

ECOSYSTEM SERVICE DELIVERY IN WALES: INVESTIGATING FARMERS' ENGAGEMENT AND WILLINGNESS TO PARTICIPATE

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SUMMARY

This paper reports on the findings of a project undertaken by the Wales Rural Observatory in 2011 to investigate factors influencing farmers' behaviour and decision making processes. Specifically, the paper addresses the influences upon ecosystem service delivery, through current agri-environment frameworks and possible future models offering more direct incentive payments. Analysis draws on 50 in-depth interviews with a representative sample of farmers across Wales, including case study groups where ecosystem services are being piloted, along with findings of an earlier telephone survey (WRO, 2010). The results of this work support wider framings of farmers as a diverse grouping, suggesting that policy makers need to tailor their approach to suit the different capacities, priorities and engagement levels. Nevertheless, there is clear potential for the development of an ecosystem services approach in Wales, given a majority of positive responses from farmers towards undertaking conservation work. However, a broad conclusion uniting the different farmer groupings is that clearer communication of policy aims is needed, along with a more considered negotiation of the balance and compatibility between food provisioning and other ecosystem services.

INTRODUCTION

This paper is intended to present results from a project undertaken by the Wales Rural Observatory (WRO) during 2011, to investigate factors influencing farmers' behaviour in Wales. The study included a focus on farmers' business decisions and future plans in relation to CAP reform, alongside a consideration of their participation in agri-environment schemes and behaviour towards the environment. This was designed to inform Welsh Government agricultural and environmental policy, including the new Glastir agri-environment scheme, CAP reform strategies, and the Natural Environment Framework 'A Living Wales'. A key theme running through these policies is the development of an ecosystems approach, which involves a more holistic and interconnected vision, alongside a reframing of the environment as a source of goods and services. Consequently, an important component of the WRO's research was to investigate farmers' understandings and disposition towards the delivery of these goods and services, and it is this aspect of our wider study which this paper will focus upon.

The need for an 'ecosystems approach' towards conservation and sustainable development more broadly, has steadily risen on global policy agendas, from an introduction in 1995 by the UN Conference of Parties Convention on Biodiversity, to the more recent Millennium Ecosystem Assessment (MA, 2005) and the UK National Ecosystem Assessment (UK NEA, 2010). As part of this ecosystems approach, a focus on goods and services has become common place since the MA, with a proliferation of schemes subsequently emerging to deliver 'Payments for Ecosystem Services'. Supporting these developments, research is underway across the globe to improve the valuation and delivery mechanisms for these schemes (e.g. Engel *et al.*, 2008; Wunder *et al.*, 2008).

In addition to advances in the physical sciences, it is also acknowledged that further investigation is required into the understanding of social and economic factors affecting service delivery. Specifically, a clearer understanding of farmers' motivations and behaviours has been outlined as a key line of enquiry to support Welsh government policy development, given their role as key stakeholders and potential providers. It is here that the present WRO study has been aimed.

In addition to emerging research on participation in Payments for Ecosystem Services (PES) schemes in the Global South (e.g. Kosoy *et al.*, 2008; McAfee and Shapiro, 2010), this research has been informed by a rich body of work into farmers' behaviour and agri-environment participation in the EU (Potter and Morris, 1995; Wilson, 1997; Wilson and Hart, 2000; CCRI, 2009). These studies demonstrate that farmers, like most people, are not simply rational economic actors that prioritise financial gain above all other factors. For many farmers, farming is expressed as a lifestyle choice as well as a business, with a range of complex factors coming into play affecting how they make business and wider management decisions. Nevertheless, financial motivations are listed alongside the fit with existing management plans as the main reasons for farmers' participation in agri-environment schemes.

Critically, it is also evident that positive attitudes towards the environment *do not* equate with agri-environment uptake or pro-environmental behaviour. Exploring other potential areas of correlation in farmers' behaviour, including farm size, profitability, and farmers' age, evaluating the literature overall indicates that there are no clear correlations between agri-environment uptake and variables including farm type, demographics, educational background, and value judgements. Instead, agri-environment decisions are now seen as a complex combination of context variables, which are best summarised as a balance of capacity, willingness and engagement. Given these complexities, segmentation through the construction of farmer typologies is accepted as a useful tool for policy makers to effectively target these differentiated audiences, whilst accommodating the variety in their behaviour motivations.

