

# Sustainable catchment management? Making progress in established programmes

## Catchment Sensitive Farming

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Natural England



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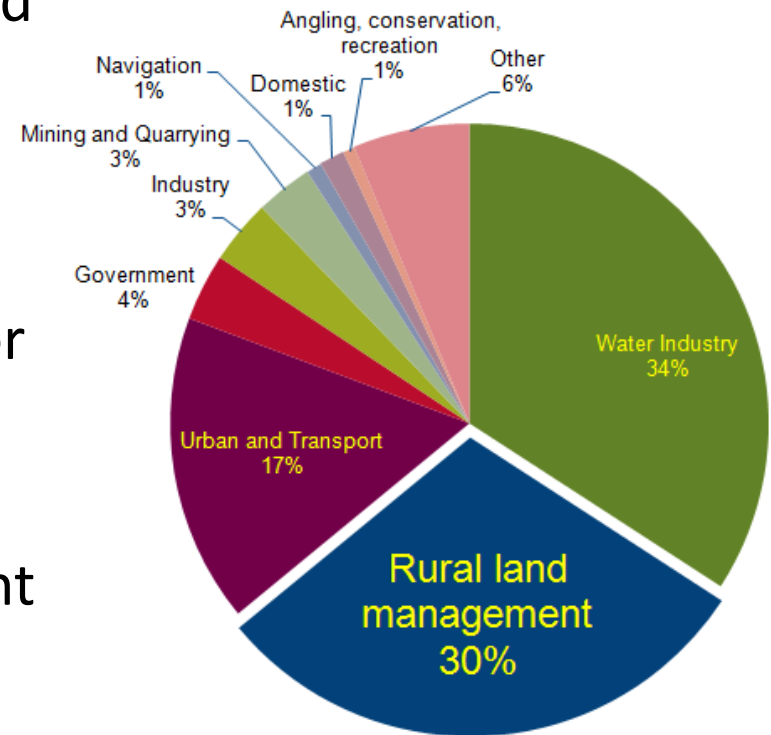


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# The issue

Impacts from agriculture are large and widespread:

- Rural land management issues account for 30% of all reasons for not achieving Good Ecological Status
- 79% of all rural land management issues are from agriculture



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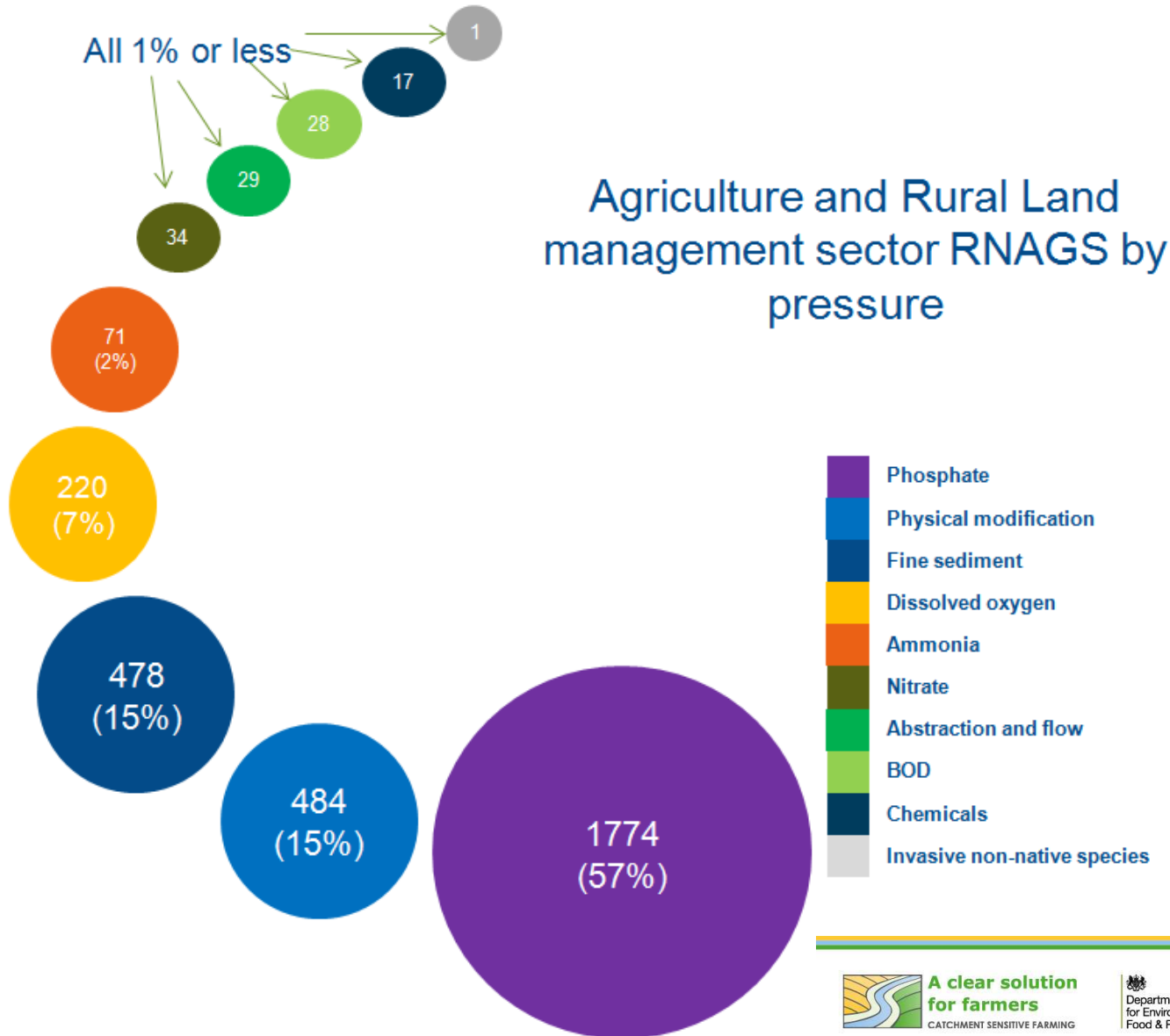


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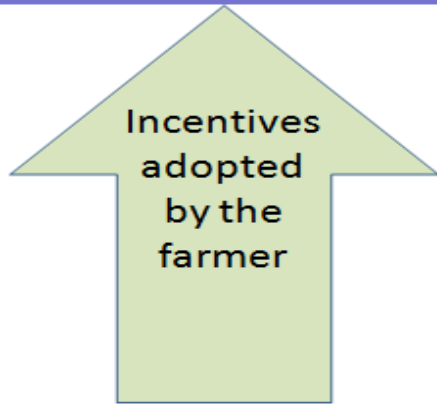
# The Issue



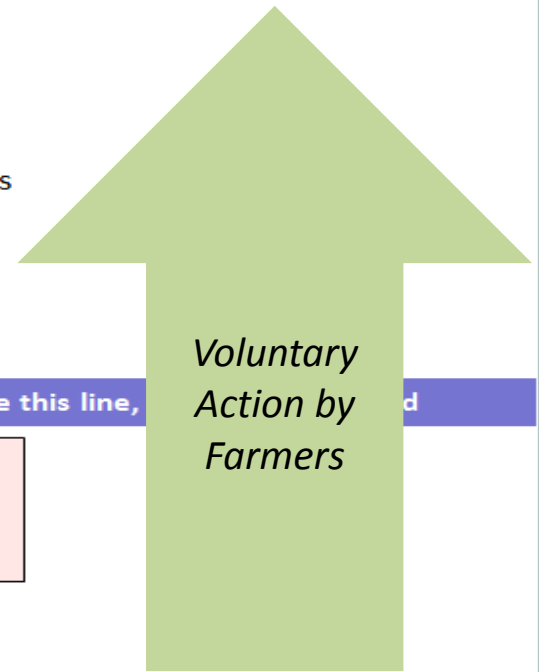
Impacts are significant and widespread

# Farming and the water environment – the delivery landscape

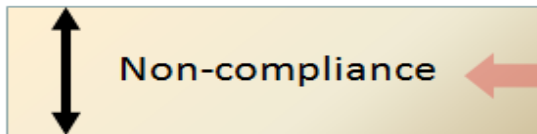
Where additional incentives do not deliver required outcomes, further tools such as water protection zones may be needed



