



Countryside and Community Research Institute

Entry and exit from agri-environmental schemes in Wales

Final Report

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Executive summary

Purpose of project

1. The main aim of this research was to contribute to the evidence base required for a full-scale review of all the agri-environment schemes (AES) in Wales being undertaken by the Department of Rural Affairs (DRA) in Wales. Specifically the objectives of this research project were to provide evidence with which to understand:

- farmers' current motivations for entry into agri-environment schemes in Wales;
- farmers' intentions and motivations for exiting or renewing membership of agri environment schemes; and
- how farmers within agri-environment schemes differ from non-members.

There are also three interrelated aims:

- Reasons for entering agri-environment schemes
- Assessing the impact of agri-environment schemes (farmers' experiences)
- intentions and reasons for exit and renewal of scheme membership

These objectives and aims relate to Tir Gofal (TG) and Environmentally Sensitive Areas (ESA).

Methodology

2. The research involved four phases. The first phase comprised a comprehensive literature review to examine the current state of understanding of farmers' decision making, motivations and behaviour with respect to participating in AES. The second phase involved a telephone survey of 353 agreement holders and 115 non-agreement holders. The agreement holder sample was subdivided into: 1. those coming to the end of ESA; 2. TG agreement holders who had been in an AES before; and 3. TG agreement holders who had not been in an AES before. The non-agreement holders sample was subdivided into: 4. previous ESA agreement holders; 5. those who had applied to TG but been unsuccessful or withdrawn; and 6. those who had never applied to an AES. Semi-structured face-to-face interviews were carried out with 28 agreement holders (25 TG and 4 ESA) and 12 non-agreement holders in the third phase. The final phase comprised two workshops with AES Project Officers in which their views about farmers' motivations and experiences were sought. Key outputs from each phase were used to inform the next phase. Each phase was structured according to a research framework (developed from the literature review and previous studies) which brought together three key influences on farmer' decisions about AES participation: capacity, willingness and engagement.

Key conclusion of the literature review

3. Most studies have tended to differentiate sets of factors which motivate and influence farmers' decisions about joining AES. These have shown that participation is influenced by a complex interplay of personal (age of farmer, attitude to conservation, level of education), farm household (eg succession plan) and farm business (in particular economic status influencing the ability to engage in new conservation) factors affecting participation. This is conditioned by availability of information and the social context of the farm and farmer.
4. The farming community is heterogeneous. Farmers and their holdings differ, as does the context in which they operate. Farmers' behavior is difficult to predict as their willingness and ability to enter is not reducible to their farm or personal characteristics, nor to their attitudes or values towards the environment or towards policy makers; and neither is their participation a simple function of economic factors. Thus farmers' decisions are determined by the policy environment, institutional and advisory structures, family influences, farming culture, community and society and ultimately intentioned by the farmer acting as a problem solving individual. As such this research is framed around the central themes of capacity, willingness and engagement.

Key points from the fieldwork

These results relate to the data gathered from the telephone survey, the face-to-face interviews and the PO workshops. The generic term AES is used to refer to TG, and to a lesser extent, ESA.

Capacity

5. Capacity refers to the farm resources, farm business, farming systems, the family, the farm life cycle, farmer skills and knowledge and how these all interact to constrain or provide opportunities on the farm.
6. The survey showed that there is no overall pattern of differences in farmer characteristic between agreement holders and non-agreement holders, however with respect to farmers' age the survey found that the agreement holders in general were older than the non-agreement holders with well over 50% of agreement holders aged 55 or older compared to only 32% of those who had never joined.
7. With respect to farm characteristics, there is no clear relationship between farm size and entry into AES. However with regard to farm type, the majority of agreement holders were upland beef and sheep farms while non-agreement holders were more likely to include dairy and lowland beef and sheep enterprises. Nearly a quarter of the unsuccessful group and nearly a fifth (18%) of those who had never joined AES were dairy farmers. 42% of the never joined sub-sample were lowland beef and sheep farms.
8. With regard to the farm business. The survey found that over 50% of non-agreement holders indicated that they planned to grow/intensify the business compared to just over 10% in the agreement holders groups. The interview data supported this showing

that although agreement holders described patterns of previous change, they were less likely to have plans to expand or intensify the farm, preferring to 'keep ticking over'. Non-agreement holders overall were also more likely to have identified a successor with 37% definitely having a family member to take over the farm with only 11% saying it was unlikely or definitely not (compared to around 30% in all other groups). Non-agreement holders (unsuccessful applicants) also had the highest proportion of business income from agricultural activities. The interviews confirmed this and found that income of agreement holders was more likely to be supplemented by non-farm sources (especially in the case of newcomers).

9. No difference was found between agreement holders and non-agreement holders with respect to membership of an environmental group or educational qualifications since leaving school.
10. Interview data analysis showed that farm capacity is clearly important with respect to opportunity for AES participation. Farming systems and environmental assets are a function of geography and physical resources and these enable or constrain the opportunity to join an AES like TG. The interviews also revealed that farm management decisions are often wrapped up in the life cycle of the farm, the age of the farmer and the existence of a successor. Non-agreement holders are more likely to 'locked-in' to high intensity production systems and have less capacity for change. According to POs farmers in lowland 'improved' areas, where there is less 'habitat' and less capacity to change the system' have become 'too intensive to change' and for many AES are not on 'their radar'.

Willingness

11. Willingness refers to farmers' goals, values, philosophies, attitudes and motivations and is underpinned by farmer identity and culture.
12. The survey analysis suggests that broadly speaking *all* farmers are sympathetic towards the environment. More than 80% of all agreement holders and non-agreement holders (65% in never joined AES group), agreed that AES are the most effective way to involve farmers in conservation matters. This suggests that attitude (unwillingness) alone is unlikely to explain a decision not to enter an AES.
13. With respect to agreement holders' goals, traditional farmers tend to emphasise making a living or a profit while trying to balance environmental considerations, while newcomers, with access to non-farm income, tend to prioritise protection of the environment over production. Non-agreement holders demonstrate commercial 'production' goals but also claim to value the environment.
14. With respect to motivations for joining AES, the most important factors to all survey respondents were the payments themselves with over three quarters in each sample saying that this was very important. The next highest factor (and related factor) overall was 'to maintain hedges, walls and ditches' with just under three quarters saying this was a very important factor. However the protection of wildlife and landscape was also rated highly as a factor determining entry. Results from the interviews and PO workshops concur that capital payments are an important incentive.

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15. The interviews revealed that the heterogeneity of the agreement holders means that many different types of motivations are at work. Three sorts of motivations were distinguished:
- some farmers regard joining AES as an opportunity for being paid for what they are already doing or aspiring to do. AES were seen as compatible with their farming practices and systems, and their goals and values.
 - some farmers behaved opportunistically and joined AES as part of a pragmatic business decision, they saw an opportunity to improve the farm (through capital payments etc). These farmers are adaptable and are always scanning for new ways to develop the business.
 - some farmers joined TG to help buffer poor and uncertain farming incomes and so sustain the farm business. In some of these cases the AES offered a lifeline to the family farm, even though the AES goals were incompatible with their own, they could 'not afford not to join'.
16. With regard to reasons for not entering AES, the survey found that non-agreement holders demonstrated negative perceptions about AES, they were skeptical about hidden costs and the level of payments being sufficient to cover the work costs, and perceived that paperwork, joining and implementation were difficult. 50% of non-agreement holders considered that AES would interfere with the running of the holding, while 31% thought that the management prescriptions were too demanding. For many this issue was more important than the level of payments.
17. The interviews data also revealed farmers' concerns about the impact of AES management on the farm business. The main comments from those who had applied and withdrawn/been unsuccessful were that they felt that the constraints on the stocking rates were too rigorous and would severely impact on the profitability of the business. Conditions of the AES were described as 'so draconian', making it impossible for them to farm profitably.
18. For those who have never joined a scheme, paperwork was perceived to be problem. When asked what improvements were needed to make them consider joining AES 'less paperwork' was selected by 74% of this group compared to 30% or less for agreement holders. This suggests that the perception of the issue of paperwork is not born out in reality.
19. With regard to future decisions about AES, in the survey non-agreement holders former ESA (34%) and those who had never applied (29%) said 'I have considered them [schemes] and may apply in the future'. This demonstrates the dynamic nature of farming, that often these farmers are constantly considering their options and would apply to a scheme in the future if there were benefits to the farm business or their circumstances changed.

Engagement

20. Engagement concerns the nature of farmers' interaction with: other farmers, with POs, with policy (makers, deliverers and aims) and with the general public.

21. In terms of engagement with other farmers, the general view was that farming networks were not particularly strong (weakened by restructuring in the area) and that other farmers had not had a big influence on agreement holders' decisions to join TG. In the majority of cases the survey respondents indicated that it was their own decision to join (78%) with only family (10%) being mentioned as influential.
22. Agreement holders rate the role of the PO highly, over two thirds of agreement holders in the survey agreeing that POs had clearly explained what they needed to do. POs provided valuable assistance to farmers when they joined the scheme, both in terms of working out how to make a farm eligible and in making sure the options were realistic and compatible with the farm system. More recently, with the transition from CCW to WAG, the nature of the working relationship between PO and farmer has deteriorated, as the turnover of PO staff has increased and they visited the farm less frequently.
23. A common complaint amongst survey respondents and interviewees was that there was insufficient feedback about the impact of AES. Although farmers could see positive changes on their own farms it was agreed that to have confirmation and endorsement would be appreciated. The POs fully supported this, agreeing that recognition is important and that this helps farmers to take ownership of AES and start to understand the impact of changes.
24. Similarly both farmers and POs agreed that monitoring of AES had been weak, there was a sense that policy makers had missed an opportunity to undertake a baseline study and monitor the environmental impact of TG. The relative value of POs and farmers in carrying out baseline surveys and monitoring was discussed.
25. With respect to engagement with policy, whilst the majority of agreement holders agree that WAG and CCW run the scheme efficiently, some 30% did not agree. Many POs and farmers felt strongly that continuity was needed, that WAG needed to implement a long term AES programme/policy so that both the farmers and the tax payers can see the results. They were cynical about proposed changes to TG and there was deep concern amongst some that TG would be replaced by a more 'watered down' approach that attracted less committed farmers and did not value the investment in the environment many farmer had already made.
26. General awareness of AES was found to be good, only 3 of the 115 non-agreement holders surveyed were unaware of Tir Gofal and Tir Cynnal.

Experience of AES

27. The majority of agreement holders agreed that the AES experience had been positive. Around 75% agreed that AES improved farm management, the landscape and increased native plants and wildlife. The majority of agreement holders interviewed regard participation as a great opportunity particularly in terms of restoring boundaries and adding capital, functional and aesthetic value to the farm.
28. When asked to rate the scheme overall, existing and previous agreement holders consistently rated current and previous schemes as being at least good (53%) or in some cases excellent (38%). Support for the agreement holders before and after the scheme

was rated highly by all with 20% saying it was 'excellent' and well over half saying it was at least 'good'. Paperwork was not thought to be a problem.

29. However, when asked to rate the scheme in terms of management/annual payments then the combined excellent/good proportion fell to 64% with 12% saying they were poor. The proportion saying excellent or good falls further to 50% when asked to rate the scheme in terms of capital payments. A fifth of agreement holders strongly disagreed that the scheme payments cover the work involved. There was also a significant number of agreement holders, about a third, who agree that the schemes have hidden costs that they had not anticipated.
30. The interviews confirmed that agreement holders felt they had gained in terms of the business, the farm environment, personal satisfaction, and environmental knowledge. Some interviewees experience was more neutral whereas for a few the TG experience was disappointing and brought problems.
31. Regarding impact on the farm. Where changes to the farming system required under the AES had been small, the impact on farm practices and the business was minimal. However some farmers had changed their systems and practices significantly to earn substantial annual payments in TG. In these cases TG had made a notable impact on the farming system and the business and the farmers were heavily reliant on the payments which brought both security and the opportunity to keep a son/labourer on the farm.
32. A generally positive impact on the environment was noted by some farmers although some negative environmental impacts were also identified. 60% of agreement holders agreed that being in an AES had increased their environmental knowledge and awareness. Interviewees valued these knowledge gains and wider understanding.
33. The majority of agreement holders (84%) found the AES easy to implement and disagreed that it interfered with the smooth running of the farm (75%), this was borne out in the interviews although some farmers wanted more flexibility. Some agreement holders had clear misgivings about the efficacy of certain prescriptions and questioned their inappropriateness to local conditions. POs acknowledged that prescriptions cannot hope to be accurate from the beginning, that implementation is a learning process. They regard flexibility in the implementation of prescriptions, with farmer input, as important.
34. All POs agreed that TG was a good, well paying option for a number of farmers. Over three quarters of agreement holders wanted to renew or continue with another scheme. The POs pointed out that many who do not renew do so for personal reasons / family circumstances rather than dissatisfaction with the AES.

Concerns about the transition to a new scheme

35. Farmers and POs share deep concerns about the impact the closure of TG will have on farm businesses, the local economy and the environment. Loss of payments (annual and capital) might mean that employees and sons would have to leave the farm. There would also be a negative impact on local contracting businesses and hence the wider rural economy. It was also suggested that former TG agreement holders might resort to ploughing up species-rich pastures to increase production if TG payments ceased.

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36. POs felt that applications to the new scheme without PO support would lead to a high risk of non-compliance. POs help the farmer to make an application that tailors the scheme requirements to the farm, identifying the appropriate amount of work they can commit to.
 37. Farmers and POs alike felt that the last ten years' worth of agreements was an important investment that should not be lost in the transition to a new scheme. There is a risk of losing a cohort of committed farmers, who represent a very important reservoir of environmental capital and know-how.

Policy implications: approaches to achieving successful agri-environmental outcomes

38. *Rewards*: Joining an AES is ultimately a business decision for a farmer. Any features of scheme therefore that enhance business income, sustain the business or improve/invest in business capacity will be important. Key amongst these are capital and annual payments. As well as enabling work on the farm, capital payment can have indirect impacts; they have a visible impact on the landscape and, when work is done by contractors, can generate local employment. Annual payments can help to buffer against changing markets and incomes. Removing these payments will expose many (some vulnerable) farms who have come to rely on them.
39. *Personal and social rewards*: There should be recognition that some farmers are also motivated by the personal satisfaction of improving their farm environment. Government and public recognition of farmers' environmental achievements can also provide social rewards to farmers, this are currently weak.
40. *Compatibility with the farming system*: Understanding the importance of AES fitting in with the farming system and equally the extent to which farmers are willing, or able, to change their system is important when designing and implementing AES. Schemes that are perceived to be incompatible and have too many conditions and rules will not be attractive.
41. *Flexibility with prescriptions/ valuing farmer knowledge*: Allowing farmers some flexibility in implementing prescriptions enables both management to be geared more to local conditions and the farmers to use their own knowledge and experience. This can improve overall engagement with AES and assist with feedback and monitoring.
42. *Joining and administering a scheme*: Negative perceptions of the ease of joining and AES administration (apparently held by non-agreement holders) can be corrected using publicity, and other dissemination methods such as POs, meetings and farm visits.
43. *Support*: Support from POs is vital. They can help the farmer to make an application that is realistic and tailored to the farm. Applications without PO support can lead to a high risk of non-compliance if this early support is not available.
44. *Monitoring and feedback*: Time and resources should be made available for a baseline study and for monitoring the environmental impact of AES. The use of POs or farmers in a monitoring role should be considered. Using farmers to monitor changes on their farms can encourage pride in what they are doing, ongoing learning and provide feedback.

45. *Communication*: Interaction between agreement holders should be facilitated and any existing clusters of agreement holders should be supported. This will encourage mutual learning and support and help to demonstrate outcomes. Education, awareness raising and dissemination of AES aims and achievements can dispel cultural belief amongst some non-agreement holders that AES is not 'proper farming' and lead to wider engagement.

1. Introduction

1.1 Aims of Research

The main aim of this research was to contribute to the evidence base required for a full-scale review of all the agri-environment schemes (AES) in Wales being undertaken by the Department of Rural Affairs (DRA) in Wales (WAG, 2008). The overall aim was to identify appropriate policy approaches to achieving successful agri-environmental outcomes. In particular the intention was to help DRA to develop a greater understanding of what motivates farmers to join AES as this will assist DRA in promoting and targeting membership of new schemes. Understanding what affects farmers' decisions to renew membership or exit schemes will also help DRA assess the likely intentions of farmers currently in Tir Gofal and ESA who are nearing the end of their agreements. Specifically the objectives of this research project were to provide evidence with which to understand:

- farmers' current motivations for entry into agri-environment schemes in Wales;
- farmers' intentions and motivations for exiting or renewing membership of agri-environment schemes; and
- how farmers within agri-environment schemes differ from non-members.

There are also three interrelated aims:

- Reasons for entering agri-environment schemes
- Assessing the impact of agri-environment schemes
- Intentions and reasons for exit and renewal of scheme membership

These objectives and aims relate to Environmentally Sensitive Areas (ESA) and Tir Gofal (TG).

1.2 Context

Understanding the reasons for farmers' actions with regard to entering, renewing or exiting a scheme in the context of ESA and TG is important. Agreements for a number of members of these schemes are due to expire soon or have already expired, and farmers' intended actions need to be assessed to assist future planning. Providing evidence on farmers' experiences of ESA and TG, which influence choices with respect to exit and renewal, and understanding the motivations of farmers who elected not to join ESA or TG are also important to enable effective future planning, particularly with respect to targeting membership of new schemes.

The ESAs offered agreements to farmers within specific areas of the country that have relatively high natural value, from a biodiversity and landscape perspective. In Wales seven ESAs were designated and open for applications until 1999. Under the scheme, farmers could enter 10 year management agreements (whole or part-farm, basic and higher tiers) with an option of termination by either party after five years. A farmer received annual payments on each hectare of land entered into the scheme. Each ESA outlines the various responsibilities for participants and the payment rates differ according to the precise management measures included in each. As the scheme is area specific entry into the

scheme was non-competitive although some aspects were discretionary. The scheme offered capital grants as well as annual payments. In 2007 ESA coverage in Wales was 65,872 ha with 754 agreements¹. Some farmers in ESA took the opportunity to transfer to Tir Gofal before their ESA agreement ended. Understanding the motivations and of farmers who have been, or are in ESA is important, particularly the intentions of those who joined in 1999 and whose agreements are about to expire. These farmers have 10 years experience (and in some cases 20) of the scheme, whether these experiences would encourage them to consider another AES is of interest. Also, whether the schemes have had a positive impact on farmer attitudes towards AES and behaviour in the way they manage the land, is also important to ascertain.

Starting in 1999 Tir Gofal aimed to replace ESA. Tir Gofal is part of a coherent pyramid of AES that provides rising levels of environmental protection. This scheme is available throughout Wales, it is a menu based whole farm scheme that last for ten years with a break clause after five years. Capital grants are available as well as annual payments. Based on a threshold score, it was initially competitive but now operates on a queuing system. Some farmers (who had previously participated in Tir Cymen or the ESA) have experienced a considerable waiting period due to the large backlog of applications from the 2003 Tir Gofal application window. At the time of the study some 900 farmers were waiting for progress on their application to TG from the last application window. Joint scheme membership between Tir Gofal and Organic Farming scheme is possible. In 2007 Tir Gofal coverage was 328,522ha with 2,900 agreements (20 % coverage of agricultural land in Wales).

Tir Gofal far exceeded initial expectations for the amount of land covered by the scheme but fell short on the number of farms. The scheme is highly regarded, due to its integrated approach, and oversubscribed (Agra Ceas Consulting, 2003). The RDP for the period 2006-2013 reports that the Tir Gofal scheme has been a notable success and the progress achieved to date will be built upon to continue to expand participation in the scheme (ref). However, not all farm types have taken up Tir Gofal in equal numbers, dairy farms and smaller, more intensive lowland farms, in particular have been under-represented as they find it difficult to offer the required environmental benefits and have to do more to gain entry. As such the motivations of TG members and equally non-members is of interest for future scheme targeting. Some TG members agreements are about to expire (2010), examining farmer experiences within the scheme and their intentions for the future will provide evidence on which to base future scheme planning.