Given these findings, it is clear that there are a number of ambiguities surrounding farmers' economic priorities and how their business decisions are made. With mixed messages evident about the extent, and ways in which farmers' are seen to be business and profit orientated. The literature also suggests that attitudinal data alone is not helpful in determining behavioural outcomes. Rather, research needs to consider social norms and self-identity as key factors alongside attitudes (Burton, 2004). Similarly, Burton *et al.* (2008) suggests that social capital and questions of self-perception and identity are critical to understanding whether conservation conflicts with how farmers' perceive their role. Equally, it is evident that questions around what is meant by 'environment' are not fully explored in surveys, leading to analytical discrepancies.

In light of these issues, it was decided that the present study should employ a qualitative approach to develop a richer data set, beyond attitudinal statements, which could delve deeper into questions of self-perception and identity as well as exploring the nuances of decision making processes. This will be outlined further in the next section.

METHODS

Whilst the study overall has employed a mixed methods approach, drawing on quantitative data from an earlier telephone survey (WRO, 2010), the annual Farm Business Survey, and

CCRI's (2009) study of 'entry and exit into agri-environment schemes in Wales', primary data collection was in the form of 50 in-depth, semi-structured interviews. Whilst the interviews were not designed to provide statistically significant data, (given the qualitative approach) they were aimed to cover a broadly representative sample of farmers across Wales, to avoid biases associated with particular locales, farm types, size and so forth. Respondents were chosen from a list of ~1000 contacts used for earlier survey work, with a sample of 50 constructed according to farm size, mirroring the ratios used for wider national surveys.

In addition, interviews were conducted with case study groups where an ecosystem service approach had been piloted, to see if there was clearer engagement with conservation goals amongst these farmers. Conservation officers associated with these case studies were also interviewed, along with union officials and civil servants involved with agri-environment policy development. As outlined above, interviews were intended to explore decision making *processes*. This was done by exploring issues from a number of angles, asking repeat although reframed questions, and considering the importance of temporal aspects upon decision making. For instance, asking about what had affected particular decisions in the past, what they thought about these issues now, and what their priorities were over the longer term. Longitudinal analysis was also possible by comparing individuals' interview responses with their answers in the 2010 survey data set. Questioning also focused heavily upon the discussion of particular experiences, to avoid abstracted or 'ideal-type' answers, where respondents say what they think you want to hear/they 'should' say. In addition, the importance of identity and social-norms were incorporated in question design, along with a need to attend to potential disparities between the various discourses of 'environment' and 'conservation'.

Areas of questioning included:

- Reasons for and experiences of agri-environment participation.
- Whether there was any conflict between conservation and their role as a farmer.
- Whether they had heard of ecosystem services (particularly in relation to the new Glastir scheme).
- Whether they would be prepared to undertake more conservation work if the payments were appropriate.
- Whether the framing of payments in terms of 'income foregone' influenced their perception of conservation.
- The extent of their business orientation and skills.
- Plans and concerns for the future, including perception of CAP reform.

RESULTS AND DISCUSSION

In the first instance it is important to highlight that the farmers interviewed were not seen to comprise a homogeneous grouping. As with previous studies, the findings of this study show that a segmented approach is more relevant to understanding farmers' behaviour. However, some broad conclusions can be drawn across the different groupings. In the first instance, it was apparent that there is clear potential for the development of ecosystem service delivery in Wales. But it is a complex issue, with a number of barriers and tensions emerging which the following discussion will unpack.

To begin by reflecting upon the question of financial incentives, it was notable that the primary reason given for not joining the new Glastir agri-environment scheme was because the

payments were too low, and there was not enough compensation for the restrictions inhaled. This was not simply a question of income lost, but also about the restrictions associated, a fear of penalisation, and distrust of government. Some were prepared to undertake conservation off their own back, without government 'interference'.

The results of this study also show that a low proportion of farmers were prepared to compromise their farming aspirations to convert land to conservation purposes, simply for financial gain. Nevertheless it is clear that money is the principle priority for a small minority and they are happy to follow whatever makes the most financial sense. To clarify, nearly all farmers have to attend to profit (or they would go out of business), but the majority will do what makes business sense *within* the parameters of farming, whereas only a small proportion will think wider in terms of business and profit more broadly, and are not tied to the farming way of life.