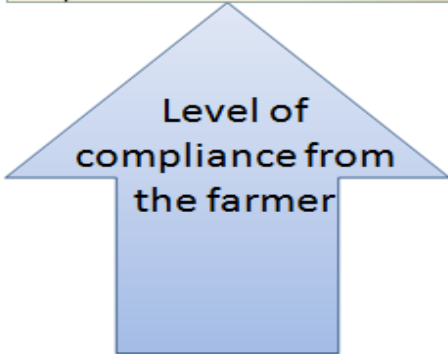
- Third party payments for ecosystem services (e.g. water company schemes)
- Highly targeted grants and payments (e.g. High tier Countryside Stewardship/ CSF, woodland grants)
- Mid/low tier Countryside Stewardship options
- Targeted provision of advice (e.g. Catchment Sensitive Farming)
- Some industry-led targeted approaches (beyond general compliance)



Minimum requirements (basic measures). Below this line, the polluter pays; above this line, the farmer pays



**Regulatory effort is targeted at places where there are environmental issues**  
(i.e. where advice and business decisions below have not delivered)

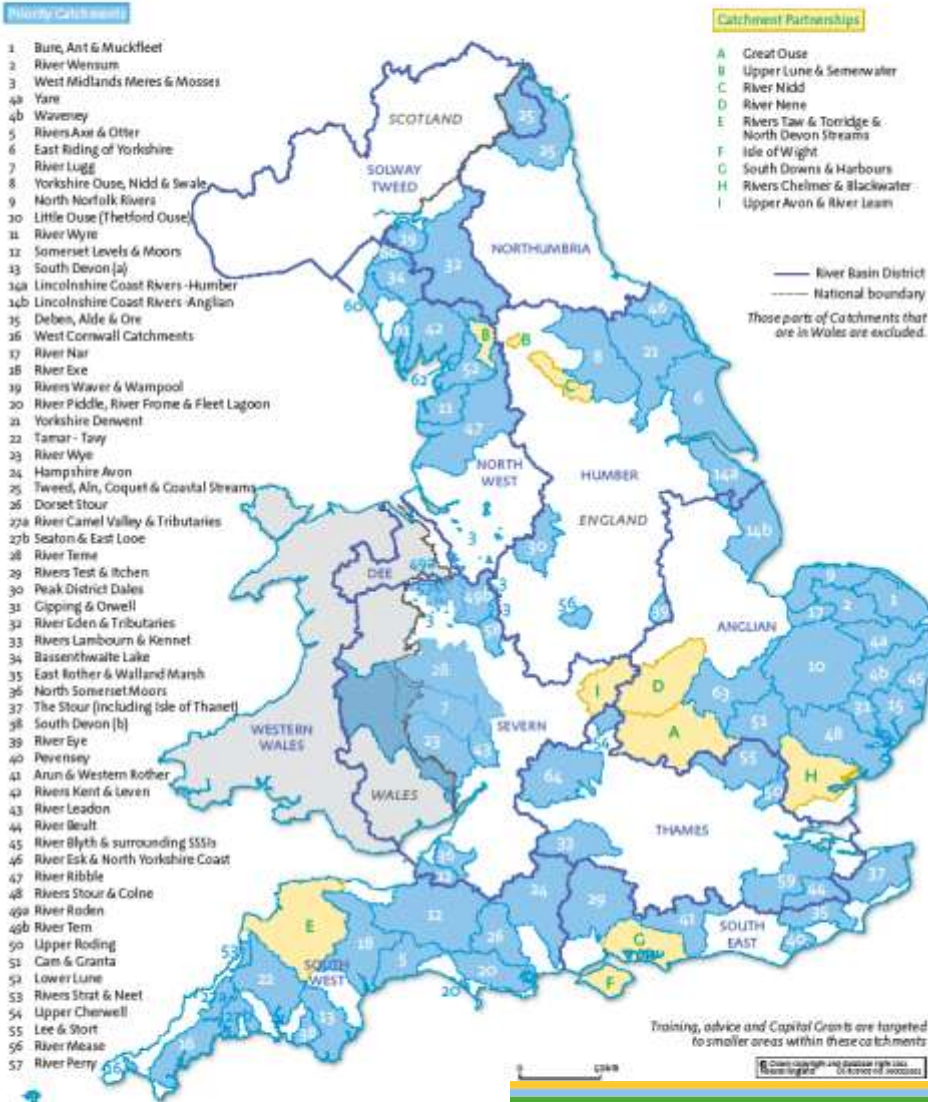


- Basic farm payments: cross compliance
- Contracts and 3rd party farm assurance
- General provision of advice (Advice Service and CSF)
- Some industry-led approach (general compliance)
- Baseline business decisions



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# Catchment Sensitive Farming (CSF) catchments



CSF started in 2006 we are working on a new phase of work from 2016.

CSF works in 77 catchments:

66 CSFO led  
 11 led by partners

We work in the highest priority catchments only focussed on WFD Protected Areas and areas protected for biodiversity.

Approaches in each catchment are tailored to the local circumstances.

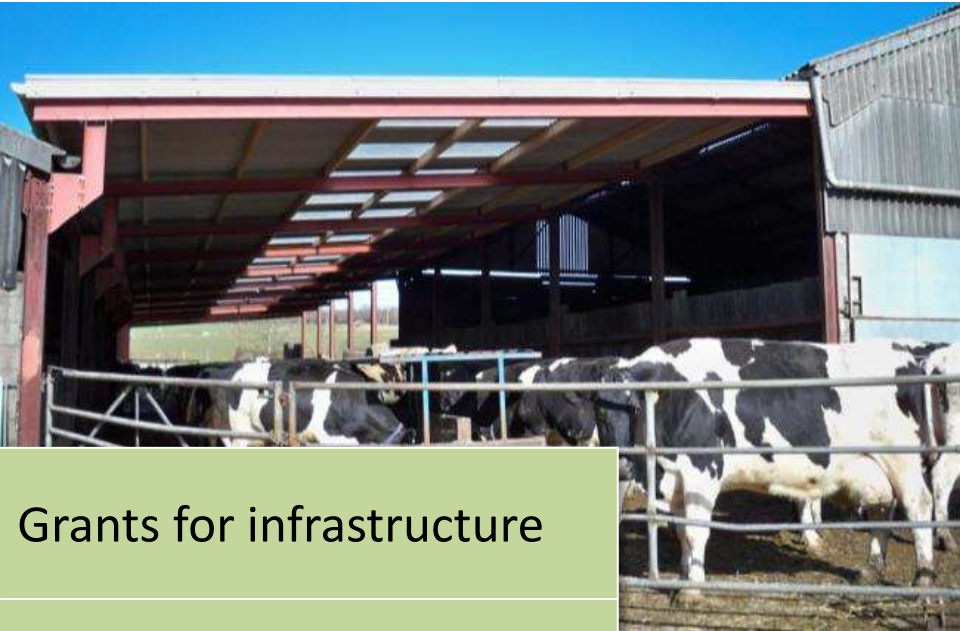
- 58 River Worle
- 59 Rivers Medway & Eden
- 60 West Cumbrian Catchments
- 61 River Uddon
- 62 River Keer
- 63 Lower Ouse
- 64 Cotswolds