Of the other AES in Wales the Organic Farming Scheme (OFS) and Tir Cynnal (TC) are relevant to this study. The OFS can run concurrently with TG. TC is the entry level scheme for Wales. Agreements for TC must run for a minimum for 5 years, after which they will have the option of continuing for the full 10 years. TC is a whole farm scheme and farmers must agree to enter all of the land for which they have full management control.

As part of the review of programmes under Axis 2 of the Rural Development Plan the Rural Affairs Minister announced on 5 May 2009 a shift in approach to land management schemes in Wales. From 2012, the five existing agri-environment schemes (Tir Gofal, Tir Cynnal, Tir Mynydd, the Organic Farming Scheme and the Better Woodlands for Wales scheme) will be replaced by one scheme, Glastir, which aims to be more appropriate for responding to the future challenges of climate change, water management and bio-diversity, and well as be more cost effective. As such Tir Gofal and Tir Cynnal schemes have been closed to new

¹ Source: <http://www.statswales.wales.gov.uk/tableviewer/document.aspx?ReportId=5818>

entrants, although those farmers who were in the process of negotiating a management agreement or have received an initial farm visit will continue to have their applications processed. The delivery of the new land management arrangements is subject to agreement with the European Commission. This new approach is part of a new strategy for Wales 'Farming, Food & Countryside – Building a Secure Future' published in May, 2009 (WAG, 2009). The objectives for this research were set, and most of the research activity took place, before this announcement was made. As such the results are pertinent to the research objectives set out in Section 1.1 with respect to ESA and TG participation. However, the outcomes of this research do have relevance to AES more generally and lessons learnt from TG and ESA experiences can be used to develop appropriate policy approaches to achieving successful agri-environmental outcomes in the context of the proposed new scheme.

1.3 Report Structure

Section 2 sets out the framework for analysis and describes the methodology used in the research. Section 3 identifies the main findings from the literature review. Sections 4, 5 and 6 present the main findings from the research with results and analysis of the telephone survey, face-to-face interviews and Project Officer workshops presented. Section 7 synthesises these results before a conclusion is presented in Section 8.

The report is accompanied by a second volume containing the full literature review. This provides a greater depth of information, understanding and appreciation of the material which is summarised in Section 3 of this report.

2 Research methods and approaches

2.1 Framework for analysis

Understanding farmers' motivations requires a framework that enables an elucidation of the reasons why farmers behave the way they do and the driving forces, within (intrinsic) or external (extrinsic) to the farmer, that arouse the enthusiasm or the will for the chosen course of action. An analytical framework derived from a study carried out by CCRI & Macaulay *Understanding and influencing positive behaviour change in farmers and land managers* (Dwyer et al., 2007) was used in this instance. This study found three overarching and interlinked determinants of farmer behaviour: *engagement* with the initiative/scheme, *capacity* to change, and *willingness* to change (Figure 2.1). This model was derived from a year long study (2006/7) which included a comprehensive literature review and extensive series of interviews with 75 farmers/farm families and initiative promoters conducted within five case studies, as such, it is based on recent and substantial empirical evidence. The model also encapsulates the key themes revealed in previous literature surveys of AES participation, (eg. Potter and Gasson, 1988), in that it recognises the critical relationship between willingness and ability (or capacity) to enter a scheme. The model also reflects findings that the extent of farmers' engagement with a scheme's message is a function of the combination of farmers' different learning styles and receptivity with the different approaches taken by those delivering the message. This has also been demonstrated for engagement with AES by a number of studies (eg. Wilson and Hart, 2000).

The CCRI & Macaulay study found that farmers' capacity to change is an important determinant of behaviour. The capacity for farmers to change reflects the farmers' *perceived* ability to change and is a function of a number of factors (see Figure 2.2). Farm characteristics such as farming system or tenure arrangements were shown to constrain scheme uptake, as has also been demonstrated in a number of AES studies (eg Falconer, 2000). Scheme characteristics, for example, have been shown to be perceived as incompatible with farming systems (Lobley and Potter, 1998). Financial barriers such as perceived expenses incurred or loss of profit can also constrain uptake whilst incentives (scheme payments) clearly enable and motivate farmers to adopt. There are many examples of AES studies in UK demonstrating this. Access to markets was shown to constrain or enable initiative uptake in the CCRI & Macaulay study. Human capital, a function of qualifications, competence and desire to learn, was found to be important, whilst labour, social capital in terms of support networks and time availability are all significant in terms of enabling or constraining positive environmental behavioural change on the farm. These factors are also important in terms of farmer decisions with regard to renewing or exiting a scheme since all the factors affecting farmer capacity are dynamic. For example a change in tenure or succession arrangements may constrain a farmer's ability to remain in a scheme, whereas human and social capital can be enhanced by learning and networking, and this can motivate the farmer to renew the agreement. All these factors were used in the analysis as indicators of farmers' capacity to join an AES.

Finally the CCRI & Macaulay study found that, as well as level of engagement and capacity to change, farmers' willingness to change was important. This element of the model captures the personal and social characteristics of farmers which have long been considered as important determinants of behaviour in the context of AES and in particular sustained change and commitment to the aims of the scheme (Morris and Potter, 1995). The study found that the values, goals and objectives of the individual farmer are embedded in the wider farming culture of the farmers' community, which itself exists within a wider society which acts to influence and motivate farmer behaviour (see Figure 2.3). Equally the way that farmers perceive government policies, consumer and public concerns influences farmers' attitudes toward environmental protection. Whilst farmers' individual values represent intrinsic motivational factors, the community and society level influences act as extrinsic motivational or driving forces of change.

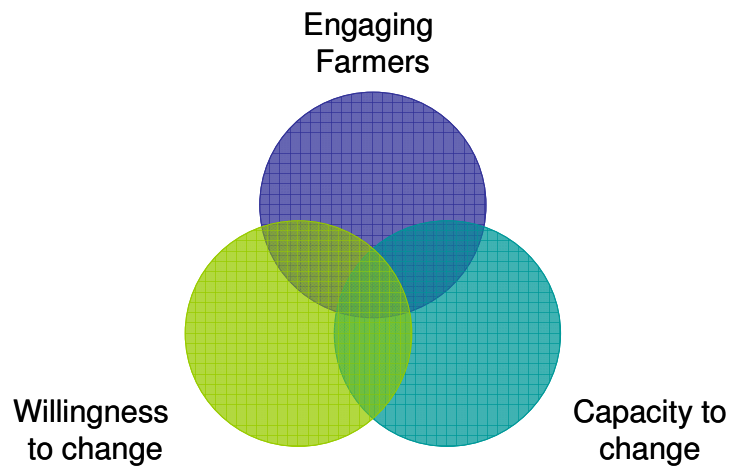


Figure 2.1 Proposed analytical framework

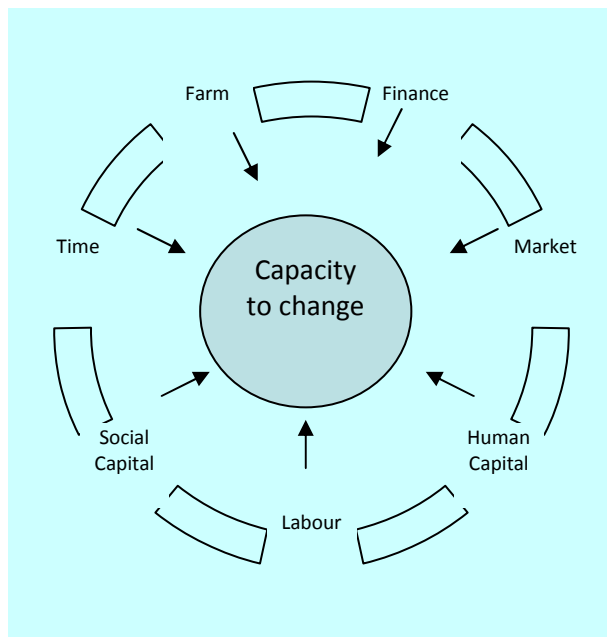


Figure 2.2 Factors affecting farmers' capacity to join AES

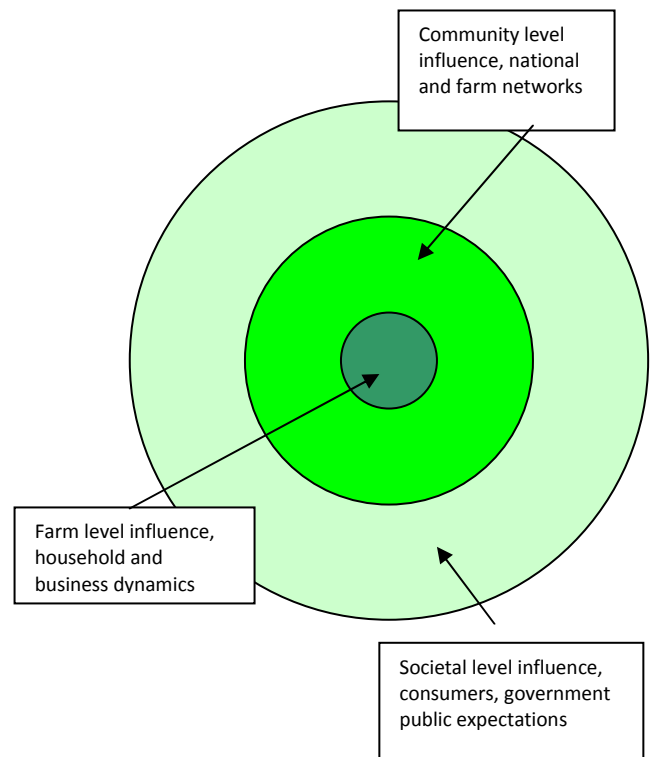


Figure 2.3 Influences on farmers' willingness to join AES

2.2 Methodology

Three main research aims linked to the research objectives were identified:

- To assess the characteristics of farms and farmers that enter into Tir Gofal and ESA agreements in Wales. The intention was to gain an understanding of the extent to which farm level structural and economic (capacity) factors and farmer socio-cultural factors (willingness) affect participation. The aim was also to consider farmers' expectations and experiences of Tir Gofal and ESA membership and assess the impacts of these schemes.
- To understand the extent to which membership has brought positive or negative benefits either to farm management, the farm environment, or to the wider environment and community. The aim was also to consider the intention of farmers to continue with or leave the scheme, their level of commitment and the relationship between farmers' experiences of the schemes. Linkages between reasons for joining and reasons for renewing or exiting were established.
- To analyse the difference (farm and social characteristics and motivations) between scheme members and non-members.

Four research phases were used to meet these aims: a literature review, a farmer telephone survey, farmer face-to-face interviews and Project Officer workshops. Using a combination of quantitative (surveys) and qualitative (interviews) methods enabled a full assessment of farmer motivations for entering and exiting, farmers' experiences with the schemes and scheme impacts and the differences between members and non-members. It allows patterns and relationships to be identified, and measurable farm and farmer characteristics to be related to scheme (non) membership as well an understanding and explanation of why these relationships exist to be developed.

Each phase was structured according to framework exploring the three key themes of capacity, willingness and engagement. Key outputs from each phase were used to inform the next phase.

Referring to the analytical framework, the survey will aim to provide data on farmer attributes and farm level structural characteristics and as such reveal farmers' capacity to join, or renew, a scheme. Questions were structured around the seven indicator factors which affect capacity to change (Figure 2). The questionnaire also enabled changes on the farm resulting from scheme membership to be identified. Whilst the questionnaire probed socio-cultural aspects that influence farmers' decision about scheme participation, it is the face-to-face interviews which provided a deeper understanding of farmers' willingness to participate in schemes by examining individual farmer perceptions and interpretations of scheme opportunities and benefits as well as the influences from the wider community and from society. Thus the interview questions were structured around the frame set out in Figure 3. The proposed workshops with Project Officers provided an opportunity to explore further, and to some extent validate, the findings from the interviews and questionnaires. Project Officers are known to play a significant role on the farm in terms of scheme uptake and as such represent a valuable information source for this research.

2.2.1 Literature Review

The central aim of the literature review was to analyse previous studies relating to farmers' motivations for entry into, exit from, and renewal of AES; and to evaluate farmer experiences of the schemes as well the impacts these schemes have on the wider community. The review considered a large body of academic research work on AES participation as well as a number of key research projects, evaluations and reviews which have examined aspects of farmer behaviour, decision making and motivation with regard to AES participation. The review drew on research from other western countries and looked at farmer motivations in the context of participating in initiatives such as those aiming to protect environmental resources of biodiversity, soil and water. The review employed a high degree of critique, analysis and synthesis and covered over 300 publications

The key points from the literature review provided a basis for further investigation in the phases that followed. Insights from the literature review enabled both the analytical framework to be confirmed and the content and structure of the questionnaire and the interview questions to be determined.

The full literature review is presented as a separate report. An Endnote library of references was also prepared.

2.2.2 Farmer Telephone Survey

A telephone survey was conducted with members (from now on referred to as agreement holders) within the Tir Gofal and ESA schemes and non-members (from now on referred to as non-agreement holders).

2.2.2.1 *The questionnaire*

The structure and format of the telephone questionnaire was derived from the emerging themes from the literature review as well as being framed around the seven factors indicative of the capacity to change identified in analytical framework. The structure and content of the questionnaire for the members and non-members was the same for the majority of questions to allow comparative analysis.

This questionnaire deployed different types of questions, the majority closed pre-coded questions, although some of these were followed by the opportunity to provide examples. A limited number of open questions were included to allow some spontaneity and freedom of expression in the answers, these allowed insights into areas that were developed in the interview stage. Multiple response questions requiring categorical answers were used to measure frequency, ranking of importance and attitudinal measures. Attitudinal measures used a Likert-style scale in which statements are provided and respondents were asked to indicate the extent to which they agree or disagree.

A pilot questionnaire survey was carried out to ascertain how the questionnaire would function in practice and modified accordingly. Data was entered from telephone interviews as the interview took place using software linked to an Access database. Analysis of the data was carried out using SPSS. Use of a Welsh speaking interviewer enhanced farmer engagement with the survey, and therefore improved the response rate, and improved representation.

The telephone survey questionnaires are in Appendix 1.

2.2.2.2 Sample selection methods

The original intention was to undertake a survey sample of 10% of all Agreement holders with agreement in ESA and Tir Gofal. According to the data provided to us, this would result in about 400 telephone interviews, roughly 300 for Tir Gofal and 100 for ESAs. Since roughly half of all holdings within Wales are entered into the available schemes a representative sample of non-members would be about 100 to 150 interviews depending on the sampling framework.

In total the telephone survey interviewed 468 farmers with a wider range of connections to agri-environment schemes (AES) from holding a number of current AES agreements to having never held an agreement at all. A total of 353 interviews were undertaken with agreement holders, selecting 100 from the ESA sample and 253 from the Tir Gofal sample. The reduction in Tir Gofal was largely because of the focus on particular aspects that resulted in fewer cases being available. Non-agreement holders were divided across three sub-samples and a total of 115 interviews were undertaken. The table below outlines the 6 different samples and indicates their origin.

Table 2.1: Detail of the 6 Telephone Survey Samples

| Type of respondent | Sample description |
|------------------------------------|---|
| AES agreement holder | 1. Coming to the end of ESA agreement with no other AES |
| | 2. Have Tir Gofal agreement and have been in AES before |
| | 3. Have Tir Gofal agreement and have not been in AES before |
| Previous AES agreement holder | 4. ESA agreement has ended currently not in any AES agreement |
| Unsuccessful AES Applicant | 5. Applied to Tir Gofal but not entered the scheme |
| Long term AES non-agreement holder | 6. Have not registered any interest in AES scheme |

The Welsh Assembly provided the names and contact details for all of the samples and checked against the database held in relation to farm payments, such as the Single Farm Payment and agri-environment scheme agreements. For those coming to the end of their ESA agreements, the means of selecting first sample was by selecting those whose agreement, according to the database supplied by the Welsh Assembly Government, ran out between March 2009 and Oct 2011. Once those who had signed up to other AES agreements, such as Tir Gofal and the Organic Farming Scheme were excluded this yielded 313 possible respondents of which between 80- 100 were to be interviewed. Respondents were selected by initially choosing every third name on the sheet as the number required was roughly a third of the total sample. Once the interviewer had tried to contact all of these potential respondents he/she moved on to the neighbouring set of names and so on until the target number was reached.

The two Tir Gofal samples were both taken from the same group of data that includes all those with current Tir Gofal agreements covering the period from Feb 2010 to Dec 2016. This was then subdivided into three discrete groups covering those:

- with the oldest agreements and therefore the earliest end dates; those with end dates in 2010;
- in the middle of their agreements and therefore approaching the 5 year break and re-signing period; those with end dates of March 2014 to Dec 2014;
- with new agreements and thus the oldest end dates of 2016.

Using this matrix sample 2 offered a total of 251 possible respondents of which between 80 and 100 were to be interviewed. Sample 3 offers a large number of possible respondents, 983, of which between 150 and 200 were to be interviewed.

The previous agreement holders sample includes those who have had an ESA or Tir Gofal agreement but the agreement had ended and they have not joined another scheme. This produced a sample of 523, of which over 500 referred to ESA agreements, of which 50 were to be interviewed.

The sample of unsuccessful applicants relates only to those who had expressed an interest in Tir Gofal and had received a Project Officer interview but for some reason had not entered into an agreement. This produced a sample of 83 respondents, of which the aim was to interview 25-30 farmers.

The final sample concerns those who have never expressed a formal interest or applied for any of the AES available over the past 15 years or so. This produced a sample of 309 possible respondents of which around 40-50 were to be interviewed. The farmers on this list had registered with Farming Connect and as part of that process of registration had been asked what schemes they belonged too. This was then checked against the payment database held by WAG and if this confirmed their non-participation in AES schemes was confirmed.

Table 2.2: Difference between Sample and Actual respondent situation

| Sample description | Sample | % | Actual | % |
|--|---------------|------------|---------------|------------|
| 1. End of ESA agreement with no other AES | 100 | 22 | 92 | 20 |
| 2. Tir Gofal agreement and have been in AES before | 62 | 13 | 88 | 19 |
| 3. Tir Gofal agreement, not been in AES before | 191 | 41 | 173 | 37 |
| 4. ESA agreement ended not in any AES agreement | 48 | 10 | 50 | 10 |
| 5. Unsuccessful, applied but not entered Tir Gofal | 28 | 6 | 27 | 6 |
| 6. Not registered any interest in AES scheme | 38 | 8 | 38 | 8 |
| Total | 467 | 100 | 468 | 100 |

As with all databases, it is possible that there are inaccuracies contained within them and the first question of the telephone was used to clarify the precise nature of the respondent's relationship with AES. Table 2.2 shows the difference between the sample and actual situation

The table shows that for the most part the sample was accurate. However, there were two main reasons for adjustments in the sample between the assumed and actual situations. The 100 assumed interviewees who were coming to the end of the ESA agreement without a replacement was in reality 92. It would be no surprise that the eight respondents moved to the second category having entered Tir Gofal. The other change is that the larger sample of 191 who were in Tir Gofal but no history of AES involvement, in reality 18 of these actually had other AES agreements. Therefore the main beneficiary of the 'actual' situation is the group who are in Tir Gofal and have been in an AES agreement before.

The actual response will be used in the analysis presented in section 4 and this shows that the target numbers were reached in all of the 6 sub-samples and exceeded in the case of Tir Gofal agreement holders with 261 respondents.

Calculating the response rate proved to be difficult but it was clear that very few respondents from the agreement holder samples declined to be interviewed. A significant number could not be contacted, either because the telephone number was missing or incorrect or because the interviewer could not contact them to request an interview. Respondents for the non-agreement holder samples tended to be 'busier' and less willing to give up their time but those that engaged with the survey were happy to complete the interview.

