

Developing approaches to ex-post assessment of regulatory change impacts at the farm level.

The research, which was a prototype study, carried out for Defra, explores the potential for improving the impact assessment process in the agricultural sector. The project analysed differences between anticipated effects of regulatory change, as predicted through ex-ante impact assessments, and actual outcomes measured through a post-implementation review of two sets of regulations in the agricultural sector. The project, which examined implementation procedures, farm business behaviour, and external forces influencing the sector to determine the underlying causes accounting for differences between ex-ante and ex-post measures of regulatory change.

Methodological approach

The study focused on exploring regulatory impacts at the individual farm level, and not the wider impacts affecting environment, economy or society of the following two sets of regulations:

- 2008 Nitrate Pollution Control Regulations
- 2006 Agricultural Waste Regulations.

First, the ex-ante impact assessment (sometimes known as the 'regulatory impact assessment' or RIA) for each regulation was analysed to identify predicted impacts. Secondly, a post-implementation review was conducted during the period January–March 2011 to identify actual impacts resulting from the regulations as implemented. Using interviews of farmers and other stakeholders a picture of regulatory impacts was developed and compared to outcomes predicted by the ex-ante study. The focus throughout the study was on exploring and understanding the causal factors accounting for differences in impacts, and exploring the scope for methodological improvement.



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Accounting for differences between predicted and actual regulatory impacts

In the case of the Nitrate Regulations the estimated total cost and benefits were broadly similar, but there were significant differences between some impact categories (eg record keeping; storage costs, spreading costs). The underlying causes accounting for the most significant differences between ex-ante and ex-post studies are the 'assumptions' made in the ex-ante study to predict impacts, and the low level of 'sector knowledge'. Some of the assumptions made in the ex-ante IA regarding take-up of various alternative behaviours have not been supported in practice, leading to differences in estimated costs to farmers. Linked to this is a lack of 'sector knowledge' which led to erroneous estimate of predicted change in farmer behaviour.

Other differences could be attributed to methodological issues (for example, discounting costs over a 20-year time horizon that does not reflect the environment in which the farmer operates). In some ways the ex-ante study was too much of a broad brush overview of impacts by farm type that did not adequately account for the wide variability in farm business behaviour.

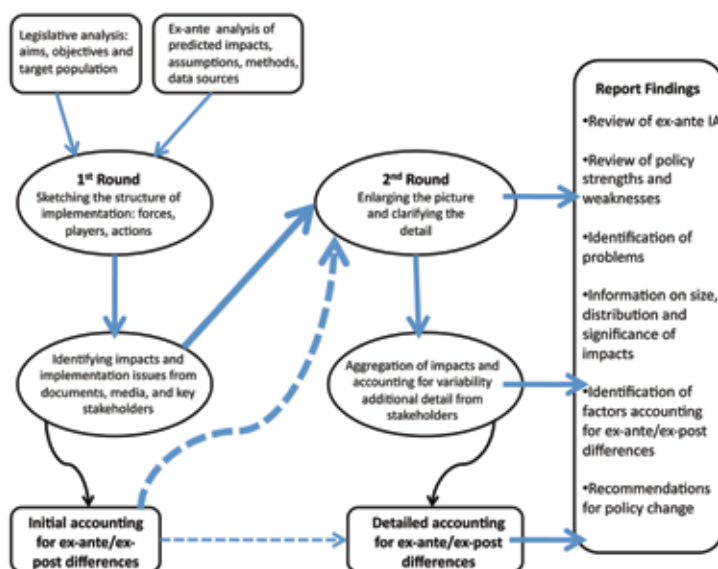
In the case of the Waste Regulations the ex-ante impact assessment over-estimated the costs to farmers of compliance with the Regulations. This was largely due to lack of consideration of the value of waste materials and the scope for recycling. The key factors accounting for the most significant differences between ex-ante and ex-post studies are again 'assumptions' made in the ex-ante study, and 'sector knowledge'. The initial assumption that farmers would landfill all waste and not engage in recycling was found to be erroneous, and more detailed knowledge of the waste sector would have revealed the market forces driving up the value of plastic recycle which contributed to changes in behaviour in the agricultural sector.

Proposed methodological improvements

Proposed improvements for the ex-ante IA process include:

- Workshops/case study methods that would modify assumptions about strategic behaviour underpinning cost and benefit estimates, and improve understanding of the potential effects of technological change
- Scenario modelling to provide insights into the potential impacts of unpredictable external drivers, such as market prices
- Improved guidelines for measuring implementation costs and benefits
- Greater focus on behavioural change among those influenced by regulatory change.

Improvements were also suggested for post-implementation review of regulatory change, which could also utilise qualitative methodological tools such as case studies and in-depth interviews to identify the full range of regulatory impacts, and explore the reasons for any variation from predicted impacts. A proposed two-step model for conducting post-implementation review is presented above.



Benefits of the proposed modifications

A modified post-implementation review (PIR) process could achieve the following:

- Analysis of the accuracy and validity of ex-ante impact assessment studies, identifying areas of strength and weakness
- Identification of a range of external (outside the farm boundary) and internal (farm based) drivers influencing policy instruments
- Evaluation of the effectiveness of policy instruments
- Identification of characteristics of particular groups with the agricultural sector that may be unduly impacted
- Identification of good practice/problems with current policy tools and pointing the way towards potential solutions for the next round of policy review.

The role of post-implementation review can thus go beyond the fundamental task of reviewing ex-ante impact assessments, but it requires careful study design, and clarity on the role of the PIR in the wider policy process.