Technical advice delivered directly or by contractors



Grants for infrastructure



Land Management Agreements

Partnerships



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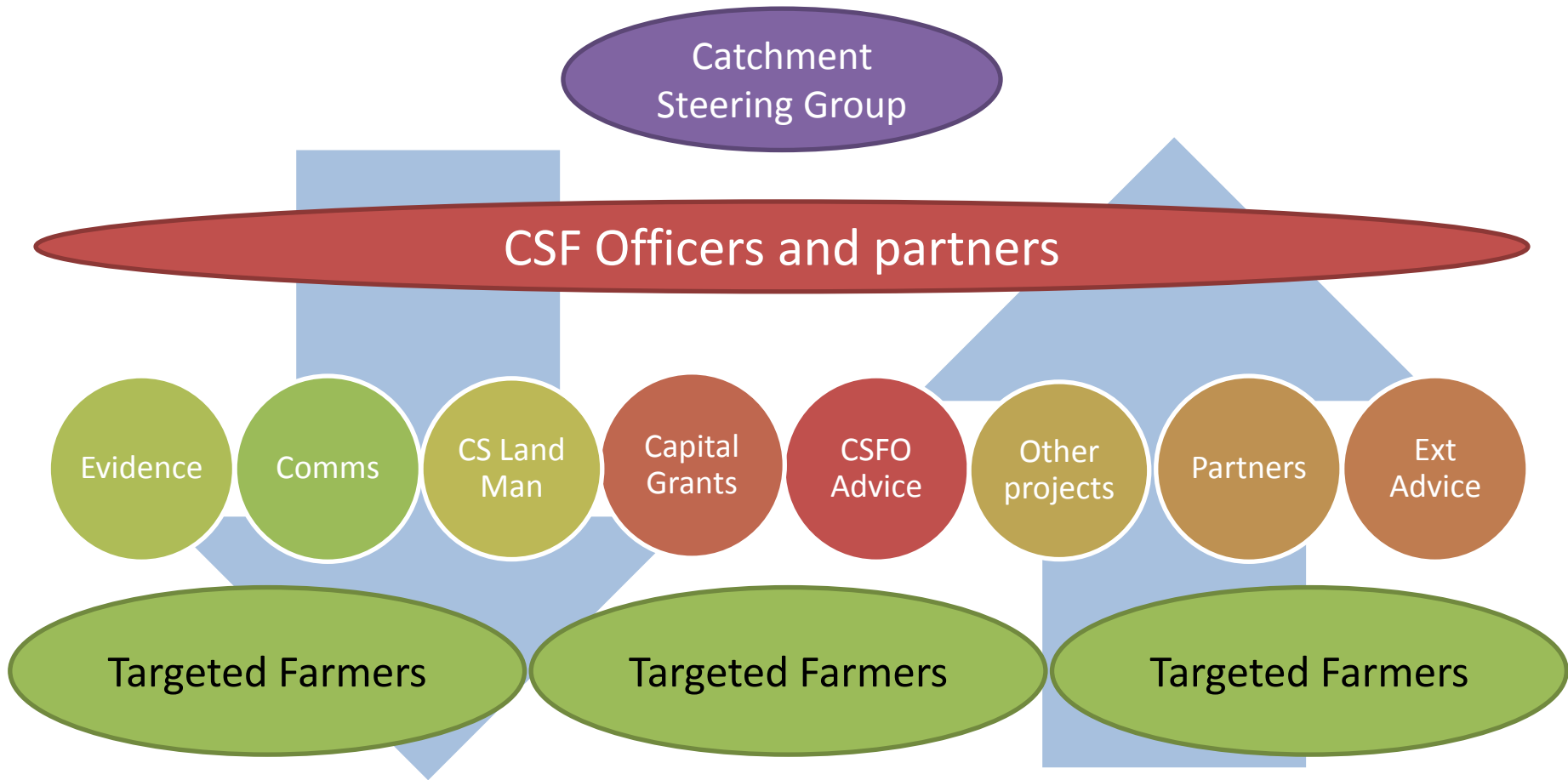


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# How is CSF Delivered?



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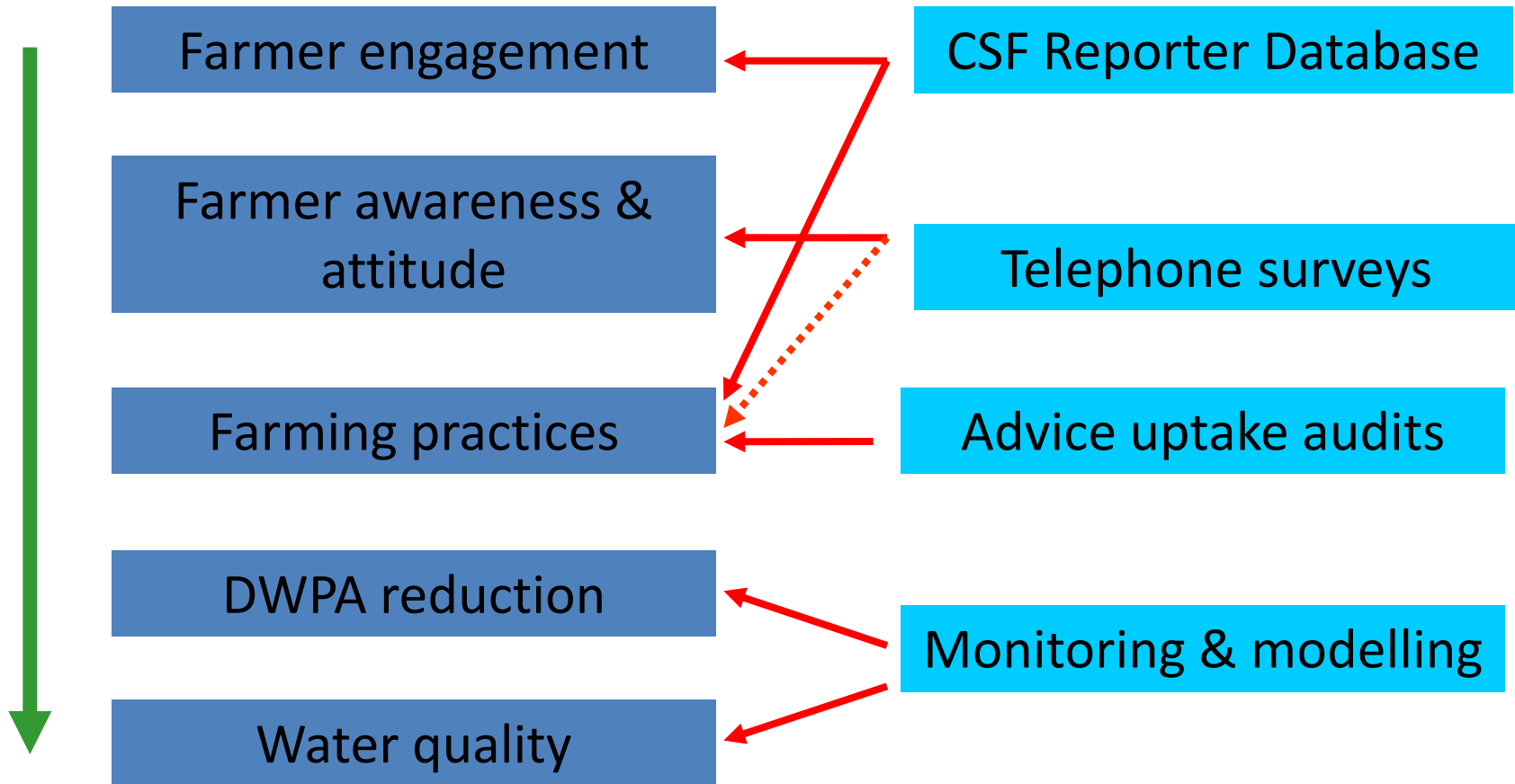


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# Evaluation Strategy



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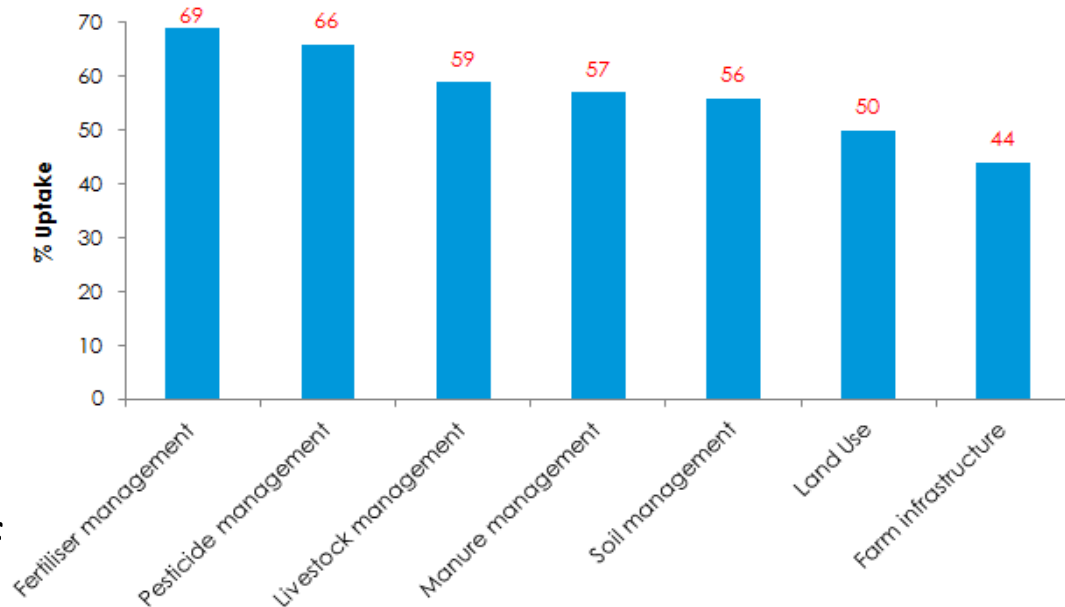