2.2.3 Farmer Face-to-Face Interviews

Semi-structured face-to-face interviews were carried out with 28 farmers who were participants of either Tir Gofal or ESA agreements, and 12 farmers who were not in any agreement. Interview questions were derived from key themes identified in the literature review and the telephone survey. The questions, whilst referring in some instances to the indicators of the capacity to change, concentrated in the most part on examining farmers' willingness to join a scheme and their experience of schemes. The intention was to develop a 'narrative approach' in which the interviewee was led through questions which explored the on-farm decisions taken throughout the lifetime of the farmer and (where relevant) the duration of the scheme agreement. The influences of other farmers, the wider community and society were also explored.

The sampling framework for interviews included all farmers in the telephone survey who had agreed to be interviewed face-to-face. Farmers were then selected from all the sample groups used for the telephone survey distinguishing early, mid and late TG entrants (see Table 2.4). Within the sample groups farmers were further selected to represent a range of geographical locations and farm types. Whilst this was not true representative sampling due to the small numbers involved it does provide an illustrative picture of some farmers in different situations. Welsh speaking interviews were carried out where requested by the farmer.

The interviews took between 25-90 minutes depending on the farmer's interest and available time. They were all recorded and detailed notes were then written up by the interviewer together with their reflections. Analysis was carried out by identifying common themes in the interview notes. The interview schedules for members and non-members are in Appendix 2.

Table 2.4 Framework for farmer face-to-face interview selection

| Sample | No of interviews | |
|---|------------------|----------|
| | IN ENGLISH | IN WELSH |
| Agreement holders | | |
| Sample 1 - are coming to the end of ESA agreement and have no other AES | 4 | |
| Sample 2 and 3 in Tir Gofal (B been in a previous scheme, C not been in previous scheme) | | |
| • Old | 8 | 4 |
| • Middle | 9 | |
| • new | 4 | |
| Total | 25 | 4 |
| | | |
| Non-agreement holders | | |
| Sample 4- have been in ESA/Tir Gofal but this agreement ended and not in any agreement at present | 3 | 1 |
| Sample 5- have expressed interest/applied to Tir Gofal (other AES) but have not entered into an agreement | 3 | |
| Sample 6- have not expressed any registered interest in AES | 3 | 2 |
| Total | 9 | 3 |

2.2.4 Project Officer workshops

Two workshops were held, one in South Wales (Carmarthen) and one in North Wales (Plas Tan y Bwlch, SNP). All TG Project Officers in Wales were invited to attend. The format of the workshops was consultative, and facilitated by three members of the CCRI project team. The aim of the workshops was to present the research findings to date and ask for PO validation. It was also to seek the views of the POs about farmers' motivations for entering/exiting schemes, experience of schemes and look for evidence of wider impacts. Not only are POs well placed to understand local farmers they also provide a more objective/dispassionate view compared to farmers and as such provide new data and enrich/provide new interpretations on data from farmer sources. The workshop reports are available in Appendix 3.

3 Main findings from the literature review

3.1 Introduction

The full literature review is available as a separate report. This section summarises the key findings. Previous studies have tended to differentiate sets of factors which motivate and influence farmers decisions. However in reality there is a complex interplay of personal (age of farmer, attitude to conservation, level of education), farm household (eg succession plan) and farm business (in particular economic status influencing the ability to engage in new conservation) factors affecting participation. Wider influences include policy environment, institutional and advisory structures, farming culture and community and society. The hypothesised sets of key motivations and determinants identified as influencing farmers' decisions about (non) participation in AES fall into three categories. These are external or

situational factors such as farm(er) type and scheme design; internal factors such as attitudes towards schemes (Black and Reeve, 1992); and communication or extension strategies (Smithers and Furman, 2003).

With respect to external factors, situational characteristics of the farm and farming system (structural factors) can influence participation. Physical farm and business factors such as tenure, size, crop portfolio, etc. have been identified as important. In addition farmer and household characteristics (age, education, income) have been found to be significant (Brotherton 1989; Wilson 1996a, 1997; Kazenwadel et al., 1998; Bonnieux et al., 1998; Delvaux et al., 1999; Drake et al., 1999; Wynn et al., 2001; Smithers and Furman, 2003; Davies and Hodge, 2007). In addition scheme factors are key determinants of participation. Type of measure, compensation paid, application costs, the level of payments incentive and the scheme duration are important (Smithers and Furman, 2003), as is ability of the scheme to fit into existing patterns of farm management (Brotherton 1989; Brouwer and Lowe, 1998; Vanslebrouck et al., 2002 Wilson 1996a; Davies and Hodge, 2007).

With respect to internal factors, the inclination (attitude) of the farmer, which is related to farmer knowledge and awareness of the scheme and perceptions of financial and other risks and benefits, is important in determining willingness to join (Davies and Hodge, 2007; Horwitz, 2006). Social and cultural influences and the effect of policy and peer pressure are equally important (Wynn et al., 2001; Jacobson et al., 2003; Siebert et al., 2006). Policy environment,

Finally communication, which is a function of institutional and advisory structures and quality of information, can influence scheme uptake (Clark, 1989; Wynn et al., 2001; Jacobson et al., 2003).

These key sets of determinants and influences are encapsulated in the framework for analysis (see Section 2) which identifies three overarching and interlinked determinants of farmer behaviour: engagement with the initiative/scheme, capacity to change and willingness to change. In addition experience of an AES represents a further dimension as it can determine whether a farmer will renew or exit a scheme.

3.2 Capacity

Capacity or ability refers to conditioning factors influencing the individual farmer that include the farm holding and business (e.g., the type and organisation of the farm), as well as the specific characteristics of the farmer such as age, education etc., and scheme factors. Such factors, whilst they may not directly motivate farmers' behaviour, will influence their ability to join a scheme either by presenting barriers or opportunities, and as such they condition the motivation. Capacity is not static, many of these factors change, such as business, market conditions, family circumstances and scheme factors, such changes may lead to renewed considerations about AESs. All these factors are equally relevant to entry, exit and renewal of schemes.

Any farmer motivated to consider an AES has different objectives for profitability which are dependent on resources at his disposal (farm factors eg land, labor, machinery, finance, credit, time) as well as on different characteristics such as age and level of experience, knowledge and skills (and different attitudes toward profit, risk and the environment).

Farm, farmer and scheme factors can affect the capacity to participate in an AES either by presenting barriers or opportunities to entry. These factors can equally influence exit and renewal decisions. Farm factors affecting participation decisions include: farm size, farm tenure, farm business, farm type. Whilst it is generally understood that larger, freehold and more economically buoyant farms are more likely to enter AES there are exceptions to the rule. Farmer factors that are generally considered to be of importance to farmer decision making include: education, succession status, age, human capital, length of residency and the farm household. Many of these factors such as age and succession, and education, experience and length of residency interact and cannot be viewed in isolation. Equally capacity is not a static feature on a farm. Farm business, family and household characteristics change and affect the ability to participate in AES accordingly.

Scheme factors include payments offered, the scheme duration (and the time lag involved in scheme renewal), logistics (information flow; follow up and monitoring), eligibility. Compatibility or goodness of fit with existing management plans has been shown to be a critical factor in farmers' decisions to enter schemes. Again this cannot be divorced from factors such as farm type, size and business and eligibility. In general farmers will not enter AES which demand large scale changes in farm management. Options that demand significant changes to farm systems will prove difficult to implement, this is often the case on arable or intensive grassland farms. Eligibility criteria and scheme conditions may restrict entry in some cases but this is highly dependent on the context.

Rather than focusing on farm, farmer or scheme factors, it is the interaction between the farmer / farm system and the scheme options and payment rates which determines whether a farmer participates and which options are selected. Also, although seen as structural factors that constrain behaviour, farm and farmer factors are often intimately related to intrinsic values that affect motivation (discussed later) for example a farm's natural habitat endowment will affect farmers' values about conservation. Positive attitudes and sufficient compensation can also mediate any negative capacity factors. It is clear from the review that AES participation factors have to be contextualised as part of a wider spectrum of constraints and opportunities confronting farm households.

3.3 Willingness

The literature recognises that, when farmers come to make decisions, their motivations, values, goals and objectives, and attitudes with regard to profit, risk and the environment are important. The willingness element of the framework captures these motivational (attitudes, goals, values) and the socio-cultural characteristics of farmers and farming families which are considered as important determinants of behaviour in the context of AES, both for entry into, and commitment to the aims of, the scheme. There is a long and rich tradition of research in UK examining the significance of attitudinal variables in the context of AES (e.g. Morris and Potter, 1995). There has also been recognition of the importance of motivation, and especially the source of motivation, in attempting to explain farmers' inclination to adopt conservation practices and participate in environmental schemes (Black and Reeve, 1992; Potter and Gasson, 1988; Wilson and Hart, 2000, 2001).

Willingness can be understood as the combination of subjectively perceived factors that influence the farmer, such as interests, values, motivations, attitudes, norms, problem awareness, identity and self-perception. Motivational characteristics (attitudes, goals, values) of farmers and farming families have long been considered as important

determinants of behaviour in the context of AES. Understandings of motivations differ, although different orientations (intrinsic and extrinsic) have been distinguished. Farmers demonstrate extrinsic motivations in response to rewards (financial and social recognition) and intrinsic motivations when seeking personal satisfaction. Although many studies emphasise farmers' economic (extrinsic) motivations for participating in AES, their intrinsic motivations are also apparent supporting views that intrinsic aspects of farming are valued. Individual farmers can demonstrate a balance between extrinsic and intrinsic motivations, with the balance shifting over time and for different parts of the farm.

There has been an emphasis in many studies on attitude as a motivational determinant of behaviour. Attitude is rarely defined but usually taken to be a belief or a concern. AES studies have relied on measuring attitude in surveys and many have demonstrated a link between conservation interest/attitude and behaviour. However understandings of attitude vary (and methods for measuring it) and the efficacy of predicting behaviour from measuring attitude alone has been questioned. Also because attitudes are conditioned by farm constraints (capacity), the value of using them to predict behaviour can be limited.

The construction of farmer typologies has been popular in past research, where farmer types are characterised according to different attitudes and motivations for participating or not participating in schemes. Such typologies have been used to reveal groups of potential enrollers which can be targeted by policy makers. More recently there has been recognition that there is a need to examine identity and how individuals interpret different notions of farming and conservation, rather than measure what attitudes actually are, or typologise farmers into categories. Some farmers identify themselves as progressive farmers and embrace new practices as a way of demonstrating this. Others draw self-identify from continuity with past practices. In both cases, advice is interpreted in light of the 'fit' with their chosen identities and value orientations.

Values, goals and objectives of the individual farmer are embedded in the wider farming culture of the farmers' community, which itself exists within a wider society which acts to influence and motivate farmer behaviour. The notion of a farmer as an individual decision maker has been criticised and many commentators argue that there is a need to understand the context and social conditions in which farmers are situated and act. This social dimension of farmers' conservation behaviour has been more widely recognised recently and it has become clear that farmers are motivated by peer and public recognition. Whilst farmers' individual values represent intrinsic motivational factors, the community, society and policy level influences act as extrinsic motivational or driving forces of change.

3.4 Engagement

A process of change is involved when farmers sign up (or are considering signing up) to an AES. This involves interaction between the farmers and the government agency, extension officers, other farmers and their organisations etc. As such the elements of communication (access to information, quality of interaction, dissemination techniques, level of farmers' 'dynamics' and networking), farmers' appreciation of the scheme objectives and their perception of policy design are significant in terms of farmers' motivations, their responses and ultimate behaviour with regard to AES.

Access to, and quality of, information are important factors in influencing participation, equally a lack of information and poor quality information can be a barrier to entry. The

manner in which the measures and objectives of a programme are portrayed can motivate or demotivate farmers. In this respect the dissemination techniques used are important. The role of the project officer in motivating farmers to enter AES is well recognised. The local farm community, neighbouring farmers and social networks play a significant role in motivating farmers with respect to AES. Farmers are motivated by the behaviour of other farmers in their community and other professionals and organisations although sometimes the influence with regard to AES participation can be negative.

Farmers accept programmes and measures consistent with their existing values, past experiences and needs. More demanding conservation-oriented AES may work better if linked explicitly to what farmers themselves know well and feel positive about. Farmers want advice that reflects the farm context as it puts the farmer, rather than an advisor, in the position of control. The process of policy design and implementation can influence the nature of farmers' engagement. Consultation and giving responsibility and recognition to farmers' own experiences and knowledge can motivate them, conversely imposed and inflexible prescriptions that do not accord with farmers' knowledge are rejected. Farmers' perceived legitimacy and agreement with overall political aims of the scheme is critical for engagement.

Engagement (and change) is influenced in part by the strength of an farmers' desire for independence and autonomy. Farmers tend to have negative views regarding any administrative burdens. Many demonstrate strongly independent farming cultures and display resistance to any idea of external surveillance or intervention.

3.5 Experience of AES

Benefits associated with AES participation include gaining knowledge and experience and respect in the community; and improved business income for the individual. Wider socio-economic benefits for the community have also been recognised. Experience of a scheme is coloured by the level and quality of support offered by POs and by the amount of interaction with, and feedback from, the policy community. Farmers resent the imposition of schemes and their prescriptions when they have not been consulted and their local knowledge and experience is ignored. The imposition of controls and rules with no flexibility creates negatives attitudes towards the schemes.

Studies of farmers' commitment towards long term behavioural change have shown that the original motivation for entering is important. Long term behavioural change can occur where farmers have joined due to intrinsic motivations but those who joined due to extrinsic motivations are less likely to commit to or demonstrate any long term positive change.

Some commentators consider that farmers demonstrate little change in overall attitude towards AES because the farming culture still values agricultural production over conservation. However, researchers are now detecting some change in ethos with regard to conservation as farmers are increasingly acknowledging the environmental, business and social benefits that scheme participation brings.

3.6 Conclusion

Whilst most studies have tended to differentiate sets of factors which motivate and influence farmers decisions for joining AES aspects, it is clear that explaining participation in

AES cannot be reduced to a single factor or determinant. However, participation does appear to be strongly determined by the interaction of the scheme structure with the farm production context. There is a complex interplay of personal (age of farmer, attitude to conservation, level of education), farm household (eg succession plan) and farm business (in particular economic status influencing the ability to engage in new conservation) factors affecting participation. This is conditioned by availability of information and the social context of the farm and farmer. Thus farmers' decisions are determined by the policy environment, institutional and advisory structures, family influences, farming culture, community and society and ultimately intentioned by the farmer acting as a problem solving individual.

The farming community is heterogeneous. Farmers and their holdings differ, as does the context in which they operate. As such, they cannot be assumed to be automatically willing or able to participate in AES. Their willingness and ability to enter is not reducible to their farm or personal characteristics, nor to their attitudes or values towards the environment or towards policy makers; and neither is their participation a simple function of economic factors. There is an complex interaction of a number of influences: agronomic, business, cultural, social, community and motivational factors. The key findings from the literature review were used to inform the telephone survey and face-to-face interview questions.

4 Telephone survey results and analysis

4.1 Respondent's scheme history and experience

The oldest AES in the whole sample was taken out in 1988 with the highest number in any one year being 107 AES agreements in 2000. Most respondents entered their first scheme during the late 1990s and early 2000s, as a result the decade running from 1995 to 2004 accounts for 318 of the 401 respondents who provided a date of their first AES agreement. Of the 65 respondents who have never been in an AES agreement 33 (51%) had expressed an interest, although most of these were in the unsuccessful category, some of the 'never formally expressed an interest' sample have clearly thought about applying. This was most likely to have occurred in 2007 (30%) or 2008 (42%) suggesting that recent changes in the farming sector and/or AES availability have triggered an interest in such schemes.

Over 80% of those with an AES agreement held one agreement, while 48 (12%) had 2 AES agreements. Only three respondents held more than 2 agreements with the maximum number being 4 agreements. A total of 75 respondents (16%) had applied to an AES scheme and been unsuccessful or withdrawn their application. The bulk of this group is the 27 who make up the unsuccessful sample however, 39 respondents (11%) of all current agreement holders sampled, had applied in the past and not been successful. The majority, over 85% in all agreement holder samples, have been successful each time they have applied.

4.2 Farm Capacity

This set of questions inquired about the respondent's farm and the main decision maker. Almost all of the respondents described their farm holding as being a private business (99%) with only one local authority holding and three owned by a voluntary body. Only 7 respondents considered their holding non-agricultural and a further 3 as 'not a commercial operation', leaving 98% as agricultural.

Farm size can be an important factor in determining participation in AES. The table below shows the % frequency of the respondents in the Farm Census size categories.

Table 4.1 Farm size by sample (ha) % frequency

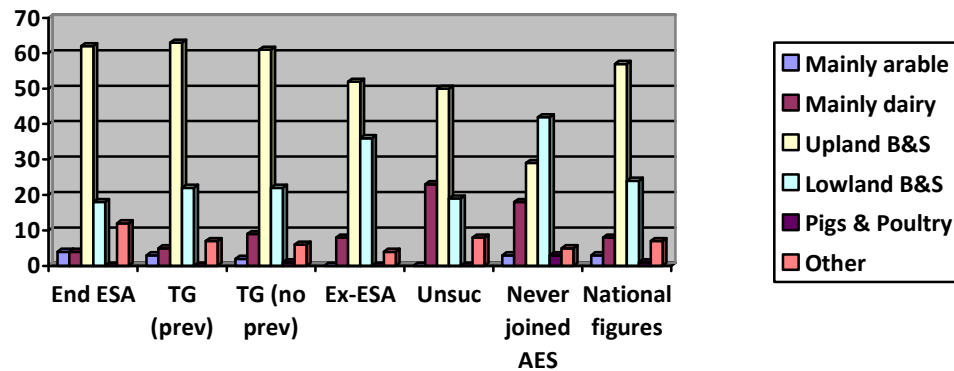
| Sample | n | 0-19.9 | 20-29.9 | 30-49.9 | 50-99.9 | 100-199.9 | >200 |
|------------------|--------------------|-----------|----------|-----------|-----------|-----------|-----------|
| End of ESA | 91 | 15 | 10 | 15 | 26 | 22 | 12 |
| TG (previous) | 88 | 16 | 8 | 11 | 28 | 15 | 22 |
| TG (no previous) | 172 | 13 | 6 | 12 | 23 | 24 | 21 |
| Former ESA | 50 | 22 | 6 | 16 | 26 | 20 | 10 |
| Unsuccessful | 26 | 4 | 12 | 8 | 35 | 15 | 27 |
| Never joined AES | 38 | 13 | 3 | 18 | 37 | 16 | 13 |
| Average | 465 (total) | 15 | 7 | 13 | 27 | 20 | 18 |
| Welsh average* | 24,304 | 34 | 11 | 16 | 21 | 12 | 5 |

* Source: Welsh Agricultural Statistics 2007, excluding minor holdings of less than 5 hectares

The table shows a fairly consistent pattern across the samples, a larger % (55%) of those who have never joined were in the category 30 and 99.9 hectares in size. However, the differences are small,

when compared to the national average. Even when holdings of less than 5 hectares are taken out of the national figures, a third are less than 20 hectares. Interestingly there is also a higher % of unsuccessful agreement holders in the >200 hectare category suggesting that there is no clear relationship between farm size and entry into AES. The proportion of those participating in this survey who are 200 hectares or more is significantly higher than the national average.

Figure 4.1 Farm type by sample (ha)% frequency

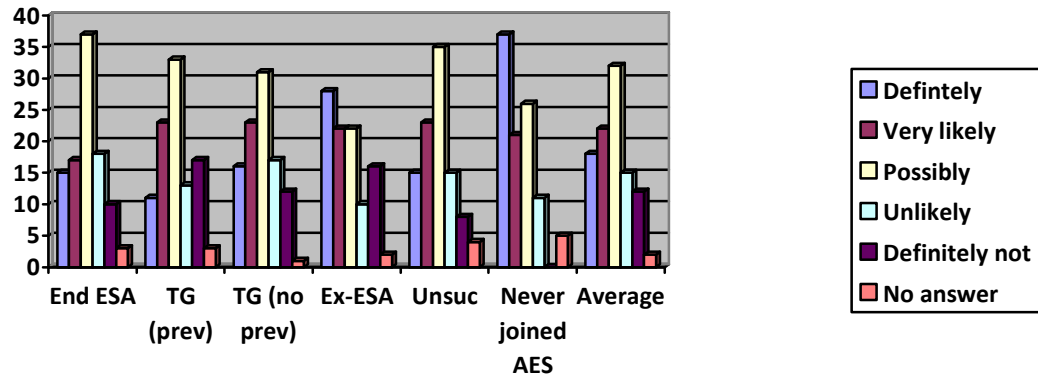


* Source: Welsh Agricultural Statistics 2007, includes minor holdings of less than 5 hectares but excludes the 'other' category. The Other category here includes the 'mixed' and 'horticulture' categories from the Welsh statistics.

