

An analysis of farmer attitudes to EU Nitrates Directive implementation in the Republic of Ireland

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Introduction

The 1991 Nitrates Directive is one of the earliest pieces of EU legislation aimed at controlling and improving water quality (Europa, 2010). The Directive aims to minimise surplus phosphorus (P) and nitrogen (N) losses from agriculture to the aquatic environment. Nutrients in fertilisers (principally nitrogen, phosphorus and potassium) promote plant growth but application in excess of plant requirement can cause negative environmental externalities such as eutrophication (EPA, 2008).

The EU Nitrates Directive is implemented at farm level in the Republic of Ireland through the Good Agricultural Practice (GAP) regulations. Farmers in the Republic of Ireland have voiced opposition to operational elements of the GAP regulations (Brosnan, 2004). Farmer acceptance of the legitimacy of the measures is a key element of compliance (Barns et al., 2009). The efficacy of the GAP measures is being evaluated holistically in the Republic of Ireland by an Agricultural Catchments Programme through intensive bio-physical and socio-economic monitoring in six representative small scale river catchments dominated by moderate to high intensity grassland and arable enterprises across Ireland (see Fealy et al., 2010). This paper aims to investigate the attitude of farmer stakeholders towards implementation of the GAP regulations using Q methodology.

Methodology

Q methodology is a technique first pioneered by William Stephenson (1935) and encompasses a distinctive set of psychometric and operational principles that when combined with the statistical application of factor analysis provides the researcher with a systematic and robust means of examining human subjectivity (McKeown and Thomas, 1988). Q methodology is expressly aimed at identifying different patterns or shared ways of thinking on a topic that is relatively independent of the researcher. The experimental design of the Q methodology reduces any potential researcher bias and pre-specification of concepts by the researcher (Ellis et al, 2007). Brown (1993) describes it as the 'science of subjectivity' where the goal is to extract patterns of similarity between the responses of a small respondent sample, which represent the spectrum of views among the targeted population. The technique is not designed to have results scaled up to draw conclusions about the relevant whole population. However, where there is considerable diversity among respondents it is feasible to make assumptions about the wider target population.

Originally associated with the fields of psychology and health studies the technique has been applied more recent across a wide range of social science disciplines. It has been applied to a range of agricultural and land use issues many revolving around land stewardship (Brodt et al., 2006; Davis and Hodge, 2007; Visser et al., 2007; Fairweather & Klonsky, 2009; Wilson 1998) but others include adoption of genetically modified crops (Hall, 2008), and forestry management (Swedeen, 2006). Barnes et al (2008) deployed Q methodology to investigate farmer attitude to Nitrogen Vulnerable Zone regulation in Scotland.

Results

After considering several different iterations it was decided that four farmer typologies represented the most logical and robust representation of opinion on the implementation of the EU Nitrates Directive in the Republic of Ireland. The four

farmer groups were labelled “Constrained Productionists”, “Concerned Practitioners”, “Benefit Libertarians” and “Regulation Unaffected”.

The “Constrained Productionists” represents a position that is generally negative towards the regulations both from a farm management and a water quality perspective. They are clearly of the view that the regulations have had a significant impact on how they manage their farm operations and have restricted the freedom to farm in accordance with their own experience and knowledge. They indicate that compliance with the regulation has increased bureaucratic load and placed additional cost on farmers. This group also strongly objects to the restriction of certain farm practices such as organic manure spreading and ploughing based on calendar dates and intimate that this could actually increase the risk of pollution.

The “Concerned Practitioners” share some of the same concerns of the productionists but are generally positive regarding other farm management and environmental benefits accruing from the regulations. This group also object to calendar date restriction on organic manure spreading / ploughing and it’s potential to be counter-productive. However, this cohort acknowledges the environmental benefits arising from the regulations, for example they firmly reject the statement “The GAP regulations have not helped to improve water quality or the environment”. This group also stipulate to some farm management benefit associated with the regulations and agreed with the assertion that the regulations have made farmers more aware of the nutrient requirement of their crops and encourage the better planning and use of fertilisers.

The “Benefit Libertarians” are quite positive towards regulation implementation and associated environmental and farm management benefits. They agree that the GAP regulations promote good farming practice standards and help to reduce nitrogen and phosphorus leaching and run-off and have assisted in improving water quality. They also stipulate to positive farm management benefits and agree that the regulations have made farmers more aware of the nutrient requirement of their crops and encourage the better planning and use of fertilisers and have helped to improve farm facilities.

Finally, the “Regulation Unaffected” seem to be mostly unaffected by the regulation except for record keeping requirements and concerns around a cross compliance inspection. Their main objection relates to the bureaucratic load associated with the regulation, the threat of being inspected under cross compliance and restrictions on freedom to farm. They do not believe that the regulations have put undue focus on the potential for agricultural pollution and see some environmental benefit from the regulation in terms of water quality and making farmers more aware of environmental issues associated with agriculture.

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