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# Advice Uptake

- 62% uptake of measures
- Affected by time, cost, farm type, location & nature of advice
- 46% uptake within 3 years vs. 70% uptake at 4+ years
- 71% uptake of cost-saving vs. 56% uptake of net-cost measures



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# Farmer Awareness

Farmers in CSF catchments:

- 58% are aware of CSF

Of those farmers engaged by CSF:

- 90% trust their CSFO
- 90% indicate their understanding of water pollution has improved



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# Farmer Motivations

- 67% engaged farmers motivated to reduce water pollution
- Key drivers for action:
  - free advice, expertise & soil analysis
  - capital grant scheme
  - help with nutrient and fertiliser management plans
- CSF has allowed farmers to:
  - implement planned changes
  - keep up with existing, or ahead of future potential, regulations



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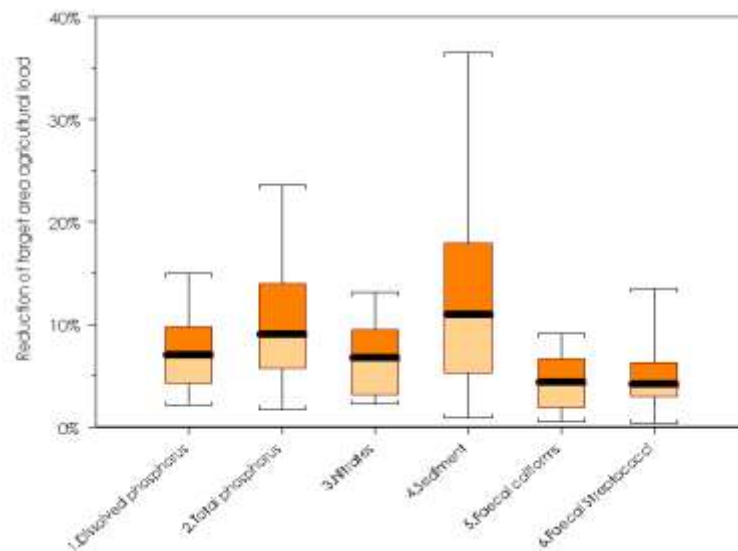
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# Reductions in pollution

- Reduce agricultural pollutant losses 4 - 12%.
- Equates to in-river pollutant reductions of 3 -7 %.
- Most effective for sediment <36%. Reductions in agricultural dissolved P in-river concentrations < 25%.
- CSF is making a significant contribution to meeting proportional targets within priority Bathing Waters, Natura 2000 Protected Areas, SSSIs and WFD water bodies.



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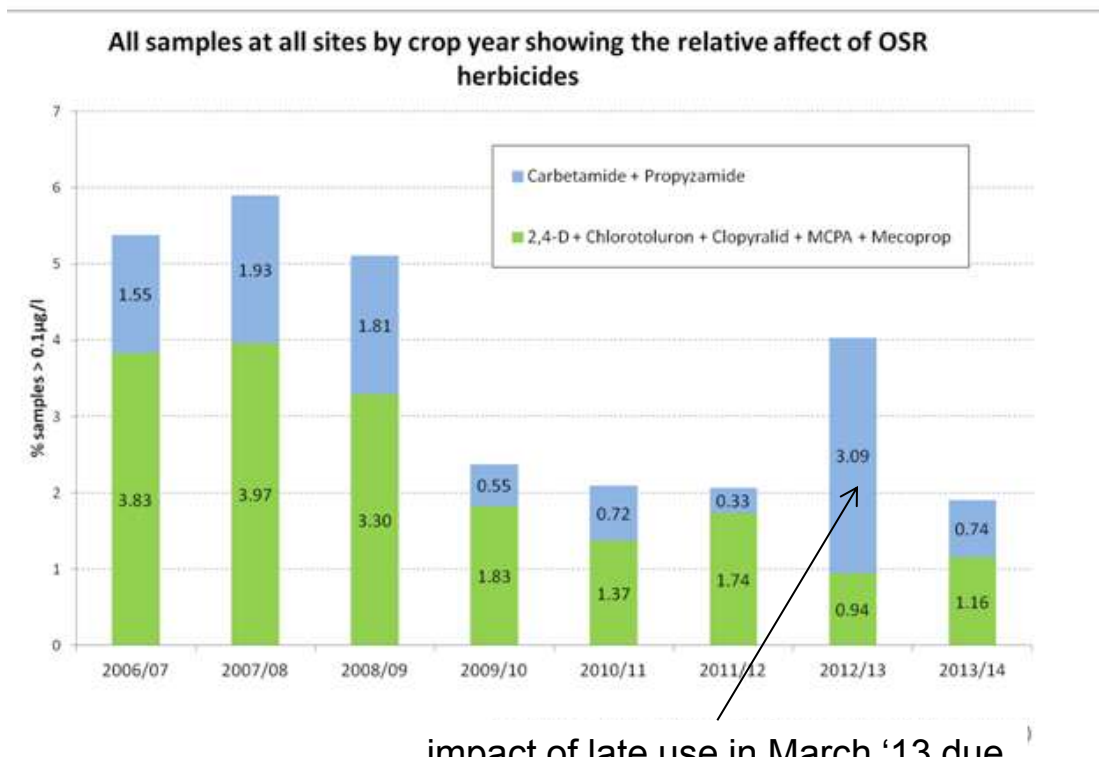


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# Pesticide Reductions

- 50% reduction in load & samples > 0.1 µg/l
- De-coupling of load & flow
- Increased usage + more intense OSR cropping
- Advice to 260 agronomists
- Grants at 65 farms



impact of late use in March '13 due to delayed crop establishment

(2 x weekly sampling at 6 sites since 2006)



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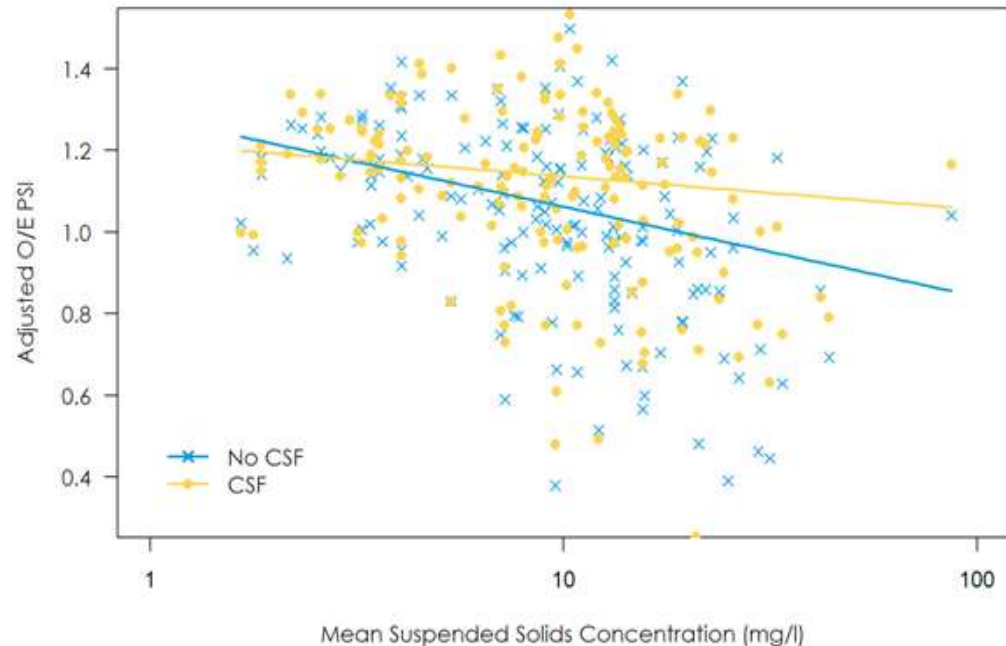
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# Ecological Changes