Farm type has been identified as a factor in explaining AES participation. Figure 4.1 shows the % frequency of the respondents in the farm type categories. The figures are very consistent throughout the samples and only the non-agreement holders stand out. First, nearly a quarter of the unsuccessful group are dairy farmers compared to 8% overall. Also nearly a fifth (18%) of those who had never joined AES are mainly dairy holdings. Second, 42% of the never joined group are lowland beef and sheep farms compared to 24% overall. There is no clear difference between figures for the overall sample and national figures. The national figures include minor holdings but the 'other' category has been excluded, because it represented 49% of the total sample. Those with organic status or in conversion are most likely to be agreement holders with about a fifth saying they are organic or are in the process of going organic.

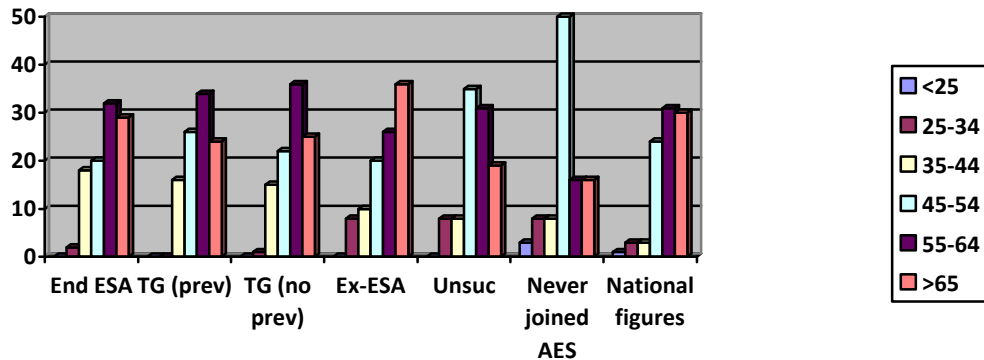
Succession in farming is often an important factor in deciding the management style and trajectory of a holding and thus the whole sample were asked if a member of the family is to take on the management of the farm after the respondent retires. The figures are shown in Figure 4.2 below.

Figure 4.2 Succession by sample (%)



Non-agreement holders who have never been in or applied for an AES were the only group that stood out when respondents were asked about succession. The average response (consistent in all the other groups) was for around 18% to say that there was a definitely a family member to take on the farm. Among the non-agreement group 37% definitely had a family member to take over the farm with only 11% saying it was unlikely or definitely not (compared to around 30% in all other groups). Otherwise the responses are similar across the sample.

Figure 4.3 Age of respondent by sample (%frequency)



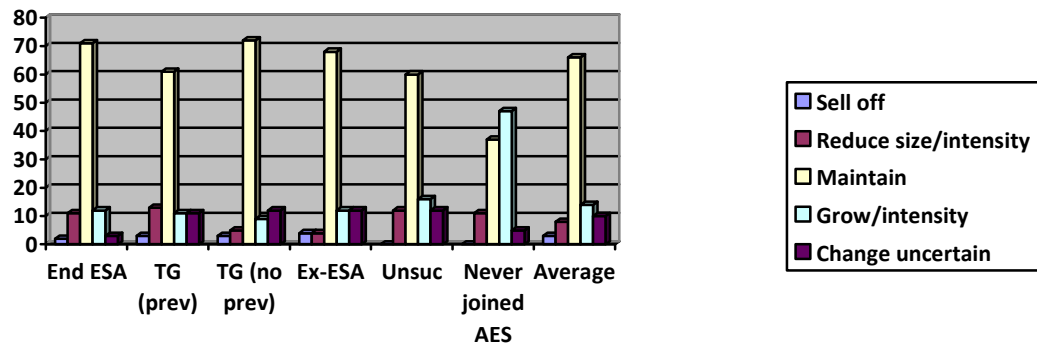
* Source: Welsh Agricultural Statistics 2007, figures are for 2005 and include principal farm holder on minor holdings

Farmer age is another factor which can determine AES participation. The % of respondents in age categories is shown in Figure 4.3. The agreement holder sample is shown to be older than the non-agreement holders with well over half of the sample aged 55 or older compared to only 32% of those who had never joined. It is also interesting to note that 50% of those who had never joined an AES were in the 45-54 age category. This compares to 24% in this age category in the national context. In terms of other life cycle factors that might affect entry into AES, most of the sample (75%) had been at that holding for more than 20 years. This was true of agreement holders and non-agreement holders.

Respondents were also asked about membership of environmental organisations and qualifications as these are factor that have also been shown to be important to AES entry. However no difference was found across the sample with respect to membership of an environmental group or educational qualifications since leaving school.

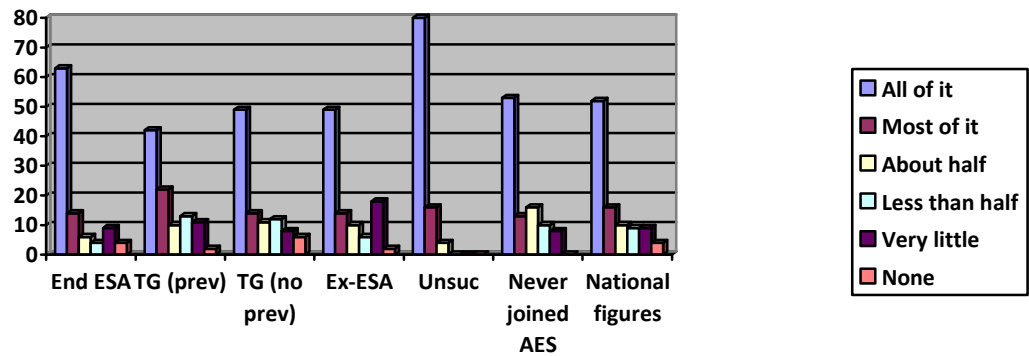
The part of this analysis concerns the farm business, looking specifically at the future plans, the impact of loans on the business and the reliance on farm income, since these can determine capacity to join an AES. Figure 4.4 shows the response to the question ‘which of these statements best reflects your plans for the next 5 years?’.

Figure 4.4 Future plans by sample (% selecting)



Approximately two thirds of all respondents in all the samples (agreement holders and non-agreement holders) planned to maintain the farm, except for those who had never joined where only a third planned to maintain the farm. The pattern was the same for plans to grow and intensify the business, with 9-12 % respondents in all samples planning to grow/intensify again except for those who had never joined where 47% respondent planned to grow/intensify.

Figure 4.5 Proportion of business income derived from agricultural enterprises on the farm (% selecting)



Farmers were also asked about the proportion of business income that they received from the enterprises on the farm (Figure 4.5). The unsuccessful applicants sample had the highest proportion of business income from agricultural activities, with all but four per cent obtaining most of their income from the farm, suggesting that this group is highly dependant on income from agriculture. However other non-agreement holder samples were similar to agreement holders in terms of reliance on farm income. Most of the sample, about two-thirds overall, obtained over half of their income from the farm.

Table 4.2 Financial position by sample (% selecting)

| Sample | N | No loans/very minor | Loan but minor factor | Large loan/major factor |
|------------------|--------------------|---------------------|-----------------------|-------------------------|
| End of ESA | 89 | 61 | 20 | 20 |
| TG (previous) | 86 | 59 | 30 | 11 |
| TG (no previous) | 167 | 66 | 22 | 13 |
| Former ESA | 50 | 72 | 22 | 6 |
| Unsuccessful | 25 | 52 | 32 | 16 |
| Never joined AES | 37 | 54 | 30 | 16 |
| Average | 454 (total) | 63 | 24 | 13 |

The questionnaire also tried to determine whether the level of debt (such as loans farmers had taken out on the farm business) influences the capacity to enter AES. Table 4.7 shows that on average 13% of all respondents have large loans that are a major factor in the way they farm, compared to 87% who have no loans or only very minor ones that have no impact on the way they farm. There are slightly fewer respondents with no loans in the unsuccessful and never joined samples however in terms of loans that impact on the way the farm is managed, the % respondents are similar in all samples suggesting that there is no apparent difference between agreement holders and non-agreement holders in this respect.

This analysis concerning the indicators of farm capacity to join AES has shown that, although there is no overall pattern of differences in farmer and farm characteristic between agreement holders and non-agreement holders, there is evidence that those in the non-agreement holders samples are more likely to: in the category 30 and 99.9 hectares in size; be dairy farms; have plans to grow/intensify the business; have the highest proportion of business income from agricultural activities; and to have identified a successor.

4.3 Willingness

In this section of the questionnaire all of the respondents were asked about their attitudes to the environment. Those not in an AES were asked more general but similarly worded questions. In the first of these questions all of the respondents were asked to agree or disagree with four statements concerning the nature of the relationship between conservation and agriculture. The response to the first statement is shown in Table 4.3.

Table 4.3 Conservation should be an integral part of agricultural activity (%)

| Sample | Sample size | Strongly agree | Agree | Disagree | Strongly disagree | No opinion | % |
|------------------|--------------------|----------------|-----------|----------|-------------------|------------|------------|
| End of ESA | 92 | 41 | 55 | 2 | 0 | 1 | 100 |
| TG (previous) | 88 | 38 | 60 | 2 | 0 | 0 | 100 |
| TG (no previous) | 173 | 23 | 74 | 2 | 0 | 1 | 100 |
| Former ESA | 50 | 12 | 88 | 0 | 0 | 0 | 100 |
| Unsuccessful | 26 | 12 | 88 | 0 | 0 | 0 | 100 |
| Never joined AES | 37 | 11 | 76 | 5 | 0 | 10 | 100 |
| Average | 466 (total) | 27 | 70 | 2 | 0 | 1 | 100 |

The table shows that while almost all of the respondents agree that conservation should be an integral part of agriculture there is a pattern in the level of support for the statement Those currently in AES agreements are more likely to strongly agree with the statement, most especially those who were coming to the end of their ESA agreements. This might be explained by the fact that ESAs are designated areas, mostly uplands, where options for intensive agriculture are limited resulting in less tension between conservation and agriculture.

Table 4.4 Conservation activity is detrimental to efficient agricultural activity (%)

| Sample | Sample size | Strongly agree | Agree | Disagree | Strongly disagree | No opinion | % |
|------------------|--------------------|----------------|-----------|-----------|-------------------|------------|------------|
| End of ESA | 92 | 1 | 38 | 46 | 13 | 2 | 100 |
| TG (previous) | 88 | 1 | 30 | 56 | 14 | 0 | 100 |
| TG (no previous) | 173 | 0 | 34 | 59 | 6 | 1 | 100 |
| Former ESA | 50 | 0 | 40 | 56 | 2 | 2 | 100 |
| Unsuccessful | 26 | 0 | 65 | 31 | 0 | 4 | 100 |
| Never joined AES | 37 | 0 | 43 | 43 | 0 | 14 | 100 |
| Average | 466 (total) | 1 | 37 | 53 | 7 | 2 | 100 |

There was no clear pattern when respondents were asked if they considered conservation activity to be detrimental to efficient agricultural activity (Table 4.5). Overall 37% agreed with the statement and just over half disagreed with little strong opinion overall. Agreement holders (a small minority of those coming to the end of their ESA agreement and in Tir Gofal) strongly disagreed with the statement. The response to the third statement is shown in Table 4.5.

Table 4.5 Farmers should take on more responsibility for the environment (%)

| Sample | Sample size | Strongly agree | Agree | Disagree | Strongly disagree | No opinion | % |
|------------------|--------------------|----------------|-----------|-----------|-------------------|------------|------------|
| End of ESA | 92 | 18 | 39 | 39 | 0 | 3 | 100 |
| TG (previous) | 88 | 10 | 50 | 33 | 1 | 5 | 100 |
| TG (no previous) | 173 | 6 | 55 | 35 | 0 | 4 | 100 |
| Former ESA | 50 | 0 | 40 | 56 | 0 | 4 | 100 |
| Unsuccessful | 26 | 8 | 38 | 54 | 0 | 0 | 100 |
| Never joined AES | 37 | 3 | 19 | 70 | 3 | 5 | 100 |
| Average | 466 (total) | 9 | 46 | 41 | 1 | 3 | 100 |

As with the first statement the clear pattern is for those in AES agreements to have a higher level of support for this statement on farmers' responsibility towards the environment. Those who have never joined an AES scheme are the most likely to disagree with the statement. The final statement in this question concerned the role of AES themselves, and is shown in Table 4.6.

Table 4.6 Agri-environment schemes are the most effective way to make farmers take an interest in conservation (%)

| Sample | Sample size | Strongly agree | Agree | Disagree | Strongly disagree | No opinion | % |
|------------------|--------------------|----------------|-----------|-----------|-------------------|------------|------------|
| End of ESA | 92 | 35 | 49 | 8 | 1 | 8 | 100 |
| TG (previous) | 88 | 30 | 57 | 13 | 0 | 1 | 100 |
| TG (no previous) | 173 | 21 | 69 | 7 | 0 | 3 | 100 |
| Former ESA | 50 | 38 | 52 | 8 | 0 | 2 | 100 |
| Unsuccessful | 26 | 31 | 58 | 12 | 0 | 8 | 100 |
| Never joined AES | 37 | 14 | 51 | 30 | 0 | 5 | 100 |
| Average | 466 (total) | 27 | 59 | 10 | 0 | 4 | 100 |

Table 4.6 shows that the vast majority in all of the samples (agreement holders and non-agreement holders) agreed that AES are the most effective way to involve farmers in conservation matters. Only in the 'never joined AES' group did the proportion fall below 80% but even here 65% agree, some strongly, compared to 30% who disagree with none disagreeing strongly.

Overall the response to this series of 4 statements has shown that all of the respondents are supportive of a positive association between conservation and agriculture. A similar set of questions was asked of farmers in connection to the Countryside Stewardship scheme in England in 2000 and the results are broadly similar.

This analysis seems to suggest that broadly speaking all farmers are sympathetic towards the environment and that AES are effective in helping farmers take an interest in conservation. The low level of difference between non-agreement holders and agreement holders suggest that factors other than attitude explain entry into AES further.

4.4 Factors affecting decisions to join/rejoin an AES

All of the respondents were asked to rate the importance of 8 factors in the decision to apply to join the scheme, in the case of agreement holders, they were asked to refer to their own decision. In the case of non-agreement holders they were asked to refer to farmers they knew who have joined AES. Table 4.7 shows the 4 most important factors.

Table 4.7 Four most important factors affecting decision to apply by sample (% very important)

| Sample | Payments | Hedges, walls | Plants/wildlife | Landscape |
|------------------|-----------|---------------|-----------------|-----------|
| End of ESA | 87 | 78 | 66 | 55 |
| TG (previous) | 80 | 75 | 42 | 33 |
| TG (no previous) | 71 | 78 | 37 | 35 |
| Former ESA | 78 | 76 | 24 | 30 |
| Unsuccessful | 73 | 65 | 23 | 31 |
| Never joined AES | 89 | 46 | 17 | 27 |
| Average | 78 | 74 | 40 | 37 |

The most important factors to all respondents in each sample were the payments themselves with over three quarters in each sample saying that this was very important and under 5% saying it was not important. The next highest factor overall was 'to maintain hedges, walls and ditches' with just under three quarters saying this was a very important factor in them joining the scheme. As with the first statement there is very little variation with the highest proportion recorded by those who have

never been in a scheme². 'Encouraging native plants and wildlife' was thought to be 'very important' by 40% of the total sample, however this hides considerable variation in the 6 samples, ranging from nearly two thirds of those at the end of their ESA agreement to 17% of those who had never joined. There is a gradual sliding scale with the actual agreement holders giving a higher response than previous and non-agreement holders. The response is more even when looking at the issue of landscape, with around 30% of respondents in 5 of the samples saying this was very important. Only the ESA sample stands apart with 55% saying this was very important. The next table (4.8) shows the four least important factors according to the percentage who rated the factor as 'not important'.

Table 4.8 Three least important factors affecting decision to apply by sample (% not important)

| Sample | Public access | Buildings | Knowing people |
|------------------|----------------------|------------------|-----------------------|
| End of ESA | 75 | 52 | 71 |
| TG (previous) | 70 | 49 | 46 |
| TG (no previous) | 74 | 50 | 37 |
| Former ESA | 92 | 68 | 64 |
| Unsuccessful | 80 | 58 | 27 |
| Never joined AES | 92 | 54 | 13 |
| Average | 78 | 53 | 46 |

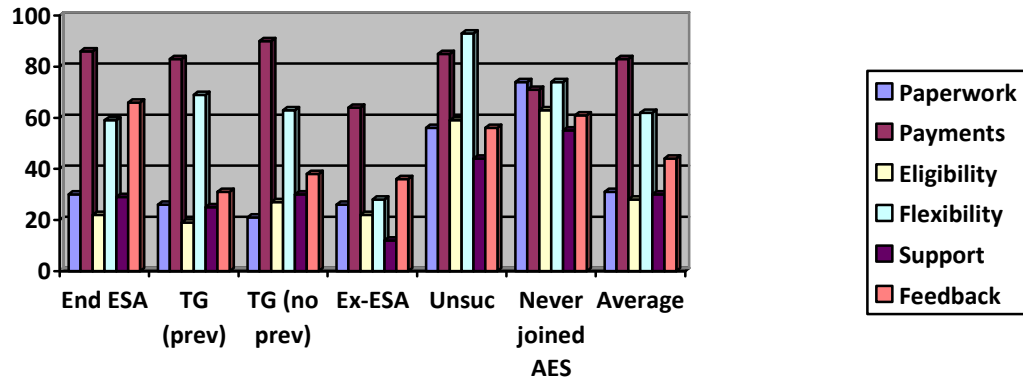
Public access was clearly the least important factor in farmers deciding to apply for AES across all 6 of the sample groups with 70% or more saying it was not important. It is marginally higher in the previous and non-agreement holder groups. The response for buildings is quite even and this is not surprising as it is not important to the majority. The issue of knowing people who have found the scheme to be successful reveals an interesting division between the samples. Non-agreement holders are far more likely to say that this is an important factor with as many saying it is very important as saying it is not important. However this is not the experience of those who have been in such schemes with only 15% or less saying it was very important compared to between 71% and 37% who said it was not important. Only in the Tir Gofal group with no previous experience did close to half say it was fairly important.

These questions suggests that although payments are important, wildlife and landscape are also rated highly, thus existing features on the farm are a key factor in influencing a farmers decision to join a scheme. Non-agreement holders also recognise this. They also appear to think that knowing people who have been in successful schemes is an important factor.

All of those in the full sample were asked '*what changes to the schemes would make the scheme more attractive or consider applying in the future*'. Table 4.14 shows the number selecting each of the six statements for the samples. This question intended to reveal the barrier to entry (as well as agreement holders experiences as discussed in the section below).

² Payment and hedge/wall management and restoration are clearly interlinked. No distinction was made between capital and annual payments.

Figure 4.6 Changes to schemes to make them more attractive (% selecting)



Of the non-agreement holders, the unsuccessful applicants selected the ‘*management flexibility*’ statement more than ‘*higher payments*’ suggesting that they perceive restriction on management prescriptions to be onerous and therefore an important reason for not entering schemes. Those who have never joined a scheme selected ‘*less paperwork*’ (74% compared to 30% or less for agreement holders) and ‘*more management flexibility*’ above ‘*higher payments*’. Non-agreement holder responses across the board were higher than agreement holders, suggesting that a range of reasons, not just the payments themselves, represent barriers to entry.

