



Using a mini-catchment approach to evaluate nutrient loss reduction measures on Irish farms

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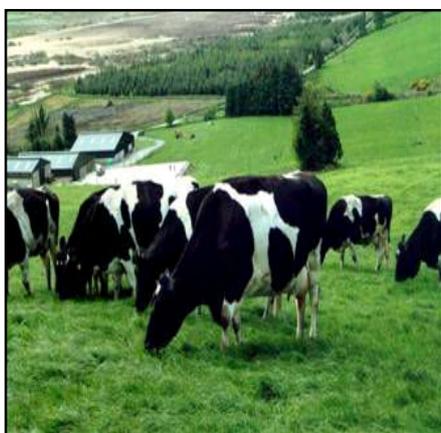
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Introduction

Teagasc is undertaking an Agricultural Mini-Catchment Programme for the Irish Department of Agriculture, Fisheries and Food (DAFF) to meet its monitoring obligations under the Nitrates Directive (ND). The programme is based on a stakeholder partnership which will generate knowledge to support competitive farming and protect water quality.



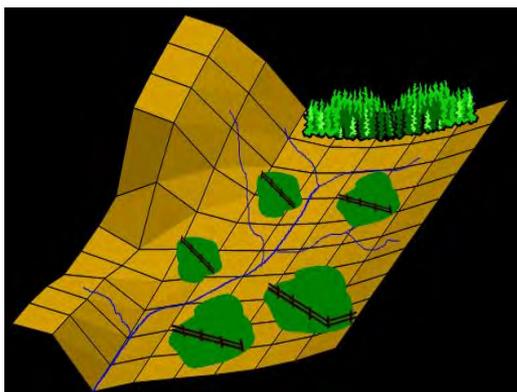
Objectives

- Provide a scientific evaluation of the effectiveness of the National Action Programme measures through the use of indicators.
- Underpin the basis for any modifications of the measures that might be required to achieve ND water quality objectives.
- Consider the scaling up of the results to larger catchment scales by model development or adaptation and validation in conjunction with national and international expert groups.
- Provide information on attitudes and awareness of farmers to water pollution issues and the economic impact of changed agricultural practises arising from compliance with ND measures.
- Provide national focal points for technology transfer and education.
- Provide a support programme for participating farms that will underpin the profitability of their enterprises.

Catchment Selection

Eight catchments were selected based on the following objective criteria:

- Predominantly agricultural with minimal nutrient input from non-agricultural activities
- Between 5 and 12 km² in area
- 1st, 2nd and 3rd order streams including headwaters
- 6 mainly grassland catchments (>80% of land area)
- 2 arable catchments (>30% of land area)
- To include farms requiring derogations (>250 kg/ha Organic N) in some grassland catchments
- Representing a range of agricultural pressures and vulnerabilities to nitrate and phosphorus loss
- Representing important hydrogeological/farming practice combinations



The Programme Team

Programme Manager: Mr Ger Shortle

Principal Scientist: Dr Phil Jordan

Data Manager: Ms Sarah Mechan

Research Officers

Hydrogeochemist: Dr Alice Melland

Hydrogeologist: Dr Per-Erik Mellander

Socio-economist: Mr Cathal Buckley

Soil Scientist: Mr David Wall

Technicians (4)

Agricultural Advisers (4)

Administrator: Ms Maria Merriman