- Assessment of EA habitat data across 62 CSF catchments.
- Examined trends in ecological status
- Evidence of improved ecological status following CSF activity, particularly at more polluted sites.
- The strongest response was evident for PSI –metric of sediment stress



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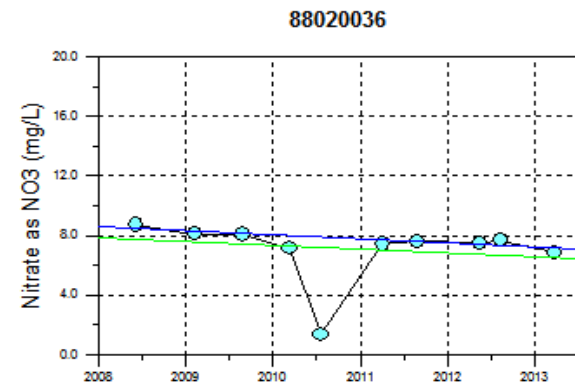
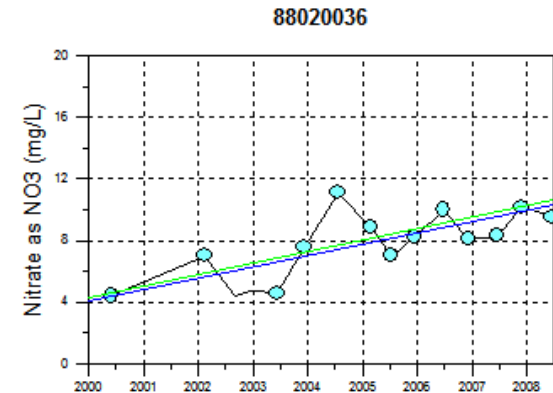
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# Groundwater Assessment

- CSF should make a significant contribution to nitrate reductions
- 48% of groundwater sites showing decreasing trends post-CSF



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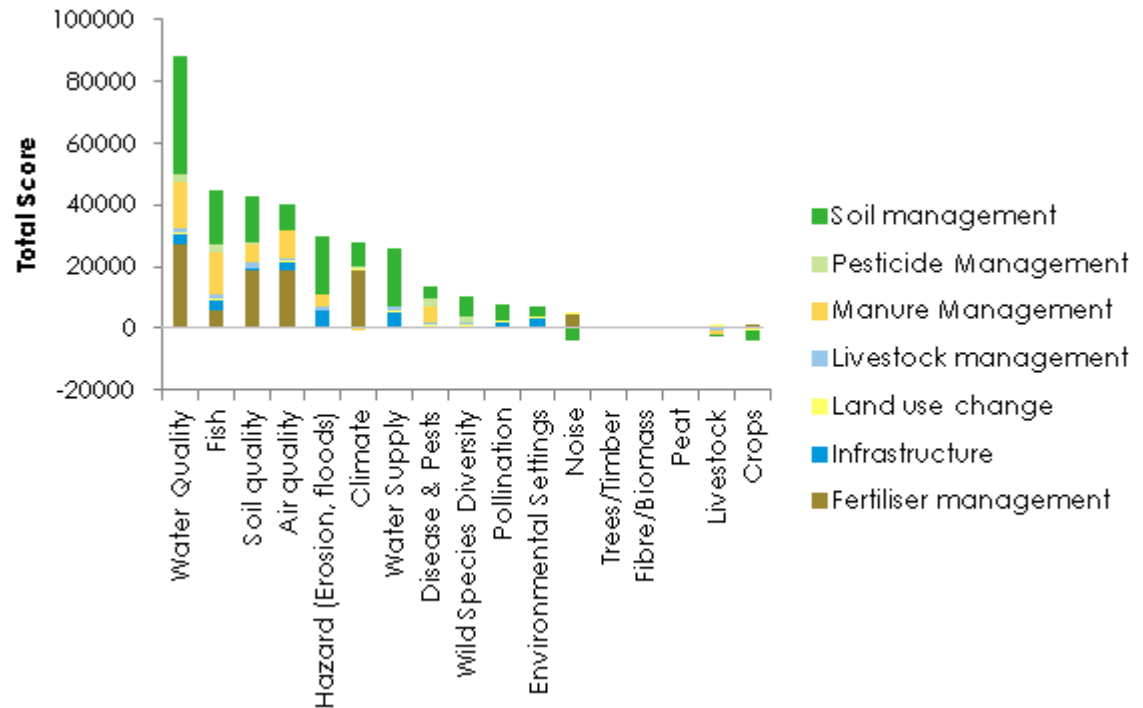
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# Ecosystem Services

- Significant benefits for fisheries, soils, hazards, climate & water supply
- Potential to enhance targeting to maximise benefits, but local context is critical



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## How do we sustain and develop this?

- New tools
- Optimising outcomes
- Better and deeper farmer engagement
- Working better with others.

# New Tools

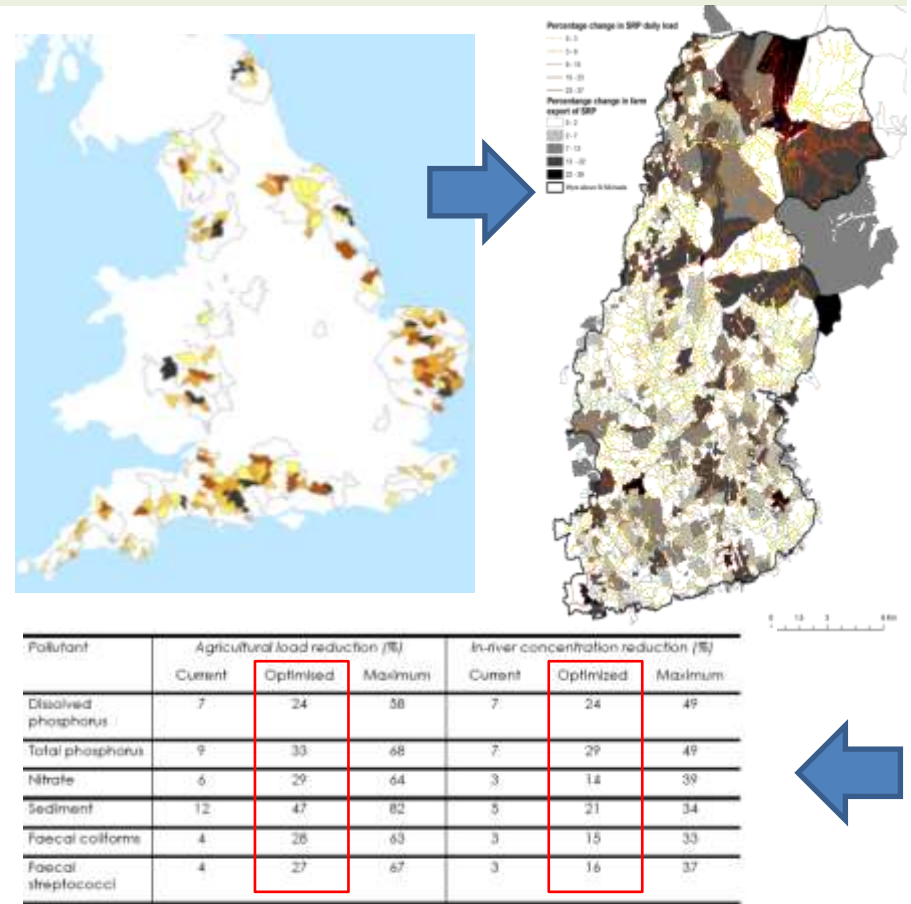
- New Countryside Stewardship agri-environment scheme.
- Water quality and key priority: 20% plus 25% for 'synergies' – water and biodiversity.
- Opportunities for land management and capital work together in 1 year or 5 years plans.
- Brings new ways of working: water – led land management agreements and new options.
- Also, new advice products under advice contract.