Non-agreement holders believed to a lesser extent (although more than agreement holders) that changes in ‘*Better information and support on how the scheme worked and what was involved*’, and ‘*more feedback*’ would make the scheme more attractive. This indicates that scheme design (prescriptions, payments and paperwork) are more of a perceived limitation than scheme process (support and feedback). Non-agreement holders were also asked what changes in the way they farm would make them reconsider applying in the future. The most likely change in the farm that would make them reconsider applying was extensification of their farm system but this was only mentioned by 30% of those not in an agreement. Most gave other, more personal, reasons relating to their specific situation. The agreement holders’ selections are discussed in section 4.6.

Table 4.9 Indications of non-agreement holders’ current position with regard to joining a scheme (% selecting)

| Sample | Sample size | Never applied | Not apply | May apply | Consider- ing now | No point | Too demand |
|------------------|--------------------|---------------|-----------|-----------|-------------------|-----------|------------|
| Former ESA | 50 | 4 | 30 | 34 | 14 | 12 | 32 |
| Unsuccessful | 27 | 0 | 19 | 15 | 11 | 26 | 30 |
| Never joined AES | 38 | 8 | 13 | 29 | 13 | 26 | 32 |
| Average | 115 (total) | 4 | 22 | 28 | 13 | 20 | 31 |

Non-agreement holders were also asked about their current position with respect to applying to an AES (Table 4.9). The most frequent response from the current non-agreement holders when asked which of the eight statements best reflected their current position was ‘*I have studied the schemes and the management prescriptions are too demanding*’ (31%), and this is evenly divided among the three samples. Next most popular is the statement ‘*I have considered them and may apply in the future*’. This was highest among those who had been in the ESA (34%) but also in those who had never applied (29%). The responses to the statement ‘*never seriously considered*’ is very low as was the concern about the time commitment and a change in their business. This set of responses would

seem to suggest that the current set of non-agreement holders are not against AES but do not currently consider them appropriate.

The survey asked all agreement holders, current and previous, if they sought to renew or continue with another scheme. The response across those coming to the end of ESA agreements, Tir Gofal and former ESA agreement holders was consistently positive, with over three quarters saying they intended to renew. Of the remainder less than 10% said that they would not renew with 13% saying that it was too early to commit. The reasons given by the 38 who indicated that they would not renew, largely fell into the 'other' category and were most often personal (eg ill health, sale of business). They tended not to relate to the expense involved, amount of work, length of agreement or business plans. This is a positive finding and confirms the figures outlined in WAG internal documents concerning renewal rates.

Overall this section has shown that agreement holders were more influenced by the existing features on their farm rather than the payments themselves or knowing others in the schemes. A large majority would renew their agreement with less than 10% saying that they would not renew, nearly all for personal reasons. Non-agreement holders are not put off solely by payment rates that they consider to be too low but by a range of reasons, including the amount of paperwork and management flexibility. They also indicate that they might consider applying in the future again suggesting that they are not scheme-averse per se but waiting for the appropriate circumstances or scheme.

4.5 Engagement

This section of questions looks at how information was received regarding the schemes, and respondents current level of interest in AES generally. All current and previous agreement holder and unsuccessful applicants were asked '*who was most influential in your decision to join or withdraw from a scheme?*'. In the majority of cases the respondents indicated that it was their own decision (78%) with only family (10%) being mentioned as influential. There was no variation among the samples. The same group was asked if they had received any advice when preparing their application. The table (4.10) below shows the responses.

Table 4.10 Receipt of advice in preparing by application by sample (%)

| Sample | Sample size | No advice | Took advice |
|------------------|--------------------|-----------|-------------|
| End of ESA | 91 | 84 | 16 |
| TG (previous) | 87 | 61 | 39 |
| TG (no previous) | 168 | 62 | 38 |
| Former ESA | 48 | 88 | 12 |
| Unsuccessful | 24 | 58 | 42 |
| Average | 418 (total) | 69 | 31 |

Rather strangely the highest proportion of those receiving advice in preparing their application is among those who were unsuccessful in their application (42%). The lowest rates are in the two samples concerning ESAs where there is less need for assistance in preparing an application as the scheme was area based. The most likely source of advice is a private consultant (29 cases) followed by Farming Connect (14) or ADAS (12). Interestingly the whole sample was also asked about other on-farm advice and most, 71%, indicated that they did not receive any so clearly the situation around AES is not unusual.

Those not currently in an AES were asked two questions concerning their awareness of existing schemes and their own current situation. Only 3 of the 106 respondents were unaware of Tir Gofal and Tir Cynnal meaning that 97% have heard of these schemes. In terms of their current situation, the table below shows the proportion selecting each statement. Most of the sample, 83%, had spoken to other farmers about the current schemes, this only dipped to 74% for those who had never been in a scheme. Half found other farmers 'broadly positive' compared to 7% who found them 'negative' with little variation between the samples.

Respondents were asked to rank two statements concerning PO support and feedback to get some sense of the extent of engagement with the schemes and the scheme deliverers.

Table 4.11 Engagement with the scheme

| Sample | Sample Size | Strongly agree | Agree | Disagree | Strongly disagree | No opinion | % |
|--|-------------|----------------|-------|----------|-------------------|------------|-----|
| <i>The project officer clearly explained what I / farmers needed to do</i> | | | | | | | |
| A Holders | 399 | 21 | 71 | 6 | 1 | 1 | 100 |
| Non A Holders | 63 | 11 | 70 | 16 | 0 | 3 | 100 |
| <i>There has been / Farmers receive good feedback on the scheme's impact</i> | | | | | | | |
| A Holders | 399 | 3 | 44 | 35 | 15 | 3 | 100 |
| Non A Holders | 63 | 0 | 22 | 56 | 3 | 19 | 100 |
| <i>WAG/CCW run the scheme efficiently</i> | | | | | | | |
| A Holders | 400 | 3 | 67 | 19 | 7 | 4 | 100 |
| Non A Holders | 63 | 0 | 52 | 21 | 3 | 24 | 100 |

Agreement holders rate the role of the PO highly over two thirds agreeing that PO had clearly explained what they needed to do. In the statement about feedback there is a quite a wide spread of opinion with 15% of agreement holders, as high as 32% of those approaching the end of their ESA agreements, strongly disagreeing that farmers receive good feedback on the impact of the scheme. However, half of those with Tir Gofal agreements agree with the statement suggesting that the need for feedback increases as agreements and schemes come to a close. This is reinforced by the results in Figure 4.6 which it shows that those coming to the end of their ESA agreements were far more likely to select '*more feedback on the impact of the scheme on the farm*' as a change that would make the scheme more attractive than other agreement holders. Whilst the majority of agreement holders also tend to agree that WAG and CCW run the schemes efficiently, some 30% disagree or strongly disagree.

This analysis has shown that receiving advice when preparing an AES application is increasingly common, even among those who are not successful. It also shows that other farmers are not particularly influential in the decision to apply. The role of the PO is endorsed but there is insufficient feedback about the impact of the scheme. Whilst the majority of agreement holders agree that WAG and CCW run the scheme efficiently, some 30% do not agree.

4.6 Experience of schemes

The respondents were asked to agree or disagree with a series of 15 statements about AES. These statements referred to the scheme agreement they are, or were involved with, for the current and past agreement holders. Non-agreement holders were asked about the impact of AES on the countryside of Wales in general. The tables below assess the statements in groups using the overall

comparison of agreement holders and non-agreement holders as a guide. Where appropriate the variation within the samples is reported in the text.

Table 4.12 Impact of AES on the countryside (AH statement/non-AH statement) (%)

| Sample | Sample Size | Strongly agree | Agree | Disagree | Strongly disagree | No opinion | % |
|--|-------------|----------------|-------|----------|-------------------|------------|-----|
| <i>It has / They have improved the farm management of the holding/countryside</i> | | | | | | | |
| A Holders | 398 | 17 | 53 | 24 | 1 | 5 | 100 |
| Non A Holders | 63 | 5 | 59 | 30 | 0 | 6 | 100 |
| <i>It has / They have improved the landscape of the holding / countryside</i> | | | | | | | |
| A Holders | 400 | 20 | 56 | 19 | 2 | 3 | 100 |
| Non A Holders | 63 | 5 | 57 | 33 | 0 | 5 | 100 |
| <i>It has / They have increased native plants and wildlife on the holding/in the countryside</i> | | | | | | | |
| A Holders | 400 | 17 | 57 | 18 | 1 | 7 | 100 |
| Non A Holders | 63 | 3 | 68 | 18 | 0 | 11 | 100 |
| <i>It has / They have improved public access on the holding/ to the countryside</i> | | | | | | | |
| A Holders | 400 | 6 | 25 | 48 | 2 | 19 | 100 |
| Non A Holders | 63 | 2 | 44 | 21 | 5 | 29 | 100 |

On the whole the agreement holder sample is more positive about the schemes, as might be expected as they have direct experience of them. The response for agreement holders is consistent with regard to improving farm management, improving the landscape and increasing native plants and wildlife with around three quarters agreeing with the statement, of which about a fifth strongly agree. However it is interesting to note that the majority of non-agreement holders are also positive in terms of the improvements that AES have made to the countryside, with roughly two thirds agreeing with the statements and a third disagreeing. Only with regard to public access are the non-agreement holders more positive than the agreement holders with nearly half of non-agreement holder agreeing that AES have improved public access compared to half of agreement holders who disagree. Table 4.13 shows the responses for the next set of statements which look at the experience and implementation of AES schemes. Again non-agreement holders were asked to refer to the experience of farms in general.

The first two questions concern the financial experience of AES and the response of agreement holders is interesting as it is not uniform. There are a significant number of agreement holders, about a third, who agree that the schemes have hidden costs that they had not anticipated. This is highest (40%) in the group of farmers who are coming to the end of their ESA agreement and lowest in the previous agreement holders (8%). A fifth of agreement holders also strongly disagree that the scheme payments cover the work involved. On this occasion the highest level of disagreement (30%) is among the Tir Gofal agreement holders who have been in AES agreements before. In terms of their experience the agreement holders found the schemes straight forward to join and to implement and not interfering with the smooth running of the farm, with over three quarters of them agreeing with these 3 statements.

Table 4.13 Experience and implementation of AES (AH statement/non-AH statement) (%)

| Sample | Sample Size | Strongly agree | Agree | Disagree | Strongly disagree | No opinion | % |
|--|-------------|----------------|-------|----------|-------------------|------------|-----|
| <i>It has / They have hidden costs which I /farmers had not anticipated</i> | | | | | | | |
| A Holders | 400 | 5 | 30 | 61 | 3 | 1 | 100 |
| Non A Holders | 63 | 11 | 44 | 33 | 0 | 11 | 100 |
| <i>The payments cover the costs of the work involved / in the schemes</i> | | | | | | | |
| A Holders | 400 | 2 | 39 | 38 | 21 | 0 | 100 |
| Non A Holders | 63 | 0 | 33 | 52 | 5 | 9 | 100 |
| <i>It has been easy to join / Farmers find these schemes easy to join</i> | | | | | | | |
| A Holders | 400 | 10 | 67 | 18 | 3 | 2 | 100 |
| Non A Holders | 63 | 0 | 24 | 48 | 17 | 11 | 100 |
| <i>It has been easy to implement / Farmers find these schemes easy to implement</i> | | | | | | | |
| A Holders | 399 | 10 | 74 | 13 | 1 | 2 | 100 |
| Non A Holders | 63 | 0 | 35 | 38 | 3 | 24 | 100 |
| <i>It has interfered / Such schemes interfere with the smooth running of the holding</i> | | | | | | | |
| A Holders | 400 | 2 | 21 | 67 | 8 | 2 | 100 |
| Non A Holders | 63 | 5 | 60 | 22 | 0 | 13 | 100 |

However when asked 'what changes to the schemes would make the scheme more attractive or consider applying in the future' (Figure 4.6), 'more management flexibility with options and prescriptions' was mentioned by those in Tir Gofal and ESAs alike, as well as higher payments suggesting that there are some negative experiences with implementation.

Among the non-agreement holders there appears to be skepticism about hidden costs and the level of payments covering the work involved. The majority also disagreed that farmers found such schemes easy to join, implement and agreed that they interfered with the smooth running of the farm. Overall it would appear to be true that the perception of the situation among non-agreement holders is more negative than the experience of agreement holders. The third set of statements concerns the administration of AES on farms and at the national level (Table 4.14)

Table 4.14 Administration of AES at farm and national level (AH statement/non-AH statement) (%)

| Sample | Sample size | Strongly agree | Agree | Disagree | Strongly disagree | No opinion | % |
|--|-------------|----------------|-------|----------|-------------------|------------|-----|
| <i>It has interfered / Such schemes interfere with the smooth running of the holding</i> | | | | | | | |
| A Holders | 400 | 2 | 21 | 67 | 8 | 2 | 100 |
| Non A Holders | 63 | 5 | 60 | 22 | 0 | 13 | 100 |
| <i>Farmers find / The paperwork is /to be a problem</i> | | | | | | | |
| A Holders | 400 | 3 | 17 | 73 | 7 | 0 | 100 |
| Non A Holders | 63 | 6 | 54 | 35 | 0 | 5 | 100 |

Over three quarters of agreement holders disagree that the paperwork is a problem. However, non-agreement holders are more likely to agree with these statements, 65% and 60% respectively. This is particularly true for those who have never been in a scheme with 70% agreeing that farmers find the paperwork a problem. The final set of statements in this question covered the impact of AES on a farmer's attitude and knowledge (Table 4.15), and on the rural economy.

Table 4.15 Attitudes, knowledge and role of the Project Officer (AH statement/non-AH statement)

| Sample | Sample size | Strongly agree | Agree | Disagree | Strongly disagree | No opinion | % |
|--|-------------|----------------|-------|----------|-------------------|------------|-----|
| <i>It has changed my / farmers attitude towards the environment</i> | | | | | | | |
| A Holders | 399 | 4 | 27 | 65 | 3 | 1 | 100 |
| Non A Holders | 63 | 0 | 52 | 21 | 3 | 24 | 100 |
| <i>The scheme has increased my / farmers environmental knowledge and awareness</i> | | | | | | | |
| A Holders | 399 | 7 | 53 | 37 | 2 | 1 | 100 |
| Non A Holders | 63 | 5 | 67 | 24 | 0 | 5 | 100 |

While non-agreement holders think that involvement in AES agreements change a farmer's attitude towards the environment, agreement holders themselves are more likely to disagree. It is possible that agreement holders feel that they are already positive towards the environment. There is a greater level of parity among both samples for the view that schemes increase environmental knowledge and awareness. There was a wide variation among current agreement holders regarding the increase or maintenance of employment on the farm as a result of the scheme agreement. Three quarters of those currently approaching the end of their ESA agreement said that they had increased or maintained employment compared to a quarter in the other three samples. This level of discrepancy is difficult to explain. All of the samples had increased their use of contractors as a result of the scheme with two-thirds indicating that this is the case. Likewise over 80% said that they had used local suppliers more as a result of the scheme.

When asked to rate the scheme overall, existing and previous agreement holders consistently rated the scheme they are or were in as being at least good (53%) or in some cases excellent (38%), with little variation between them. However, when asked to rate the scheme in terms of management/annual payments then the combined excellent/good proportion fell to 64% with 12% saying they were poor. The proportion saying excellent or good falls further to 50% when asked to rate the scheme in terms of capital payments. Support for the agreement holders before and after the scheme was rated highly by all with 20% saying it was 'excellent' and well over half saying it was at least 'good'.

This analysis of farmers experiences with AES has shown that in the view of agreement holders their AES agreement has generally improved their farm management as well as the landscape and natural environment but not public access. Non-agreement holders recognise these changes as well suggesting that the effects of AES are visible across Wales. The experience of AES is generally positive, but the scheme overall as a package is rated more highly than the management and capital payments, which agreement holders are less happy with as their experience is that they do not cover the costs involved. The paperwork is not considered a problem and the overall delivery in terms of project officer involvement is rated very highly. Improvements suggested by agreement holders included flexibility in the management prescription, higher payments and, for those nearing the end of their agreements, more feedback about the impact of the scheme.

Non-agreement holders demonstrate negative perceptions about AES, they are skeptical about hidden costs and the level of payments being sufficient to cover the work costs, and perceive that paperwork and the impact of such schemes on farms will be problematic tending to disagree that farmers find schemes easy to join and implement. This reinforces results discussed earlier suggesting further that barrier to entry are perceived problem with paperwork, implementation and flexibility and payments.

4.7 Telephone survey results: summary

The extent of the differences between the agreement holders and non-agreement holders in factors that affect farm capacity to join AES was not as great as might be expected from analysis of the literature. There is no overall pattern of differences in farmer and farm characteristic between agreement holders and non-agreement holders. There was no clear relationship between farm size and entry into AES, there are indications that those who had never joined a scheme have smaller to average holdings (30-100ha) however the data also shows that those who have been unsuccessful have larger holdings. In terms of farm type the picture is clearer with dairy holdings more likely to be in the never joined or unsuccessful samples. This is not unexpected given that these tend to be intensive systems and therefore less suitable for AES. Also the upland beef and sheep numbers were low and the lowland beef and sheep figures higher among those who had never been in an AES. This is likely to be explained by the higher proportion of AES agreements in upland areas. With respect to farmers' age the agreement holders appear to be in general older than the non-agreement holders with those who were unsuccessful or never in a scheme on average on the 45-54 category rather than 55-64, which was the mid-point for agreement holders. Possible explanations for these patterns will be explored further in the face-to-face interviews.

With regard to the farm business plans non-agreement holders (those who had never joined) were more likely to plan to grow/intensify the business. Non-agreement holders overall were also more likely to have identified a family member to take over the farm. Non-agreement holders (unsuccessful applicants) also had the highest proportion of business income from agricultural activities. In terms of loans that impact on the way the farm is managed, the % respondents are similar in all samples. This suggests that non-agreement holders are more likely to be conventional farmers, reliant on farm income, making plans to expand the farm and continue the family farm through succession. This will be explored further in the face-to-face interviews. It should be noted that the sample for those who have never been in a scheme came from Farming Connect and this may have biased the sample towards the more production-oriented farmers who register with Farming Connect because of interests in developing the agricultural side of the business.

With respect to willingness this analysis seems to suggest that broadly speaking all farmers are sympathetic towards the environment and that farmers agree that AES are effective in helping farmers take an interest in conservation. Although agreement holders do demonstrate more positive views towards conservation, there is a small difference between them and the non-agreement holders suggesting that unwillingness alone is unlikely to explain a decision not to enter an AES. Again this thesis will be examined in the face-to-face interviews.

With respect to motivations for joining AES, payments are clearly important and this is linked to an interest in maintaining hedges, walls and ditches. However the protection of wildlife and landscape is also rated highly as a factor determining entry, thus existing features on the farm are a key factor in influencing a farmer's decision to join a scheme. With regard to reasons for not entering AES, management flexibility with options and prescriptions, payments and paperwork appear to be the main concerns of non-agreement holders. Non-agreement holders demonstrate negative perceptions about AES, they are skeptical about hidden costs and the level of payments being sufficient to cover the work costs, and perceive that paperwork, joining and implementation are difficult. This indicates that scheme design is more of a perceived limitation than scheme process. The face-to-face interviews will be used to examine this issue further.

In terms of engagement there is general awareness about the schemes and farmers do talk to each other about them although agreement holders said that other farmers were not influential in decisions to join. However, non-agreement holders appear to think that knowing people who have

been in successful schemes is an important factor with respect to entry. This may suggest that there is a role for facilitation networking among those who have never been in a scheme with those in schemes. This would also help to allay negative perceptions about the paperwork involved and impact of the implementing the scheme that have been revealed previously. Receiving advice, when preparing an AES application, is increasingly common. The role of the PO is endorsed but there was thought to be insufficient feedback about the impact of the scheme. Whilst the majority of agreement holders agree that WAG and CCW run the scheme efficiently, some 30% do not agree. Overall it would appear that agreement holders are well engaged with the AES appreciating the role of the PO and WAG, however lack of feedback was mentioned suggesting that WAG could, enhance engagement by providing feedback which will give agreement holders some sense of achievement and help them sign-up to the overall aims of the scheme and on farms. Additionally the low levels of farmer networking and discussion in the context of AES suggest that this is an area that could be facilitated to improve the visibility of the AES and to demonstrate environmental outcomes.

