



# A clear solution for farmers

CATCHMENT SENSITIVE FARMING

## Summary of Phase 1 & 2 Evaluation Report

The first five years of the England Catchment Sensitive Farming Delivery Initiative (ECSFDI) have been evaluated. Drawing on results from the different elements of our evaluation, there is clear evidence to demonstrate that the initiative has met its primary objectives, to:

- increase awareness amongst rural land managers and stakeholders of the impact of diffuse water pollution from agriculture
- improve soil and land management practices amongst farmers within Priority Catchments
- reduce the pollution of water caused by farming within Priority Catchments

Farmer engagement was highly effective, with some 9,023 farm holdings receiving advice directly. This represents 17 per cent of all farm holdings within Priority Catchments (38 per cent by area) and 45 per cent within targeted sub-catchments (62 per cent by area).

Additional pesticide advice was provided through specific programmes developed with the Pesticide Voluntary Initiative and ADAS. Partnership and Associate Catchment Sensitive Farming Projects, developed with government agencies, regional government, industry bodies, water companies and environmental NGOs, extended the reach of the initiative beyond the Priority Catchments.

Over 80 per cent of farmers receiving ECSFDI advice confirmed their knowledge of water pollution had increased and that they had taken, or intended taking, action to reduce water pollution. Over 90 per cent indicated the ECSFDI was the best way to learn about water pollution. Despite this increased awareness and understanding, there remains only limited acceptance from farmers that agriculture makes a significant contribution to water pollution. To date, the key drivers for change have been the financial incentives of free advice, reduced costs (for example, by more accurately calculating fertiliser applications) and grants.

The ECSFDI has brought about significant improvements to soil and land management practices through voluntary uptake of advice and a capital grant scheme. 93,360 farm-specific recommendations have been made for improving soil and land management, with an uptake rate of over 50 per cent.

Implementation of control measures resulted solely from ECSFDI advice in most instances (83 per cent). For the remainder, implementation was also influenced by one or more incentives, other schemes or initiatives. The Nitrates Action Programme, Environmental Stewardship and ECSFDI Capital Grant Scheme were most significant; the latter contributing towards £29 million of farm improvements.

Uptake of control measures providing a cost saving to the farmer was only slightly higher than for those with an associated cost. This indicates that the ECSFDI is helping target and accelerate changes that might be expected through general trends towards improved farm practice, whilst also delivering significant additional changes.

Modelling indicates that improvements in management practices will result in significant reductions in pollutant losses. Reductions from the first four years of the ECSFDI are generally predicted to be between 5 and 10 per cent across Target Areas, but can be up to 36 per cent. These reductions translate into in-river decreases in pollutant concentrations of similar magnitude. Responses vary for different pollutants and Priority Catchments, due to variation in advice delivery and uptake and the significance of agricultural pollutant sources.

In some cases, predicted phosphorus reductions from the ECSFDI will help achieve compliance with Water Framework Directive (WFD) standards for Good Ecological Status. Where WFD standards are being met (through improvements at sewage treatment works) the ECSFDI will help reduce concentrations further towards guideline standards for Special Areas of Conservation.

Extension of ECSFDI activity across existing Target Areas will deliver significant further reductions in diffuse pollutants.

Water quality monitoring has demonstrated reductions in pollutant loads and concentrations resulting from the ECSFDI. These reductions were up to around 30 per cent across targeted sub-catchments within representative catchments and, for pesticides, across targeted catchments. We are confident these reductions represent real improvements associated with the initiative.

Longer-term datasets are needed to robustly analyse and confirm trends at the individual catchment scale. Sediment source tracing has demonstrated a beneficial response to the ECSFDI within the Dorset Frome. By focussing on assessment of pollution sources this technique overcomes the complexities of pollutant mobilisation, pathways and delivery that are inherent in conventional water quality monitoring.

Initial analysis of ecological monitoring data, from rivers within Priority Catchments, found no evidence of any response, with a clear need to assemble longer-term data records.

For an advisory initiative to provide a comprehensive evaluation of its performance using monitored and modelled data is unique. The results make an important contribution to addressing uncertainty over the uptake and resulting benefits of ECSFDI advice and demonstrate that voluntary advice can make a significant contribution to reducing diffuse water pollution from agriculture. Communication of the benefits will be important to secure future buy-in of stakeholders (especially farmers).

Targeting will be improved to maximise environmental outcomes from future phases of the ECSFDI. Using understanding gained from our evaluation, we have developed the capability to assess the geographic locations where CSF is most likely to be successful in influencing land owners to take action and where the mitigation measures themselves will make the greatest contribution to catchment improvement. The approach will be developed further to identify the most effective combinations of control measures for particular locations, as our evaluation shows there is scope to increase the impact of advice delivery.

Evaluation will remain a core element of the next phase of the ECSFDI. The approach developed can also inform how other initiatives are effectively evaluated, from the detailed design of, for example, water quality monitoring programmes to the use of an overall "weight of evidence" approach.

Catchment Sensitive Farming (CSF) is delivered in partnership by Natural England, the Environment Agency and Defra.