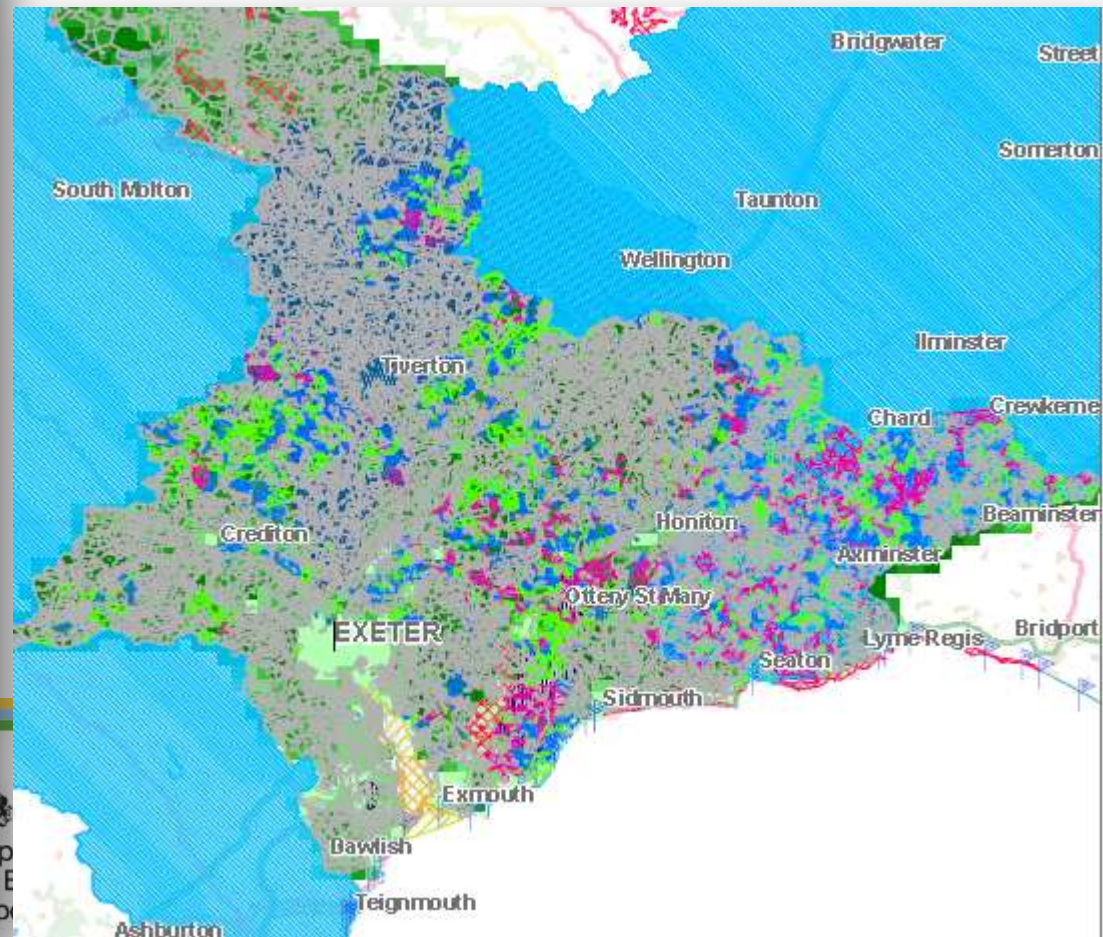
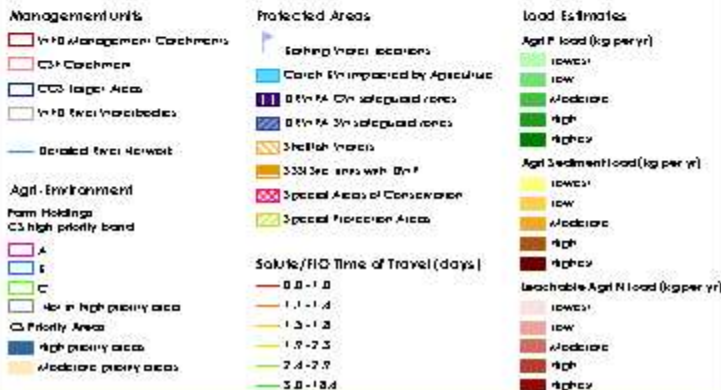
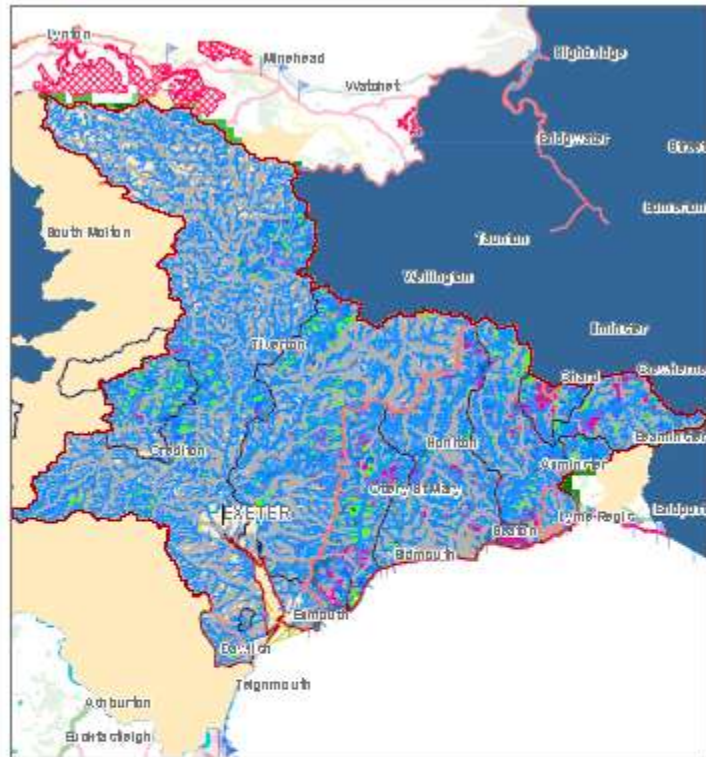
# Optimising Outcomes

- Optimised scenario indicates where potential effect of CSF is the greatest
- Modelling developed to show where current CSF reductions are close to theoretical maximum
- Strong spatial variation to benefits