With respect to experience of AES improvements to farm management, landscape and natural environment noted by agreement holders and non-agreement holders alike. The experience of AES is generally positive, all aspects of the scheme are rated highly except for capital payments, which are thought to be insufficient to cover rising costs. Improvements to the scheme suggested by agreement holders included flexibility in the management prescription, higher payments and, for those nearing the end of their agreements, more feedback about the impact of the scheme.

5 Face-to-face interview results and analysis

5.1 The sample

Twenty nine agreement holders (25 in TG and 4 in ESA) and 12 non-agreement holders were interviewed. Table 2.4 sets out the sample details and Tables 5.1 and 5.2 presents the farm, farmer and scheme characteristics of the interviewees. All the quotes are from TG agreement holders unless otherwise stated.

5.2 Agreement holders: factors affecting entry

5.2.1 Capacity

5.2.1.1 *The Agreement Holders*

Table 5.1 shows that of the 25 TG interviewees 19 had farming backgrounds (traditional farmers) (13 from local family and six who had moved into the area from another farm) and six who were new to farming having moved to the area in the 80s or 90s (newcomers).

Traditional farmers³ who had local farming backgrounds had either stayed on the family farm (2nd or 3rd generation), built up a farming businesses nearby, or worked away in contracting or farm management and moving back to the farm when the father retired. They tended to derive all their income from the farm. Some were college/university graduates, some had a qualification obtained through a day release at college or had attended practical training days however the majority had joined the farm straight from school. Their ages ranged from 44-65 and in most cases they had identified a successor, or possible successor. Three had been in schemes previously (OFS, ESA and National Park). Agreement holders with farming backgrounds but new to the area tended to come from smaller farms or smallholding and had moved to Wales to buy bigger farms,. Three of the six derived all their income directly from farming. Those in previous schemes had been in OFS, TC and ESA.

Of those who were newcomers (new to farming), they tended to be professional people (eg. doctor, engineer), had higher education qualification, who had moved into farming and to the area for variety of reasons, for the lifestyle, to (semi) retire, for investment or for health reasons. Most were in their 50-60s and relied on (or used to rely on) off-farm income The smaller holdings are found in this interview group. This group were more likely to be in the OFS as well. The majority moved into the area in the 1980s. One smallholder agreement holder who could be described as an idealist explained that he and his family had gravitated to Wales where the holding pattern and cost of land allowed people without a great deal of capital to set up on their own. They had differing ambitions, although in the most part they held environmental ideals and intended to derive some income from farming. Whilst the majority of these newcomers carried out some farming activity, some acknowledged that they are not farmers, and with off-farm jobs, had little time to participate in farming, for example:

³ Traditional farmers are understood here to be those who rely on farm income to sustain the farm business and family and have with goals that reflect this.

For a long time they [PO] wanted me to take hay off it but it is impossible because of access but also because I am not a farmer. I had a job and a farmer has to take advantage of a good day to go and do it but I couldn't (woman smallholder).

Although a distinction is made here between traditional farmers and newcomer agreement holders, there is diversity within each group. It would appear that although the newcomers are following a similar lifestyle, they are involved in varying degrees of commercial farming, ranging from organic box schemes 'with turnovers into the millions right down to subsistence farmers who had as little to do with the money economy'. As such, as one interviewee pointed out, it is wrong to use such terms as hobby or lifestyle farmer to cover such a diverse group, that 'there were many different motivations at work in the surrounding area'.

The ESA interviewees show a similar pattern with two of the four interviewed coming from family farms now deriving all their income from the farm. Three of the four farmers were over 60. One interviewee was new to the area and the other new to farming and the area, in both cases they have relied on off-farm income to service mortgages and loans. These latter two had smaller holdings.

The heterogeneity of the TG and ESA agreement holders is interesting compared to the composition of the non-agreement holders interviewed who tended to be traditional local family farmers in the most part. Whilst the small number and non-representative sampling of the interviewees does not allow any patterns to be revealed, TG appears to be equally popular with those new to farming and to the area and with farmers with local backgrounds.

5.2.1.2 The farm

Farm size and type

There was a range of farm type and size represented in the agreement holders interviews, from 202ha livestock and arable farm to a 4ha smallholding. Traditional farmers agreement holders tended to have farms over 100 acres whereas the newcomers tended to have smaller holdings. Upland beef and sheep (UBS) farmers dominated the interviews although there were some lowland livestock farms (a few with arable) represented. In more than one case the farm included common land. It was clear from the interviews that, although farms were categorised in the telephone survey, there is often a history of changing enterprises, from dairy to beef and sheep, from a pig unit to a suckler unit, from sheep to horses, or from conventional to organic as well as the reverse. As such, farm type is dynamic and this needs to be understood in the context of this study. Equally, there are complex arrangements of land ownership and tenure. Although in the most part the farms were owner-occupied many had rented fields, these arrangements appeared to be constantly changing depending on the farm business strategies and life cycle.

The farm land /resource and the farming practice

The physical resource of the farm determines the nature and extent of farming opportunities and environmental management. With respect to farming a number of traditional agreement holders noted that they were on marginal land and as such their farming options were limited (often to UBS). They described themselves as 'traditional' or low-input (non-intensive) farmers often using little or no fertiliser. They recognised the limitations (in capacity) of their farm land, for example one agreement holder observed: 'This farm is a hill farm anyways limited to amount of corn, shallow soil, what we do plough only top 3 inches so options are limited.' These observations were the same for TG and ESA agreement holders. In terms of environmental management, a number of TG agreement holders described areas of high environmental value on their farms such as woodlands, streams, meadows, parkland, ponds as well as landscape and historic features which presented opportunities for joining an AES.

Some traditional agreement holders, however, have elected to follow the low-input route for reasons other than land capacity. Some clearly had an appreciation of farm costs, they stressed the importance of the ability to sit back and look at costs, outcomes and effort. A number had opted to keep inputs low to reduce costs. For example one farmer keeping cows, but looking for an easier life, asked his wife 'can we live on £80 a day?' (the amount he was spending daily on feeding his cows). As the answer was yes he decided to sell the cows. Others share the same outlook. They had not modernised their farms or improved pasture like neighbouring farmers but kept small fields and hedges and unimproved pasture, in the realisation that 'the more fertiliser you put on the more cows you have to have to pay for it'. This is a positive choice to farm less intensively and often reflects the business aspirations of the farmers, life cycle of the farm, outside interests and the age of the farmer. A number noted that being less intensive meant being more relaxed and allowing more time for leisure or family.

In terms of farming practices, although some viewed themselves as 'traditional', others used more specialised practices that emphasise quality rather than quantity, such as reducing livestock numbers but improving the management of a smaller flock, or as this farmer describes:

The biggest emphasis over last 2 years has been trying to getting more from the ground, we stitched in a lot more clover to reduce bought-in protein, while trying to keep numbers the same. We don't fertilise.

It was also apparent that, although some agreement holders regarded themselves as less intensive or traditional, they adopt different approaches for different parts of the farm, for example, one agreement holder described a dual system which involved both intensive and extensive farming practices: 'We had an Adas man years ago, he said on the better land you push that as far as you can and on marginal land bring that into nature and that's what we have tried to do'.

For some, limited by marginal land, the environmental assets are very much a by-product of their management systems in that it is not consciously produced by them. For others the environment is very deliberately produced, managed and enhanced and this is partly the reason that farmers opt for low-input farming. Agreement holders with this approach were characterised by their statements about working with nature and not pushing the land too hard. There was also another type of agreement holder (usually the newcomer) who actively sought out holdings of high environmental value to manage. As such 'different types of capacity or opportunity' are evident.

The farm business

Most of the agreement holders from local farming backgrounds derived all their income from the farm, although in some cases incomes were supplemented with money from enterprises such as timber sales from an area of woodland, holiday cottages, haulage and contracting. Those with a farming background but new to the area were more likely to have income from specialist activities, such as cheese making, and organic fleeces, pet production and horse rearing. Income from a spouse working off-farm was also useful supplement for agreement holders from farming backgrounds.

Reliance on income from non-traditional farm activities seems to accompany a decision not to farm intensively. One agreement holder who had diversified into pet production, which now provided the main household income, said that they 'were not so focused on growing grass and using fertiliser' anymore. Similarly in one case, where the agreement holder's wife (local farmer) worked full time and provided a very important income to the farm household, they did not have to rely on the farm for income and that affected the way they could farm.

Most newcomers relied on (or used to rely on) off-farm income and this input underpinned the farm household. Often the newcomers had worked full-time when they first bought the farm and were

building it up, in some cases servicing mortgages. One newcomer although she had a traditional beef and sheep farm said that it was run entirely from a conservation perspective. The livestock enterprises contributed to the farm income but ran at a loss and the shortfall was made up from the agreement holder's pension. In another case the agreement holder (newcomer) and wife both earned an income from outside farming and rented half of the land out. This enabled them to have the freedom to go on holiday and not always be tied to the farm. For those who have moved into the area and purchased farms they rely heavily on off-farm income 'We don't depend on it [farm] for our living. It doesn't generate enough money'. Often they had mortgages and loans and as such tended to distinguish their situation from those born into farming families:

Farming just about pays for the interest, but if you worked out how many hours you put into it you don't have much return really. You couldn't do that and live on it, we couldn't anyway. People who have inherited a farm it is different. People who have no interest they can make money on what they earn (ESA).

Although the attitude appears to be quite buoyant 'Mind you we sold some lambs the other day for £80 something, the stock has definitely gone up this last 12 months and you never know we might actually start to make a living'.

In terms of changes to the farm business, some had been precipitated by personal or family matters such as illness: 'It changed because circumstances forced things to change. Just the way things worked out.' In other situations some decisions to expand or develop the business were awaiting a decision about succession. In another poor health combined with realisation that the farm would not get the SFP (because previously it had not been farmed for 10 years) meant that they would not increase the size of the farm or develop the farm enterprises. Although a number of agreement holders described phases of farm expansion in the past, few had plans to intensify or grow the business any further, however such plans were related to the life cycle of the farm, the age of the farmer and the existence of a successor.

With respect to changes on the farm, the TG agreement holders' narratives described a constant pattern of change, increasing and decreasing intensity and farm size, starting and dropping enterprises. Some agreement holders mentioned how they had been encouraged by the government a few years ago to diversify, as a consequence one had started producing pet animals and when this business took over he sold 200 ewes and most of his cattle. Other farm changes reflect decline in profits in some sectors, for example, a shift from pigs to suckler cows or from dairy to beef and sheep. All the ESA interviewees described a history of developing the farm since taking it on, through pasture improvement and growing the stock numbers or diversifying, for example:

Over the years there has seen changes in the quality of the land brought about by improvements, helped by putting sheep back on the common (ESA).

We have done a lot of improvements. We reseeded, fenced and put modern buildings up and put in the road. When we came here there were 99 ewes and we expanded to 400 which we were able to do because of the improvements (ESA).

We had 300 or 400 ewes, 18 cattle. We then diversified into deer and sold half the sheep. Diversification was the big word at the time and we had a vet who was keen on deer....A lot of what we have done has been dictated by outside circumstances (ESA).

This gives a picture of farmers who have intensified production or diversified responding to trends and changes in markets and policies. This dynamic view of the farm is supported by this comment: 'My wife is always saying 'I don't know why but we seem to be changing all the time'. If you stand still you go backwards. I am quite a progressive farmer'. However in terms of the future, in the case

of most of the TG and ESA farmers the plan now is 'to keep ticking over'. The only one ESA AH intends to expand and he has a definite successor. Another recognised that goals for the farm change, as one said: 'We were commercial farmers I wouldn't say that we are now'.

The farm family/farm life cycle

Those agreement holders who had identified a successor tended to be older and as such have older children, they were also more likely to be from a local farming background. For those who had not identified a successor this was usually due to having no offspring, the young age of the children, or indecision on behalf of the offspring (or other careers planned). In some cases it was clear that the children were not interested in farming, this was more likely to be the case with newcomers. It is evident that small farms find it difficult to sustain two families /salaries. If the son wants to return, the alternatives are to set up another business to run from the farm such as a timber or a contracting business. Successors working on the farm played varying roles in farm business decisions, from 'farmer's boy' to actually running the farm while the father took a back seat. In terms of influencing the decision to join TG, sometimes it was the successor who was the key driver. As already indicated changes to the farm business are linked to the farm life cycle.

Most interviewees were part of a family or a couple, however some were single farmers (male and female), with the females more likely to be newcomers. In some cases interviews were conducted with the 'farm couple' and it was clear that on a number of farms the wife was an equal partner in terms of decision making and running the farm, as well as playing a role as a book keeper, an extra pair of hands at lambing time or as a provider of off-farm income. Wives also appear to be a strong driving force behind decisions to join TG or the organic scheme.

With respect to the life cycle of the farm, a significant number of TG agreement holders had started the farm from scratch having bought it following a move from a previous family farm, or from another area or expanded a holding. In some of these cases the farms were described as run-down requiring the agreement holder to undertake repairs, re-establish and repair fences and hedges. In other cases, notably for those buying dairy farms, the new owners had elected to take a fresh approach and become less intensive (eg de-stock and stop fertilising). Thus a change in occupancy can often result in major changes in management practices which can have implications for the environment and for AES participation. For those from a local farming background who have bought or developed their own farm recently, there is a sense that 'young farms' were disadvantaged in relation to older ones in the area which had had a number of good years to help 'see them through the bad years'. The new farms were not buffeted against the industry challenges which have seen young businesses under pressure from events such as BSE and FMD.

Farm capacity is clearly important with respect to opportunity for participation. Capacity can be a function of physical resources on the farm that either restrict options to low-input farming (eg. marginal land) or provide options (environmental assets in the case of TG). Decisions to farm 'traditionally' can also be a function of wanting to limit inputs (costs and labour). Non-farm income appears to be important in allowing a farm household to survive on low-input farming, and as such alleviates some of the constraints that other farms reliant on farming income encounter. Farm management decisions are often wrapped up in the life cycle of the farm, the age of the farmer and the existence of a successor. Thus a change in occupancy, trajectory, or manager can often result in major changes in management practices and therefore capacity and opportunity for joining an AES.

5.2.2 Willingness: agreement holders' philosophy, identity and values

Agreement holders with local farming backgrounds tended to identify themselves as traditional family farmers, being 'born to it'. They value the way of life and being their own boss. TG agreement holders also value their farm's environmental assets, as one said 'The thing with this farm is we can walk around in the evening and its interesting' (this was compared to a neighbouring 'sterile' farm). Many of these TG agreement holders regarded their holdings as special places that are different from others in the area. They expressed this 'specialness' in many different ways. Clearly, wildlife was important, but so too was the history and farming connections, the generations who had farmed there, the landscape and field patterns; there was a sense of place and belonging. Newcomers also tended to value the same 'lifestyle' attributes of farming, a number of them saying: 'Farming is something I've always wanted to do'.

With respect to goals, agreement holders (TG and ESA) with farming backgrounds tended to emphasise the business side of farming: 'We sell fat lambs mainly so I'm mainly a commercial farmer' or 'My principal reason for farming is for the farm business' or 'We are a commercial farm and a family farm'. Others pointed to making a living: 'My main reason for farming is to put a loaf of bread on the table' and, rather than wanting to make a lot of money, they wanted to continue farming. Some emphasised sustaining the family farm: 'I am a commercial farmer who is keen to keep the family tradition going'. For one ESA agreement holder, although production was important, he identified quality as much of an issue as quantity:

My main goal for farming is full production. I try to produce quality. It used to be just numbers and that is one thing that I've noticed. We have always been a little bit particular about quality, but everyone else is now (ESA).

Some TG agreement holders considered themselves to be progressive in the sense that they like to learn and be equipped with information to make choices but not in the sense of jumping on the next band wagon.

ESA agreement holders showed a greater tendency to have commercial goals and this reflects their farming systems and businesses strategies described earlier and suggests a mindset that is geared towards production.

Many of the TG agreement holders with farming backgrounds have environmental interests but acknowledged that they needed to balance these with making a profit. These agreement holders were more likely to say that they aim to keep land in good order, a number believe in low-input farming and not pushing the land beyond its capacity (making them compatible with TG).

I find a balance between animal welfare and maintaining the environment as well as organic production, but at the end of the day you need to be able to make a profit.

The most important reason for farming is for the lifestyle. However maximising production is the most important part of the business but within the boundaries of good land management.

These TG agreement holders appeared to share a common experience as youngsters of enjoying wildlife pursuits. Although in the past these may have been badger baiting, egg collecting and shooting, they have since transformed into an appreciation of nature, as one said 'I've always been interested in wildlife... It's always been a part of life for us'. Some have identified themselves as stewards of birds and wildlife, and entered and won conservation competitions. In some cases the environmental tone is set by the wife who has developed an interest:

We have the same ethos as they have [Tir Gofal]. We like to farm in that way, we like to be environmentally friendly, we like to be organic, we like good food, we like to make sure the food is produced properly, we like to make sure the land is right, we like to see the land looking right, we like to see habitat.

Newcomer agreement holders (TG and ESA) appear to share a common love of wildlife and have chosen to farm for lifestyle reasons and enjoyment of the countryside, in many cases prioritising this above farming itself:

I was a Doctor and I was never anything to do with farming. I always loved walking in the countryside and being outside. I thought when I had cancer and could not carry on full time as a Doctor, I thought what do I want to do, what is the most important thing I can do in the world for everybody that is to try and save our species, our biodiversity and I just thought I would just come here and enjoy it.

There is an acceptance amongst many of the newcomers that they will not make a living from the farm (relying instead on off-farm income) as one said 'We are not stocked high enough to make a living. We are just enjoying the lifestyle'. For some newcomers the notion of production was almost alien, they recognise that it is a hobby and as one TG agreement holder said of her smallholding:

It's not really a farmer. I think of it as a private nature reserve. We have a few sheep and the numbers are diminishing because I would rather have somebody else's than keep my own, because it does need grazing obviously. I was originally attracted to it because of the flowers. It is really a very good flower meadow.

Thus the goals of the more traditional local farmers can be distinguished from those of the newcomers. The former prioritise profit making while trying to balance environment considerations, as they need to make a living from farming. In contrast the newcomers, often reliant on non-farm income, can afford to put protection of the environment at the forefront of their farms. There are clear links to capacity as discussed earlier and motivations as discussed below.

5.2.2.1 Motivations for joining Tir Gofal and ESA

The farm resource, life cycle and the business dictate whether the opportunity exists for joining TG. For example, the farm may be on marginal land and as such only farmed very extensively or it may have environmental and historic assets to protect – in such cases the farm lends itself to TG in a capacity, business and landscape/habitat sense. However at the same time the farmer needs to be willing to consider joining an AES. This willingness might stem from an opportunist or pragmatic approach towards schemes in general and their perceived benefit to the farm business or it might be derived from a positive attitude towards the environment (underpinned by a supportive philosophy and set of values and goals), although these reasons are not mutually exclusive.

Some agreement holders with local farming backgrounds tended to view AES opportunistically, that is, from a farm business perspective. They described the process of deciding on TG as part of looking at all the schemes to see which could help the farm from an economic perspective: 'We have gone for everything (schemes) that will add a little bit of extra income', or:

Everything that has come along, we have had a good look at and we have gone into schemes; farming connect, the organic scheme and Tir Gofal. We are pretty adaptable and if there is a chance to move the business forward [then we will consider it].

One TG agreement holder acknowledged that in his decision making he was a pragmatist and that his business decisions were in response to government policy and incentives:

So we are very much swayed or influenced by what government wants or society wants. If you want food we will produce food, if you don't want food then we will sit down and admire the scenery, basically.

For these farmers TG was seen as a way of providing a regular income (to buffer poor/uncertain farming incomes), as an opportunity to improve the farm, or, in some cases, as a lifeline to the farm business. For some farmers there was no question of not joining TG as one agreement holder explained 'When we applied (in 2000) prospects for farming were bleak, we felt we had to get into TG'. Indeed the traditional farmers interviewed in Welsh stressed that they could not afford not to enter TG and it was believed that many local farmers are in TG because they have come to depend on the income from it.