These differences were clearly linked to respondents' sense of identity. But it is also important to draw attention to the temporal element of 'what makes financial sense', because it is important to acknowledge that farmers have to consider the long term implications of their business decisions. Change in farming practise can be slow to bring about and investment in particular techniques, management systems, and/or diversification strategies can take time to capitalise on. Consequently, the notion of 'doing something for the money' must be measured in different time increments, and with an eye to how important different temporal stages are to different individuals. For example, a farmer who is in a position where they are happy to retire, will be differently disposed to the idea of converting more land to conservation than one who is at the start of their career, have made significant investments 'improving' their land, and/or who are concerned to pass on the farm to their family.

Many farmers in the latter position suggested that whilst they were happy to undertake conservation on some areas of their land, they would not be prepared to convert their best land for conservation. This was explained in terms of the long term viability of their farms, most often referring to concerns about succession and the need to ensure a sustainable future for their family. Specifically, it was argued that they would not compromise the long term fertility and workability of their land in favour of short term financial gain to undertake conservation work such as tree-planting or reduced stocking to the extent that significant fertility loss would be incurred.

These farmers argued that in future they would need to produce food, making reference to increasing population and concerns raised in the media about food security, demonstrating their maintained attachment to their role as food producers alongside their commitment to their families. Equally, questions of trust in relation to government policy and the wisdom of conservation management were raised, given the number of U-turns evident in agricultural policy over the last 50 years, alongside their own negative experiences of working with conservationists.

Moving to consider the framing of payments, a significant number of respondents indicated that their immediate preference was for market payments rather than subsidies. But on reflection they were less convinced that this could work. Many did agree that it would be better from the public's perspective, as payments which were more explicitly linked to the delivery of ecosystem services would seem less like income support and would be useful as a better way to acknowledge the work farmers do. But their main concern was to improve the payment levels.

Echoing the arguments above, many were concerned that conservation and farming should not be divided by this type of reframing. They argued that they were happy to farm in a sustainable and conservation orientated manner, but not to completely compromise food provisioning for environmental gains.

Equally, a high proportion of respondents went on to argue that farming was reliant on subsidies and that this should be acknowledged and accepted rather than reframed. In particular, they highlighted the influence of supermarkets to affect prices and argued that farming would need to continue to be subsidised if the country wanted affordable food.

In terms of their attitudes towards conservation, very few farmers had a strongly negative attitude towards the environment. This was not just a case of saying 'yes I am concerned about the environment', but was backed up by detailed conversations about habitats and environmental change on their holdings. Many respondents were seen to have a clear affinity with the environment and wildlife, with a keen appreciation of these considerations evident as part of their working practise. Often this was apparent as part of their reasons for being farmers and something which had been developed through continued exposure to the environment in their daily lives. Some even demonstrated an in-depth knowledge of local species and ecosystem function. However, it was also evident that many respondents had a less holistic and more zoned conception of how conservation should work on their farm. These respondents stated that they would do conservation in some areas of their holdings but not others.

Critically, it was also obvious that there were a number of conflicts between farmers' perception of what was good for the environment and what conservationists had advocated through projects and previous agri-environment experience. This was not just a case of cultural differences, but often as a result of poor communication from conservationists about the aims of agri-environment schemes. This dis-juncture was highlighted as a major reason for tension in farmers' desire to be involved in environmental work. Coupled with the lack of awareness of ecosystem services as a policy priority amongst almost all respondents, it is clear that there is a particular need for further work on communication with farmers in relation to PES. This is not to suggest a one way process, but a dialogue; particularly given that many farmers raised very sensible concerns and observations. For example, even farmers who were attentive to conservation priorities, and already employing agro-ecology techniques, were concerned that current policy changes were too environmental and not balanced enough. In addition, many respondents argued that if the government was concerned about carbon footprints, then it should focus more on promoting localised production and supply chains; rather than reducing farming capacity here to attend to environmental goals and then have to import goods.

Overall, this suggests that a major issue with the delivery of current agri-environment schemes is the perceived legitimacy of government policy, and the need to strike a more clearly explained balance between food provisioning and ecosystem services. Equally, a legacy of poor communication and distrust between conservationists and farmers is seen as a key barrier to enable further co-operation. It is, therefore, suggested that the development of policy programmes to deliver ecosystem goods and services should take these issues on board in order to improve engagement and farmers' willingness to participate.

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