# Optimising Outcomes

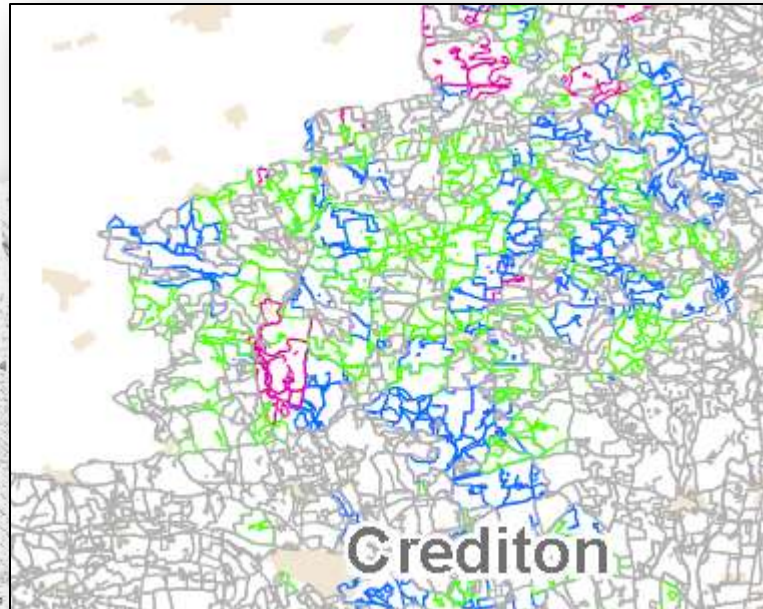
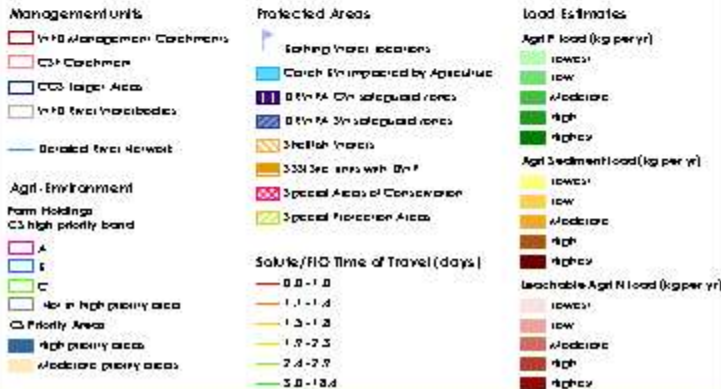
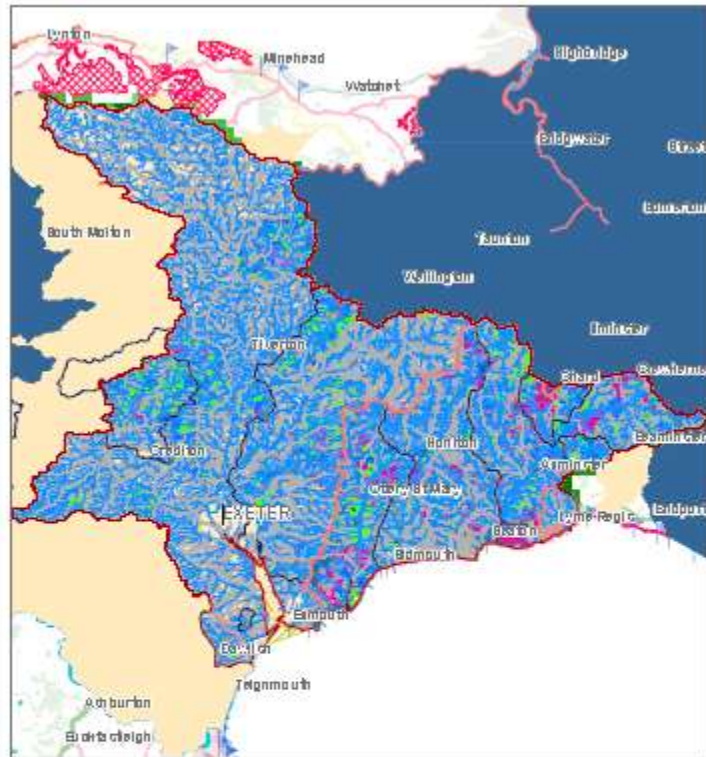
## Catchment appraisal





# Optimising Outcomes

## Catchment appraisal



**Social Situation**

Individual farmer

Group of farmers

Wider community groups inc farmers

**Social Relationships & Resources**

**Social Mechanisms**

**Social Outcomes**

GOOD

BAD

UGLY

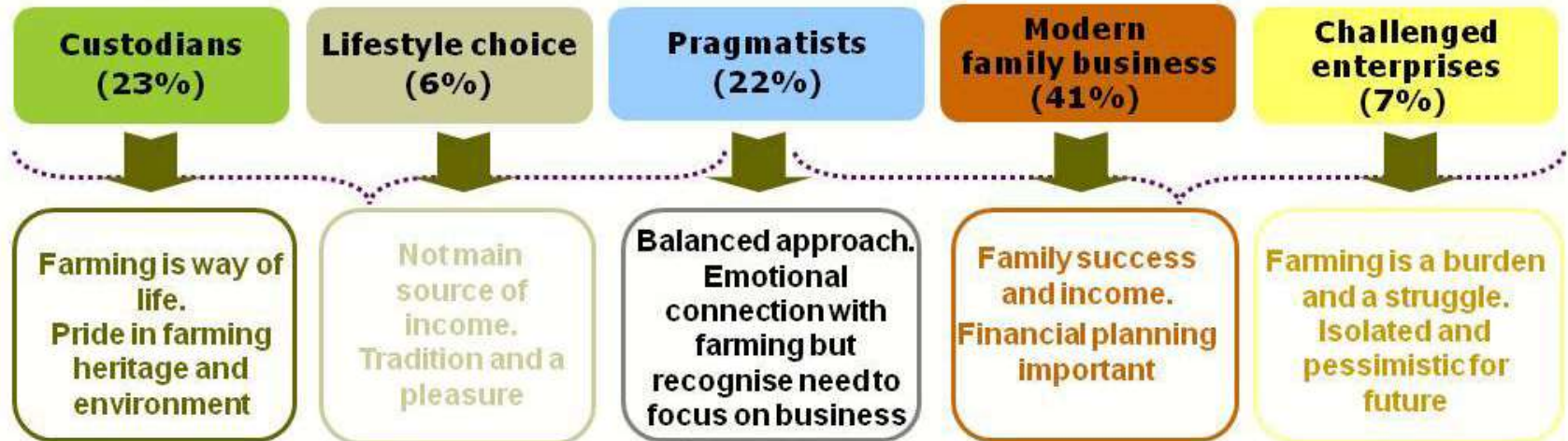
**Deepening our engagement**

**Environmental Outcomes depend on Social Outcomes**

We need the evidence to prioritise the most effective Social Mechanisms



# Deepening our engagement



**How to engage?**

- Respect
- Partnership working towards mutual benefits
- Protecting the future

More emotive, sensitive to needs, not directive but an inclusive approach

**How to engage?**

- Business-focussed
- Productivity
- Input costs

More rational and pragmatic – hard facts  
Need concrete reasons to pay attention