One of the main reasons for joining for nearly all TG agreement holders interviewed was the incentive of capital works payments for maintaining boundaries (and in some cases woodlands). The fencing and hedging payments were certainly very popular and in particular helped those who had taken over run-down holdings where the boundaries needed to be repaired/restored. The payments were seen, not just as a financial incentive, but as an enabler to achieve a better farm (better stock protection, tidier farm). Although a number declared that without TG they would have carried out the works, they acknowledged that it would have been at a much slower pace, and that TG gave them the push and encouragement to get the job done. For all ESA interviewees the main reason for joining was for payments for hedge restoration. It was an incentive because as one said 'It costs a fortune to maintain small fields on your own'. Farmers view payments for hedge maintenance in a business like way, as one ESA farmer noted one his farm is an asset that needs to be maintained and ESA is one way of doing this. Another ESA farmer placed a high value on hedges because they provide shelter for the lambs and therefore help him farm more effectively.

Many of the traditional agreement holders saw TG as an opportunity for getting paid for what they were already doing or aspiring to do, it enabled them to farm in the way they wanted to, ie not fertilising and not grazing high stock numbers. In some respects it was seen as an endorsement of what they were doing or planning to do, as one remarked: 'In the late 90s I was using less and less fertiliser, I cutback, I was getting less intensive and I couldn't wait to get in [to TG]. Another agreement holder new to the area agreed: 'Tir Gofal represented an ideal opportunity to turn the land back into productive use while at the same time looking after the environment...Tir Gofal appeared to fit very nicely into our plan' which was to work the farm. Other agreement holders saw TG as helping those who wanted to de-stock, they recognise that they are locked into a system of farming which they don't necessarily support, as one remarked: 'It is a way of financially compensating for reduced stock, overstocking is one of biggest problems on small farm as it's hard to cover fixed costs without high stock numbers'. As such, they regard TG fitting in with their approach and with their philosophy, 'its very nice to have subsidy for doing what we agree with rather than hellish payments for having lots of sheep which we don't agree with'.

A number of traditional TG agreement holders mentioned that they had areas of environmental value on the farm such as woodlands, meadows etc and did not want to 'throw fertiliser' at them. With the combination of low intensity farming and high environmental value they felt that, as one remarked that 'our farm lent itself to the scheme'. It also meant that it was relatively easy to meet the eligibility requirements. One farmer summed it up: 'It was perfect for me, also we had all the flora and fauna here already'. Some agreement holders had specific farm features they wanted to preserve. For example, one farmer had a wet field which he had always maintained: 'because in the middle of the summer you would see thousands and thousands of moths and butterflies almost on every square yard that you are walking on'. When he found out that 'there are schemes that will pay you to look after it' he joined because he was 'doing it [conservation] anyway'.

Often TG agreement holders recognised that it was a combination of the payments and the ability to carry on farming in an environmentally friendly way that attracted them, as one farmer said 'On a farm like this it just did not make sense not to join'.

Newcomers tended to have bought farms with high environmental value and saw that TG could assist them in preserving habitats and other features. One said proudly: 'We had the highest number of points in Wales when we put in for it... The habitats and historical buildings that are on the land. It's great, it's fantastic.' Other newcomers wanted to be told what to do: 'I wanted the help. I had never run anything like this, I was doing it on instinct'. Similarly, another welcomed TG as a 'framework' to manage the farm in an environmentally friendly way. Others agreed that if you want to improve the farm it is far better to be in the scheme and get a little bit of encouragement and support. This encouragement was appreciated particularly on the more run down farms:.

It was the only point in the whole thing where anybody has come and offered us a thing and not just that, but help specifically aimed at what we were attempting to do...It was an intensely useful, cheerful and optimistic thing and gave us encouragement.

The heterogeneity of the TG agreement holders means that many different types of motivations are at work. However a distinction can be made between the more traditional farmer and the newcomer with respect to motivations and this is linked to their capacity and willingness as discussed already.

In terms of the organic agreement holders interviewed, they tended to join TG because they saw the two scheme (OFS and TG) aims as being compatible and regarded TG as a further stage in protecting the environment or a natural progression as 'virtually every other organic farmer has joined TG' anyway. As one remarked: 'We joined Tir Gofal because we agreed with everything that Tir Gofal stood for. We were already organic so we saw Tir Gofal as just a continuation of the way that we were farming'.

5.2.3 Engagement

5.2.3.1 Engagement with other farmers

Connections with other farmers and agreement holders

There are mixed responses to questions about the 'connectedness' of the local farming community. Some give the impression that they are not well connected to other farmers and not part of a strong community of local farmers. One view was that once farmers used to help each other but with fewer farmers now there is less co-operation. Some agreement holders mentioned the isolation and loneliness, also the fact that some neighbours had sold up and moved away. However, one newcomer remarked that other farmers had always been helpful: 'if you want calves pulling or a field cutting because your mowers broken they are there straight away, you can't beat it, they really are nice people, we are very lucky'. One TG agreement holder mentioned a very good network of farmers in the area (Dyfed) in which all aspects of farming are discussed. Another newcomer (also in Dyfed) believed that the local landscape of smallholdings contributed to a community feel:

If you have the land in the right size in the right place and the right chunks and the right distance from the town you get a community that starts to work and can sustain itself. Whatever your vision of sustainability is you have to have that structure right otherwise the right people just can't end up in the right place at the right density to keep economic activity going. That's why we are here.

Some agreement holders interact with other farmers within local discussion groups, such as a local grassland organisation which for one agreement holder 'was free ticket to see how other farmers

are'. Another agreement holder (newcomer) praised the community of private nature reserve owners facilitated by the local Wildlife Trust which allowed farmers with similar values to meet up and visit each others farms.

With respect to farmers communicating with each other about TG, this depends on how well networked farmers are. Some agreement holders do discuss TG and swap notes, they also suggest to other neighbours that they might join TG. A few attributed their decision to join to advice from a neighbouring agreement holder who had had a good experience of being in the scheme. Some mentioned one or two agreement holders they knew in their surrounding areas - (eg Monmouth shire). However there is no evidence of a large TG community regularly interacting. One agreement holder said that he was one of the first to come out of the ESA scheme and go into TG and advised his neighbours to do the same. With respect to hearing about ESA some agreement holders had heard about it through word of mouth and often asked other farmers who were already in the scheme:

I asked around before going into the scheme because we were a little bit late going in. I was just a bit suspicious really because I thought we were going to have to cut production, but it didn't affect it. I asked for feedback from other farmers. I am always one of those who usually ask(ESA).

One or two TG agreement holders were looked upon as leaders: 'Other farmers come to this farm to see what we do. I've always been a grafter, they look on me with respect'. By entering farm environment competitions some agreement holders have gained a high profile amongst other interested farmers and environmental organisations and possibly the public. A number of agreement holders however were not influenced by others in TG, do not interact with them and do not themselves influence or persuade other farmers to join. There appears to be no distinction in different farm(er) types (traditional or newcomer) and the extent of interaction with other farmers.

Negative perceptions amongst some in the community

In the early days of TG negative views were circulating about the scheme. As the good opinion of other farmers is important this had an impact on some agreement holders. For example, from one agreement holder's point of view, the adverse comments he got from other farmers about the condition of his land was for him the main downside of the scheme:

I have fields that are reverting to unimproved grassland. They have these Horsetails and they are all over the field. When I drive up the field I think 'oh no what will people think.' It's the classic looking over the hedge syndrome. I got someone to top them the other day, which is all I can do... That's a real negative thing to have those on public view. If it was an animal people would say it was cruelty to animals, but you can't have cruelty to fields.

Agreement holders also believed that there was an early perception amongst non-agreement holders that TG involved a lot of restrictions which initially put a lot of farmers off: 'Around here in the farming community there was a lot of scare mongering about Tir Gofal, they were saying I wouldn't touch that with a barge pole, you can't do this you can't do that'. Agreement holders described the notion amongst non-agreement holders that 'you weren't farming properly' if you joined TG. Some agreement holders were ridiculed, for example, for putting up double fencing: 'my neighbours were thinking 'what the hell is he doing?'. The hostility, reluctance and general mindset of farmers who do not embrace something new like TG when it first appeared was criticised by some:

I remember a meeting with the PO who was pushing TG, one farmer said I don't want to join the 'sandal brigade' and I spoke up because he tore into that PO. I said 'Weve got to change, there's a surplus of food, it's no good chasing your tail growing more lambs, we'd get more points with the public if we did environmental things and grew less food'. Later on a lot of

farmers were sorry they didn't go into TG. That was back in 2000 and in the later years as well. There are so many farmer who have this tunnel vision production, production, not doing their costings, their lamb and beef production is costing them money and effort.

Agreement holders point out that the older generation still think about tidy landscapes and drainage. In the old days a good farmer was seen to be an improver: 'If you were not ditching and things like that you were not doing a proper job.' Some felt that both the young generation of farmers and the more educated farmers (often newcomers) are more environmentally active. Newcomers recognise that the traditional family farmers are more set in their ways whilst they (newcomers) have to be adaptable and are therefore more open to new ideas:

The farmers have been here for generations and tend to be quite set in their ways and are reluctant to change. We have always had to be open to new opportunities because we haven't got enough land to farm in a conventional way and make enough money out of it.

Those farmers who are set in their ways are thought to have trouble understanding the mind set of TG farmers:

I have another neighbour on the other side who can't understand why I am planting anything, why plough up a good grass field and plant corn in it? And why plant 1000 trees when he could put his cows on it? Everyone has their own ideas. I can't imagine him going into Tir Gofal in a million years. His son is chainsaw mad and he would cut down every single tree on our farm if he had his own way. There are four sons and they are all indoctrinated now. "You pull those trees out and you will have more room for the tractor to go underneath. Cut closer to the hedge for the silage", they can't understand why I'm leaving six or eight feet around every field and we don't put fertiliser to the hedge and we don't over fertilise and we don't do two cuts of silage like he does.

These remarks suggest that there is a cohort of farmers resistant to AES, although some have changed their minds since TG has become more established. Adaptability and necessity has meant some farmers (more likely younger, more educated or newcomers) have had to embrace AES to enable their farm to survive. More traditional farmers, who are set in their ways, regard farm improvements and intensification as the only means of sustaining the business.

With respect to ESA and views of the community, there was a feeling that the farming community were reluctant initially to embrace any changes as with TG but were slowly changing:

Most of them view the schemes in a positive light. I think they are a bit wary at this end, they are a different type of breed. They don't like change, they like to do everything like their fathers did it before. They are coming around to it.

However ESA uptake was believed to be significant, also that farmers were becoming more aware of the environment although this was attributed as much to regulation as to ESA.

Views on farmers' environmental responsibility and Tir Gofal

Two main views emerged from the interviews, one, that farmers in general already take enough responsibility for the land, the other, that some farmers could try harder. In the latter group some farmers are described as having 'gone very intensive or just ranching the land', as described above. However, it is recognised that not every farmer is in a position where they can farm environmentally, that they are locked-in to intensive systems and cannot afford to lower inputs:

If you're the only son and there are no debts it's one thing but if you're renting or have a huge mortgage, you can be a 10x better farmer but you never make any money so you have to increase production.

Generally they are not really focused on protecting the environment. Farming is a very difficult thing to make a living out of because you have to spend so much in order to get so little. I think that you tend to find that you're so busy all the time to keep your head above the water.

They (farmers) always start off with the old hay fields first. What they mean by improvement I mean by degradation. That is ploughing it up and sowing one of these new swards of hybrid plants and altering the nitrogen and phosphorous levels and everything to make it more productive. Of course its not the farmers fault, they have been manipulated by Government to be more and more productive... Any land that survives now is because people have chosen not to improve it.Only the wealthy and people like me who are determined to do it for very different reasons [farm less intensively] can afford to be like that (newcomer).

Some agreement holders hold strong views about who should be allowed to join TG. Some believe that only those who are truly committed to the environment should be in TG. They have the impression that whereas entering TG in the early stages was more demanding, now 'almost anyone appears to be able to get in'. Long term agreement holders see their neighbours joining and 'carrying on farming just as before'. One view is that rewarding farmers who make no attempt to change but simply have a 'run-down farm and some 'habitat' is not right: 'You go to some farms round here where it is like going back in time. It's giving them money for old rope'. Instead they argue that the encouragement (scheme funding) needs to go where the results will be more visible. Also it is felt that there were some farmers in the scheme who are providing very little in return and are not being actively monitored by TG to make sure the work is done. This was giving the 'good' agreement holders a bad reputation. Agreement holders tend to refer to their neighbour's behaviour to demonstrate their own environmental credentials. They are particularly critical of those farmers who enter schemes just for the financial reasons. One, for example, described an older farmer:

He went into ESA at one point and they said "you can't put fertiliser on that hill now" because he was having a payment for it to be a certain grass. He said "nobody is going to tell me what to do!" and he had signed all the papers! He went up there with his fertiliser spreader. That is fine, but don't sign the papers and go into the ESA for all that money.

5.2.3.2 Engagement with POs

There was praise for the POs who worked for CCW in the early stages of TG. These POs provided huge assistance with joining the scheme, both in terms of working out how to make a farm eligible and to make sure the options were realistic, manageable and compatible with the farm system. POs understood the restrictions that TG would place on the farming and advised farmers accordingly. For example, some were advised to leave land out as a buffer in which they could farm more intensively if required. More recently the nature of the relationship has changed, whilst the early POs were familiar visitors, with the transition to WAG, POs have been absent from the farm. Some farmers were also on their fourth or fifth PO and many could not name their current PO or had not met them. This may be a reflection of the stage they were at in the scheme, and for some, they were confident that if needed they could phone the office and speak to the PO. However another commented that there have been far too many POs and that this is unsettling, in particular it prevented a working (and trusting) relationship being developed. Agreement holders acknowledge that PO numbers have dropped and sense that the moral of TG staff has also fallen. Those who had recently joined TG were more likely to have a poor impression of POs:

The officers have six month contracts, we never ever get the same person and when they come they don't know who you are. They may agree with you that that was probably not the best thing to do, but they don't explain what you can do now, but I don't think they really know. They are youngsters just out of University... They don't know anything about the farming side

of it... It would be really nice to have the same person coming back year on year so that you could build up a relationship with them.

It was also noted that there was huge variation between one officer and the next: 'some are really helpful while others are completely unsympathetic or are too young and inexperienced'. Another commented that there was 'far too much conflicting advice and far too many controls without the evidence to back this up – there needs to be far more honesty and trust if they are to work'. These negative comments which tie in with criticism of prescriptions, are from 'traditional farmers including Welsh speaking farmers. Proximity to the office is seen as a great advantage by some because they know how much pressure the POs are under now. For this reason there is a sense that more remote farms might find it difficult to get advice.

For some newcomers to farming the approach of the POs was particularly welcomed:

The scheme was very encouraging, it was the only input from anybody that gave us any encouragement. It was also very clear in its aims. They [POs] were used to dealing with people who knew what they were doing... We weren't quite like that and it was very nice to be given the benefit of any doubt.

Another newcomer AH remarked that the PO had been a great help explaining how the scheme would work and what options would suit her farm. The PO also helped with her desire to learn more about the plants and wildlife by providing books and pamphlets. However the agreement holders said she thought that some TG staff may not value her type of farmer as much as conventional farmers:

I would also like to ask them (TG staff) not to denigrate the newcomer farmer, like me, or the hobby farmer when they are really making a contribution to the landscape and native breed conservation and taking part in the commercial farming world.

It was acknowledged that some farmers had had disputes with their POs or differences of opinion but these appear to be rare, as one agreement holder explained this can often be due to non-compliance: 'Some farms say they can't see eye to eye but I think some farms try to bend the rules. I've seen fencing and gate hanging I wouldn't pass myself so fair dos there has to be standard'. In one case an agreement holder blamed a poor working relationship with the PO, lack of support. compounded by having five different POs in five years, for his decision not to renew, even though he was committed to the aims of TG:

Once we joined Tir Gofal we found it wasn't quite like that. We got absolutely no help or assistance from them at all. If we said we had a problem they immediately penalised us... The first payment was made approximately six months late, the next payment took three and a half years to be paid.

He also attributed the poor relationship to the fact that he was well informed about TG and questioned the prescriptions. He felt he was being patronised by the TG staff:

We are not like normal farmers, I think they think we can't read the book on Tir Gofal. Not only can we read the book we also go on the Internet and check what other people are saying about Tir Gofal.

Most agreement holders agreed that there was little feedback from the PO/WAG about TG: 'Nobody has told us that what we were doing actually made a difference'. Although they could see it on their own farms it was agreed that to have confirmation and endorsement would be nice: 'We would be interested to know if we are doing the right thing'. To learn about the scheme's impact in a wider sense and the contribution they were making would also have been welcomed. One agreement holder commented he had much better feedback from the Woodland scheme officer. In terms of monitoring, a number of agreement holders mentioned surveys that had been done on their farms

to document rare species early in the scheme but since then they have not heard anything and had no idea how things have changed:

You don't get much feedback, there is no audit, I think that's probably the best word. There has been nobody here after five years to say this has improved that much because they don't know what the yardstick is to start with. But I think it has because there are always birds about the place and rare things like butterflies.

We haven't had any feedback really. The most annoying things that they do when they do come out, it was with Tir Cymen, the first thing they did was come out with their little wheels and measured the fences to make sure that you haven't been cheating. They don't see any improvement because they are not here for long enough to see it.

We were a bit disappointed because we didn't seem to have any follow up from the organisation. I did go to see them last year and they looked in their file and they couldn't understand why we hadn't had any follow up. Well it would have been nice if somebody had come out and said we have done a good job that the hedges are looking better that is a good bit of planting.

However, not every agreement holder was concerned about recognition as one said 'You don't do it for a pat on the back you'd do it for your own benefit.' Some agreement holders felt a separation from their POs and other agreement holders after the five years. One remarked that he had learned a lot from the training days that POs put on for new members but that he was no longer invited to attend because he has now been in the scheme five years. He would like TG to have frequent open days where farmers could get together and talk about the scheme. Others mentioned open days but a number said that they were too far away. One newcomer contrasted her experience with the local wildlife trust who gave her more support, they surveyed the plants and provided advice or a visit when required.

From these comments it is clear that PO support for TG has been important, particularly in the early stages of joining the scheme; that support to newcomers is particularly valued; and that recognition through feedback would be welcomed by the majority of agreement holders.

With respect to ESA views diverged. Two farmers said they had never had any support from POs. Although one acknowledged that he had not sought help: 'if you don't seek support, you can't say you've been let down'. One agreement holder also claimed that they had no feedback: 'We've certainly had no information on the area and whether it has made any difference. None at all'. However, the other two ESA interviewees (who also said their knowledge had increased) were proactive in seeking help and felt they have had good support from POs: 'Really good they were. Feedback is important because then both sides know because one might be thinking down a different avenue to another'. Another comment suggested that feedback had been delivered, he appreciated the relationships and the flexibility this offered:

'We did as much as we could do [hedging] and they [PO] have remarked on how good it has turned out. So it has worked for both. They are very impressed. Yes that was really good and it was quite pliable on both sides as we adjusted things to suit those because we did change the plan very slightly just to suit both of us. So it wasn't just "you will do this and you will do that". It was good for both sides. Some farmers don't realise there is some flexibility and that is where a good project officer comes in, they explain things from the start.

One ESA agreement holder mentioned that the quality of POs has changed, whereas before POs were criticised for knowing very little about farming, now they were more up to speed: 'You have

got to know what you are on about. They [WAG] seem to be using people with farming experience now.'

5.2.3.3 Engagement with WAG: views on policy

For some agreement holders, who were newcomers or more educated, there was a tendency to feel that there was a general lack of information about what the prescriptions are trying to achieve. They would have welcomed more dialogue and more feedback. One agreement holder commented that there was little information available publicity for those thinking of entering the scheme.

