			
Cattle river crossing				
Farm yard	Biobeds	■		
	Yard infrastructure	■	■	■
	Rainfall harvesting		■	
	Silage structure quality		■	
Management	Soil analysis/pits	■	■	■
	Pesticide handling	■		■
	Manure/slurry analysis	■	■	■
	Machine calibration	■		
	Nutrient management plan	■	■	■
Change feed				

## What are CSF Officers Recommending?

Responses provided during interviews regarding the most commonly recommended mitigation measures have been summarised in Table 1 for the Catchment Sensitive Farming Officers (CSFOs). The variety of measures recommended by all the different organisations are listed in the columns to indicate those being suggested outside of the CSF initiative. Key features to be highlighted are:

- CSFOs make a broad range of recommendations.
- Differences in recommendations exist between CSFOs in the three regions of England.
- Yard infrastructure measures are commonly recommended by CSFOs, but also by other advisors who often signpost to Catchment Sensitive Farming capital grants.
- Many organisations and businesses interviewed focus on specific mechanisms to encourage uptake of measures. CSFOs utilise an array of mechanisms.

Table 1. Mitigation measures most commonly recommended by CSFOs and the predominant mechanisms to encourage uptake stated during interviews.

## CSFOs compared to other advisors

To further analyse the responses provided during interviews, a multidimensional scaling statistical tool (PROXSCAL) has been used. This method assigns each advisor to a specific location in a conceptual two dimensional space dependent upon the DWPA mitigation measures they recommend, thus enabling analysis of the similarities between advisors.

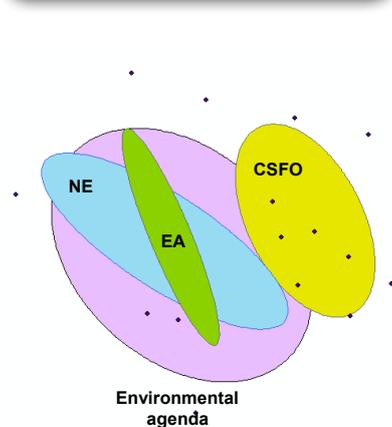
Advisors located near each other in the space are more likely to have recommended similar measures.

To compare the similarities of recommendations between organisations, *standard deviation ellipses* were created in ArcGIS using the PROXSCAL outputs. The ellipses define the core area of interest for a group of advisors.

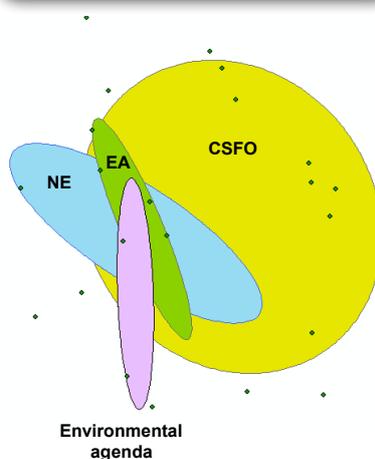
Comparisons between the shape, size and location of the various ellipses help to inform interpretation of the data.

In the diagrams below, Natural England (NE) and Environment Agency (EA) ellipses represent national results, using advisors from all three regions. This is appropriate as the national role of NE is to advise on agri-environment scheme (AES) options and EA is to enforce regulatory measures. The ability to compare where CSFOs are placed in relation to these two government organisations highlights that they are focussing on different (often broader) sets of measures. Organisations with an environmental agenda have been grouped (e.g. Rivers Trust; Wildlife Trust; RSPB; Woodland Trust and FWAG in the South West ) and are also displayed for regional comparisons.

### North West Advisors



### East Anglian Advisors



### South West Advisors

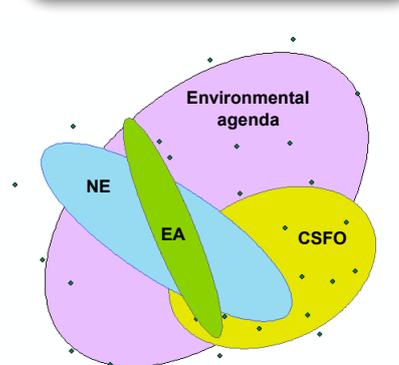


Figure 1. Advisors from each region plotted on a 2D similarity scale using PROXSCAL based upon the diffuse water pollution mitigation measures they recommend, with one standard deviation ellipses for CSFOs, Natural England, Environment Agency and environmental organisations.

- The diagrams indicate that some overlap does occur between organisations in terms of recommendations, however there are distinctions, suggesting organisations are fulfilling different niches. The most overlap occurs between NE and organisations with an environmental agenda as many of the latter focus on recommending AES options as an incentive to engage with farmers.
- Larger sized ellipses imply that advisors within the organisation are making different recommendations to one another, covering a broader remit. In East Anglia, many of the CSFOs interviewed recommended a smaller number of measures that they specialised in. This often depended upon farmer requirements in their catchment e.g. pesticide management.
- The least overlap with CSFOs occurs amongst independent specialists and agricultural companies as they provide particular advice on topics such as animal nutrition, crop rotation and nutrient requirements.

Results from the farm advisor interviews indicate that Catchment Sensitive Farming is well defined in the realm of the farm advice sector, fulfilling a different niche to other organisations. The contrasts in advisor recommendations between regions indicate that CSFOs are adapting their approach within their catchments/region depending upon farmer needs. This emphasises the importance of working at a local scale and in sympathy with the catchment based approach.