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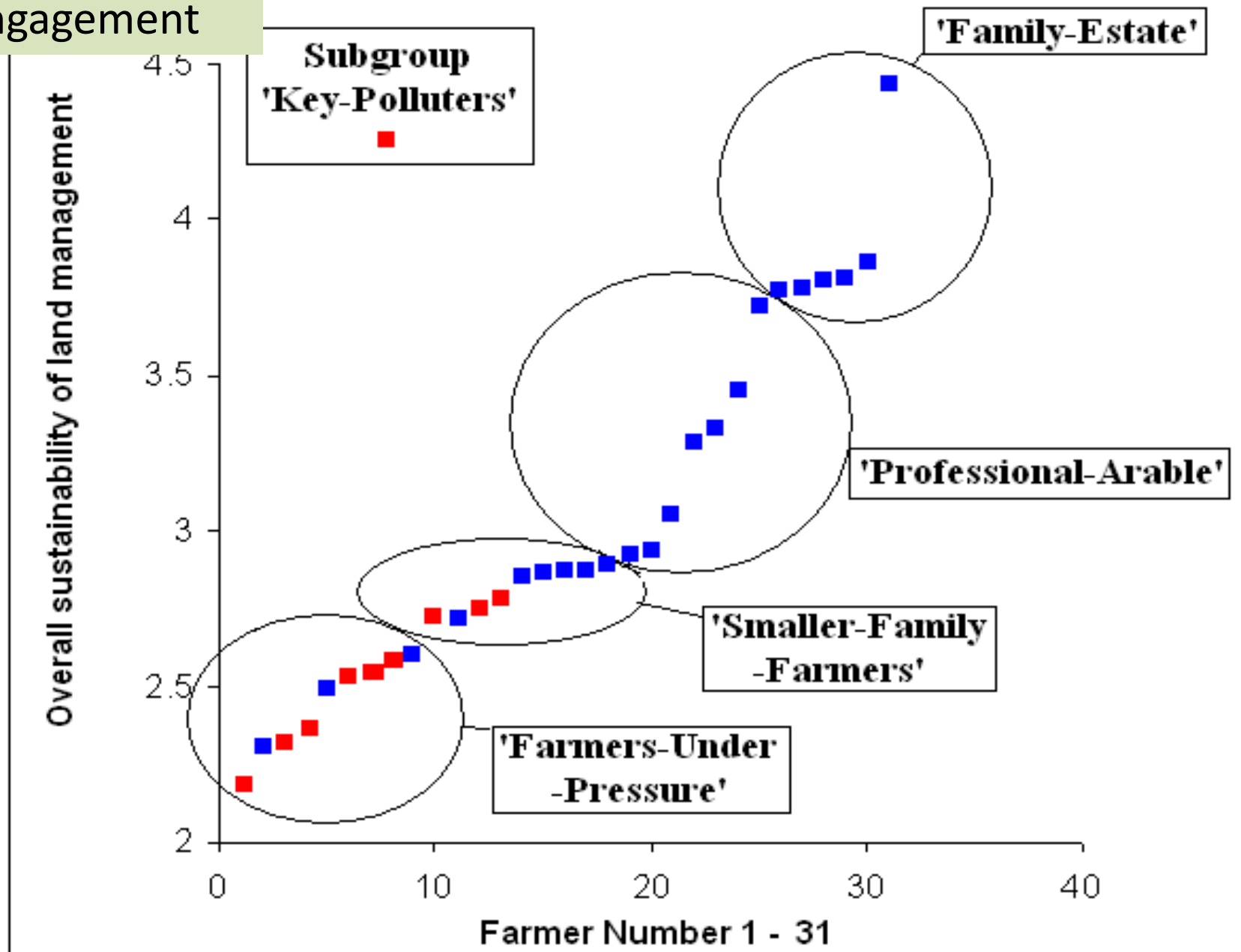
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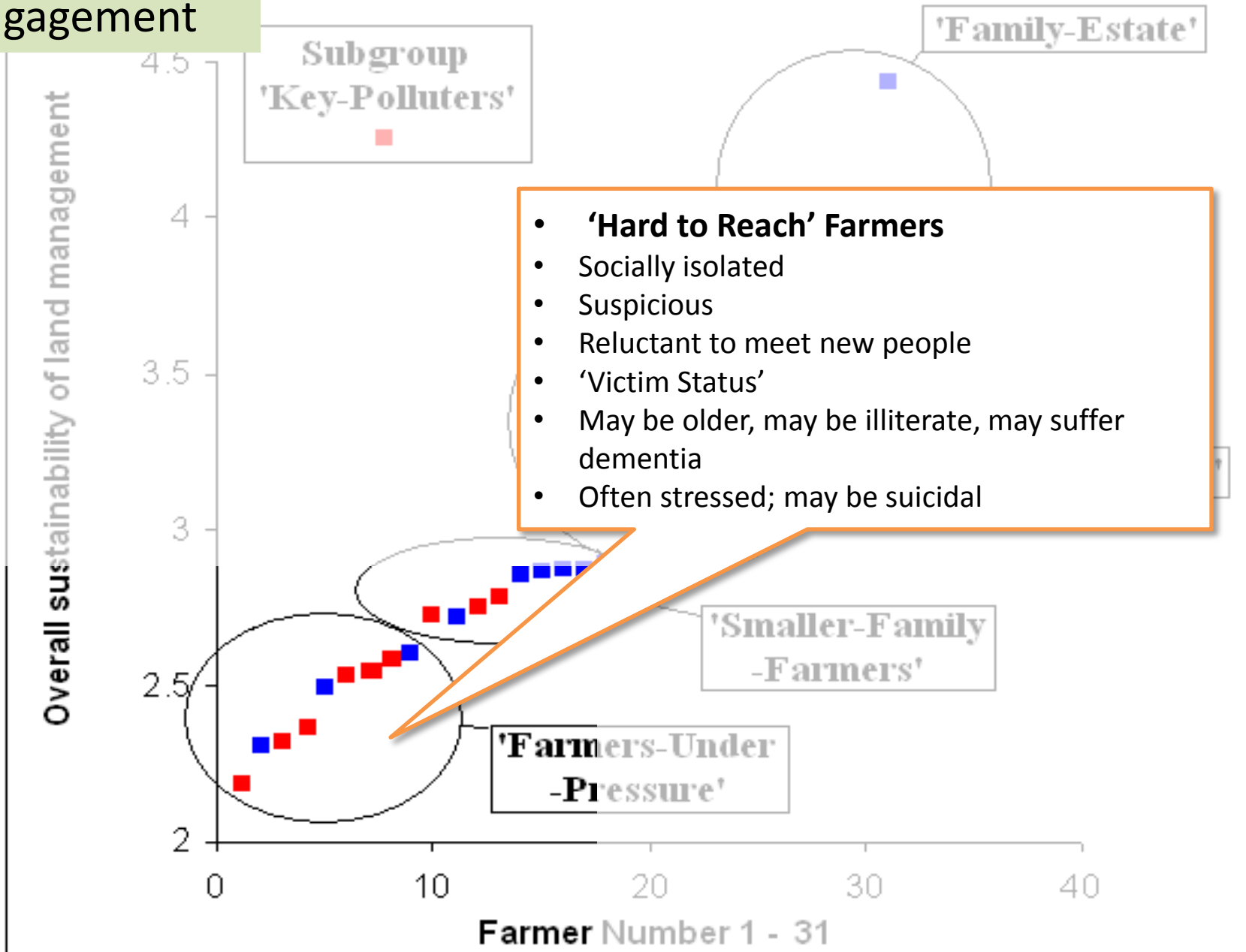
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Deepening our engagement



# Deepening our engagement





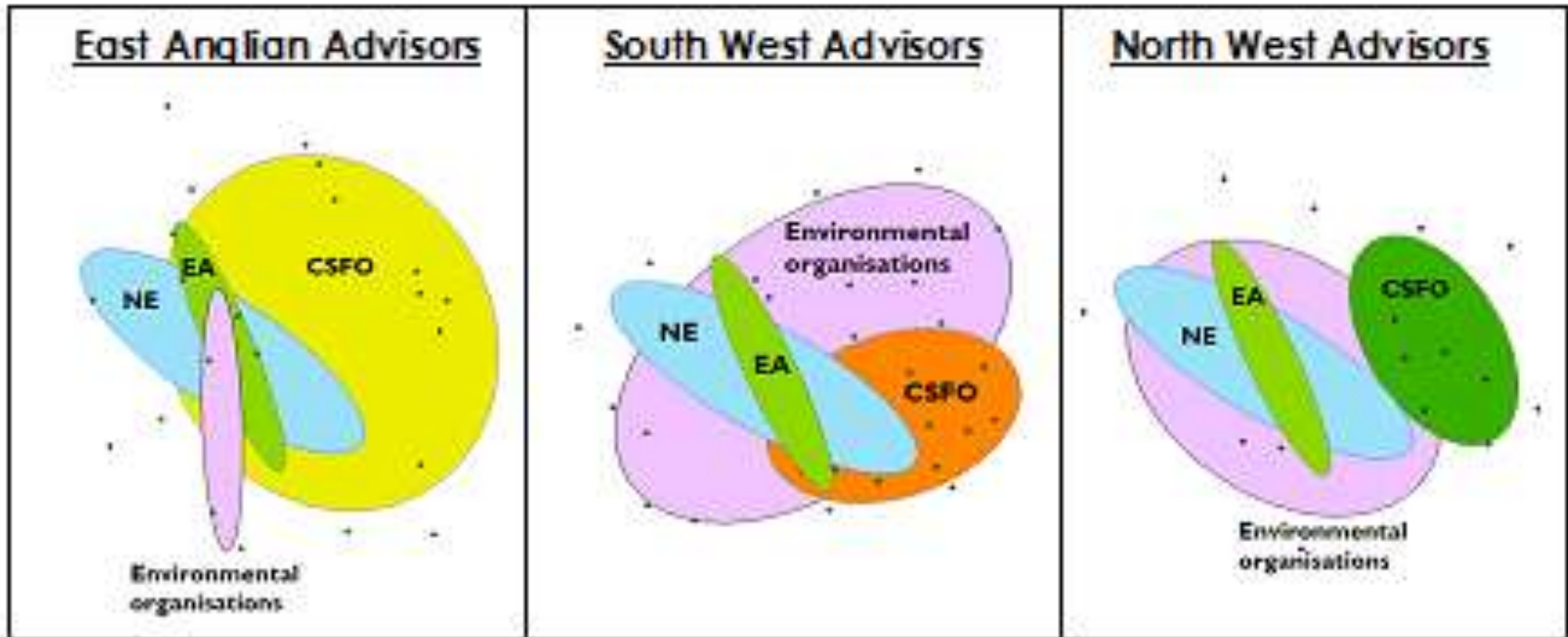
# Working together

Develop genuine partnership approaches that:

- Develop current and past work
- Maximise available resources
- Simplify and co-ordinate messages to farmers and catchment communities.
- Maximise use of available mechanisms.
- Have long-term impacts.
- Are sustainable over the long term.



# Working together



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# Critical factors

- Farmer awareness
- Range of delivery options
- Effective farmer relationships
- Robust evidence base
- Motivating farmers
- Changing attitudes
- Adaptable approach
- Advice supported by grants
- Advice uptake



Source: LEAF



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Thank you

*For more search 'Catchment Sensitive Farming'*