In terms of the aims of TG, whilst many agreement holders did not specifically know the aims, there was generally an understanding of what the intended outcomes were and that these were compatible with those of agreement holders: 'Personally I think that the best thing is to stick to your instincts. I assume that the aims are more or less my own aims'. While some agreement holders felt that objectives of schemes needed to be widened, for example, that the agri-environment funding in general should be reformed to encourage local production of wind and energy power, others had concerns that food security issues might become prioritised by governments in the future with detrimental effects to the environment. Some pointed out that to achieve the best outcome all of Wales needed to be in a scheme, and that little could be gained using a piece meal approach like TG. However, others argued that small changes to the landscape could be very effective that a scheme like TG was compatible with the mosaic of land uses and habitats found in Wales. There was a sense that the scheme was operating well:

A lot of farmers have joined the scheme and you can see the hedges being laid. Where ever you go you see land been put back to the plough [arable options]. All because a little money in the right place has given the encouragement to farmers to do the work. Just a little nudge to push farmers in the right way.

Others, however felt that this approach was flawed, one agreement holder smallholders argued that some of the most biodiverse and historically important parts of Wales were not in the hands of conventional farmers but in the hands of people like himself. The logical conclusion to this line of reasoning was that if it was important to manage and enhance these places and that smallholders needed to be treated fairly in gaining access to the scheme and that there might be hidden barriers under current arrangements. Another view held by those in TG was that the scheme does not go far enough in rewarding good conservation work. TG was used to prevent destruction of habitats by farmers but did little to enhance the management of high value habitats and landscape. It was argued that there should be a system of payments by results:

I think the money must truly reward biodiversity success. At the moment it rewards somebody with a trampled rushy meadow with nothing that ever flowers because they thoroughly overgraze it and graze it at the wrong time of year and probably put in the wrong kind of animals as well.

In terms of the future of TG many strongly felt that continuity was needed, that it is behoven of WAG to implement a long term policy so that both the farmers and the tax payer can see the results. They were cynical about politicians making changes for changes sake and called the proposed change to a new scheme, 'a knee jerk reaction'. There was deep concern amongst some that TG would be replaced by a more 'watered down' approach that attracted less committed farmers:

My biggest concern is that we have invested in a few areas of ground but they change scheme so dramatically that you end up trying to get production back and putting in clovers and improved grasses to try and get production back because you have lost direction of scheme. That's what I do like about the scheme[TG], it is targeted so if someone wants to do it and do it well there is rewardif they melt it down for everybody those who have been in it for 10 years will think that's a huge step back and for those who've never been in before probably wont be committed.

Some specific policy issues were raised, for example, confusion and rule changing about dual funding issues for those in TG and OFS. Those that left TG because participating would have impacted OF payments, or those who had to pay back funds, were very unhappy about the way in which WAG had dealt with them. Equally some criticised the waiting periods and the over subscription of the organic scheme which resulted in less money available for TG. Another issue that was raised was the fact that land put under environment practices appeared to become ineligible for SFP, and as such they were being penalised:

Another problem is that you put in all this 3 m, 20 ft swathe of hedging that they want you to do. It all looks lovely when it's first done, then it fills with brambles and then five minutes later a man from the Ministry comes along and says that isn't grazing land anymore and then they take it out of your field size. It seems so petty beyond belief when you think that we are all in this together and I am trying to do something for the environment and I am being penalised. That kind of thing doesn't really add up, and it all falls down there. You have the Tir Gofal here with their environmental and the Ministry there with their anti-environmental. There is a big divide. There really is. We put a pond in on the other farm for the environment with ducks. They come along and see it from aerial photographs and say that has to come out of your grazing now. It is so petty that two things fight against each other with the farmer in the middle playing bat and ball. That is where it goes wrong.

There were a range of views about WAG policy and its implementation. However the overall thrust was that consistency and joined up thinking were paramount, as is rewarding good practice and environmental improvement.

5.2.3.4 Engagement with the public

Educational visits are popular with agreement holders and, although they are used to increase points and gain payments, they are also seen as a very important way of interacting with local wildlife societies and school children. Agreement holders with this option do more than the hours required because they enjoy it and are proud to show off their farms. All agreement holders appeared to hold the view that people as tax payers should be made aware of/ become more appreciative of farmers' activities in the landscape, equally all agreed that most public do not understand the farming industry and that the media does not support farmers. Although some felt that farmers have a bad reputation with the public they also noted that it was getting better as people who have moved into the area have begun to support the local economy by using the farmers' markets and taking more interest in locally produced food.

5.2.4 Factors affecting agreement holders entry in TG and ESA: summary

Farm capacity is clearly important with respect to opportunity for participation. The physical nature of the farm determines the nature and extent of farming opportunities and environmental management. Physical resources on the farm either restrict options (eg low-input farming on marginal land) or provide options (environmental assets in the case of TG). Decisions to farm 'traditionally' can also be a function of wanting to limit inputs (costs and labour) because agreement holders want to farm within the capacity of the land or because of it is a lifestyle choice. Newcomers are more likely to have elected for low-input farming for lifestyle reasons and because they have bought farms with high environmental value which they want to protect.

Traditional farmers more likely to rely on farm income whilst those new to the area and to farming more likely to supplement household income with, or rely on, non-farm sources. As a consequence newcomers tend to view the farming as supplementary, a hobby and sometimes not as a farm

business at all (eg nature reserve). Where non-farm income contributes to the household this appears to be important in enabling a farm household to survive on low-input farming

Farm management decisions are often wrapped up in the life cycle of the farm, the age of the farmer and the existence of a successor. Thus a change in occupancy, trajectory, or farm manager can often result in major changes in management practices and therefore capacity and opportunity for joining an AES.

The goals of the more traditional local farmers can be distinguished from those of the newcomers. The former regard making a living/profit, while trying to balance environment considerations, as important. In contrast the newcomers, often reliant on non-farm income, can afford to prioritise protection of the environment. As such traditional farmers are motivated by the financial and business rewards that TG can offer. Capital payments to restore their boundaries were seen as an incentive to improve the functioning, value and appearance of the farm. Equally annual payments were considered to help sustain the farm business and family. However at the same time they viewed TG's environmental goals to be compatible with their own and could see that TG would fit into their farming system without too many changes. Farms which were marginal, low intensity and rich in habitat and historic/landscape features in particular 'lent themselves' to TG. Newcomers were motivated more by a personal commitment to the environment. For ESA the main reason for joining was for payments for boundary restoration and the fact that ESA it did not require too much of a change in farming practice.

With respect to engagement, the general view was that farming networks were not particularly strong (weakened by restructuring in the area) and that other farmers were not influential with respect to agreement holders' decisions to join TG. Agreement holders themselves had not been influential in persuading other farmers to join either. With regard to other farmers there appears to have been an initial resistance to AES amongst more traditional (often older farmers) and this is related to a production-oriented mindset and a self identity about what it means to be 'a farmer'. Agreement holders believe that adaptability and necessity has meant some farmers (more likely younger, more educated or newcomers) are more willing to embrace AES. There was a sense that TG agreement holders had chosen a different business trajectory compared to some of their neighbours who they described as expanding and intensifying. TG agreement holders hold strong views about who should be allowed to join TG believing that only those who are truly committed to the environment and have a positive impact should be eligible.

PO support for TG has been important, particularly in the early stages of joining the scheme, both in terms of working out how to make a farm eligible and to make sure the options were compatible with the farm system. Some farmers suggested that the high turnover of POs and the mixed quality were detrimental to the relationship with the farmer and the implementation of the scheme. PO support to newcomers was particularly valued. Recognition of achievements with TG and ESA through feedback would be welcomed by the majority of agreement holders. There was a general sense that there was a lack of policy continuity and great concern that TG was ending, particularly given its large investment in environmental and human capital. A number of TG agreement holders had concerns about their future income (and the survival of their farms).

With respect to different types of farmers and their capacity, willingness and engagement with the schemes, traditional farmers (local or having moved into the area), who rely on the farm for their household income, are more likely to enter schemes that provide business advantages, are compatible with farming systems and farming family aspirations. They are also more likely to identify themselves as traditional commercial farmers, to have identified a successor, and to criticise PO support and AES policy in general. Newcomers to farming are more likely to regard the farm

business as supplementary to their income, relying on non-farm income. They tend to join TG for environmental reasons, and are more likely to value PO support and less likely to have identified a successor.

5.3 Agreement holders: experience of the scheme (TG and ESA)

5.3.1 Impact on farm management

There are divergent views on the impact TG has made on farming, some found that little change was needed in their farming system, others regard farming under TG as representing a radical change. In this sense the experience is a reflection of the intensity of farm practices prior to joining TG, the options chosen and the motivation for joining. For those farms which were already low-input often little change was needed, indeed, as already noted, the main reason for joining was because the scheme fitted in well with the farm system:

The scheme hasn't really changed the practices on the farm. We would have farmed in the same way without it. But we have probably done more fencing than we would have, especially around the woodland areas and some better environmental practices.

For some it has not changed things particularly because TG has helped them operate a dual system of restricting stocking rates in the TG fields and stocking more intensively in non-TG fields. One agreement holder described how he reduced stocking density a little on the hill but had taken on extra land to compensate:

'So you could say we have had to fork out for the other land, the grass keep, that is true, but on the other hand the lambs are growing better and we are not paid on headage payments so we cut down a bit as well on that so that they have all got a bit more to eat. Before that one was lifting their leg up for the other one to eat!'

However, others found that joining TG required significant changes. One agreement holder, for example, who formerly ran an intensive system, remarked: 'It was exciting going from really intensive looking at the different options.. hay meadows, arable and so on. A quarter of the farm became extensive, it was a big shift for us'. Another agreement holder described how the arable options required some extra effort, he said: 'We reduced stock, and had arable areas set aside for corn growing and no spraying, yes this had an impact on the way we farmed. It wasn't easy, it needed a bit of learning'. Although regarded as a challenge these farmers did not look upon these changes in a negative sense. Indeed some agreement holders described the advantages to the farm of taking on options they were initially reluctant about such as arable options. For one agreement holder having to grow turnips: 'worked out really well, which we wouldn't have done if we hadn't been in Tir Gofal'. For the most part the changes required were viewed as positive and farmers derived satisfaction in implementing the changes.

However, some had less positive experiences and views. One (newcomer), for example, referred to the requirements as 'hard work' because they did not have sufficient labour and they were unrealistic in their plans:

*As it was we were far too optimistic. We picked off far too much. We planted three and a half thousand trees, we've put in god knows what, we did it and it b**** nearly killed is. It distorted the path of family life for five years.*

Similarly for others the agreement has created problems, this seemed to be more the case with, traditional farmers and with Welsh speaking farmers. For one TG farmer (Welsh speaking traditional) taking sheep off the mountain in the autumn has brought additional costs and problems:

As they are tugged on better land, we have had a huge increase in twinning. This has placed more pressure on the restricted area of enclosed grazing on the farm and because we can't feed them well enough up here we had to rent land in the lowlands to cope with the feed demands of ewes rearing twins up here. This has created a lot of additional cost and inconvenience. Also because the sheep are off the mountain for so long the place is beginning to 'run wild' and the value of the entire area for sheep grazing has plummeted.

Another farmer (new to farming in 80s) found that TG did not fit in with his system. He had a holding of high environmental value with a number of historic sites, rich habitats and a SSSI and was committed to aims of TG but found that it did not fit in with his management system which involved the out wintering of cattle. He did not agree that the restrictions on supplementary feeding and argued that they caused animal welfare problems. He wanted to house suckler cows inside but was refused permission for a livestock shed by TG. He had a lot of the problems with breaching TG prescriptions and these stemmed from managing the cattle outside through the winter, particularly grazing and supplementary feeding. The agreement holder has been penalised 100% for the last two years for non-compliance, as such he has decided to pull out of TG because it was costing him too much money.

The common view held by those with negative experiences was that whilst ESA allowed conservation to take place without interfering too much with farming, Tir Gofal has a much bigger impact on farm management.

ESA does not seem to have brought about many changes to farming practices. All agreement holders interviewed said that they did not have to reduce stocking rates or make any management changes to join the scheme. The opinion was that this was fortunate compared to 'some farms which have had to drop their stocking densities and become environmental'. Another pointed out that it only fitted in because they were winding down and that if they had to cut stocking rates to comply with it then it would have been a disadvantage. For another it was a good experience as it fitted in with the farm business very well, being able to leave the 'the nice flat fields in Tier 1 and the hilly bits they put in Tier 2'. Two agreement holders put hay meadows option in the scheme as a secondary option, although this appears to be more of a gesture and was generally considered an inconvenience. This comment made by an agreement holder with regard to the timing of ESA following a period of improvement of the farm, suggests that the ESA was only acceptable because the farm had already been developed:

In a way for us, I guess, because we are so small, basically because we weren't planning anything radical anyway, it hasn't had much impact. How much impact it would have had if it started when we first came here and the place was totally unimproved and we haven't been able to do things. It would have been devastating. Well we wouldn't have probably gone into it. For instance when we first came here no fat lambs had ever gone off the place they just went into stores. Because it was very poor grazing and a very poor place generally. By the time we were up to 400 ewes and had improved and reseeded we were selling of fat lambs. There wasn't an ESA then anyway the emphasis was on producing more (ESA).

However in one case a farmer found that reducing stocking levels had not reduced profits because: 'what we kept did better so we got more money – quality rather than quantity'. ESA was also found to tidy up the farm and made farm management easier: 'It looked a lot nicer, the hedges, double fenced, a lot better for birds and livestock'.

5.3.2 Impact on farm business

Views on the effect of TG on the farm business were in the most part positive, for some the annual payments represented a significant part of the farm income whereas for others they were seen as helpful but not vital to sustaining the business. It is clear that for many agreement holders the annual payments bring a regular income not subject to the vagaries of the markets and provide some form of financial security or buffer. This security enables them to make plans, and provides continuity for developments and strategies including employing farm labour, and in some cases allowing a son to remain on the farm:

Realistically we haven't made much of margin in last 10 years producing beef and lamb so by attaching myself to schemes like this it allows you to produce meat but gives you buffer in the market place and income that allows you to farm not so intensively.

Some annual payments were considerable, in some cases in excess of £20,000 and as such made a significant contribution to the business:

Financially we look at it as a separate enterprise, sheep, beef and the environment. If it (the scheme) finished it would-be like dropping a complete system out of your business from a financial point of view and have a major impact... as an income stream it's vital.

In some cases the payments represented a lifeline to the farm, as one agreement holder's wife said: 'we can not carry on without the subsidies that go with farming environmentally', another concurred 'I need the income and cannot really imagine what it would be like without it. I doubt my son would be able to stay at home'. Comments from another support this:

We wouldn't have survived as a farm without it because we are quite small. We only have 108 acres altogether. I'd don't think we would have managed to have paid the mortgage it was that close at times.

For some the income is critical and they continue, even if they found that the prescriptions and changes required are problematic: 'I am not totally happy about what is prescribed but cannot do anything about it. I could not afford not to be in the scheme and have to grin and bear it'.

The capital payments are also seen as giving farmers 'extra money to put back in the farm' that is improving the capital value of the farm and the condition of the land, especially the arable leys. Fewer farmers held the view that TG restricted their ability to make a profit as this agreement holder observed:

We would have been better off financially if we were not in the scheme, mainly due to the impact on stocking rates and we would have pushed the land harder. The payments that we receive through the scheme probably don't make up for our lost profits due to reduced stocking levels. For example, we haven't been able to take advantage of any opportunities to buy store lambs/cattle from neighbours to feed up and sell as we would have overstocked again— environmental conservation can certainly be detrimental to commercial farming

Other agreement holders agreed more generally that TG reduces the capacity of farmers to produce and that being in TG takes the option of being intensive away from them. It also takes some other options away, one newcomer for example wanted to grow blueberries but could not within TG. One agreement holder referred to not being able to put enough fertiliser on as 'running the farm down', an opposite view to that expressed by others who saw TG as helping to improve the farm. In some respects delays in payments have also affected the business, particularly where agreement holders have had to go into debt while waiting for their payment. Another unresolved difficulty was the mismatch of the agreement anniversary dates and payments and deadline for capital works which represented difficulties for some. Loss of SFP because of fencing off woodland and stream corridors has a further (minor) impact on income.

For ESA agreement holders there was a view that the scheme had helped the farm business because that payments were received for doing what the 'farmer wanted to do'. It also brought in a bit of extra farm income which was particularly appreciated by one agreement holder who was living on tight margins. Another claimed that he could not afford to maintain fences if it was not subsidised. However one agreement holder thought that that ESA had not made a big difference as the payments were not that high, although his was a small farm. In comparison to Farm Improvement Grants which were 'good because you could actually do something', ESA was thought to be 'just fencing off corners and not ploughing bits' by one farmer who had a history, and a mindset, of farm improvement.

5.3.3 Impact on the environment

Farmers appreciate the positive impact of TG on the landscape, particularly the well maintained and restored walls and hedges. A number commented on the landscape looking tidier as one said 'When we first came here every gate had to be lifted and was tied up with bailer twine'. Some also note that 'a little bit of money has gone a long way', ie that small things like ploughing up small areas of land for corn can have large landscape impacts. The difference in the landscape, especially in the network of field boundaries has been noticed. Some farmers enthused about the number of birds particularly lapwings on the arable leys and hedges and curlews in a wet field. However others claimed that there had been no significant change in numbers or type of wildlife. Some had expected bigger changes and more species: 'What I don't understand is why we don't have any curlews'.

One newcomer agreement holder said she had seen marked improvements in the biodiversity of her wet meadows during the five years she had been in the scheme. She observed that the grazing regimes that had been introduced had definitely been a success. Another attributed the return of otters to streamside fencing and shade tree planting. Another comment shows that farmers are observing signs of wildlife that they attribute to the scheme:

To be honest I think the schemes are working, well I hope they are. We've fenced the gutter over there and there is longish grass in there now and you can see little mouse runs and they said it was to get a mouse run from the yard to the hills and owls would come in, with a bit of luck.

Some negative impacts were however attributed to inappropriate management prescriptions. More than one agreement holder thought that the prescription to exclude all stock from his woodlands had had a detrimental affect on the woodland flower species (supported they say by the Forestry Commission). One agreement holder remarked that coppicing his woodland has resulted in a 'sea of bramble's while another found that management of a water meadow meant that it looked 'messy' compared to a neighbouring one. The double fencing on either side of a hedge was also noted by more than one agreement holder as resulting in colonisation by brambles:

You end up with a 3 m gap between the hedges and fences. You find that in a years time the gap between the fence and the hedge is all full of brambles and the sheep get caught in the brambles. It doesn't work.... Everyone you speak to says that is a big problem with Tir Cymen and Tir Gofal.

Others agreed that TG did not improve the environment as one said:

I am not convinced that the farm has more wildlife and think that many of the management practices could actually be counter-productive I have always tried to look after the environment but am not convinced that measures such as reducing or eliminating grazing are going to bring about the desired results.

One had stronger views: 'I am convinced that the farm has less wildlife and am convinced that many of the management practices are undoubtedly counter-productive'. Interestingly both these comments were from traditional Welsh speaking farmers.

For ESA opinions diverged from a positive view that the hedges improved the bird population to 'it was not really worth doing from the environmental point of view'. One claimed that there is more wildlife, birds, butterflies dragonflies because we put some small ponds in', however another suggested that a lot of wildlife was already present:

There were silly things like the local wildlife trust put up owl boxes along the valley and in the first year they got 17 nesting pairs. There were there anyway, they didn't just come because they put the nest boxes up. We had a good environmental area anyway so I don't think the scheme has particularly improved it. The only thing that happened is a few field corners and trees.

In this sense agreement holders did not feel there were great environment benefits although one thought ESA had 'worked well really because it worked with the production and helped the environment at the same time.' One farmer noted that he was lucky to be in the Radnor ESA, as: 'Brecon didn't have the chance.. If you go a round the countryside you'll see the difference, hedges in a lot better condition'.

5.3.4 View on prescriptions

A common view amongst TG agreement holders was: 'If you sign up to a scheme you have to abide by the rules', and that if you are receiving money you cannot really complain. As the conditions are clear from the outset 'If you don't like it don't join'. Another remarked 'we chose to make the commitment to the management plan and options are discussed before they are agreed on'. Although some appear more committed than others, as one agreement holder observed 'If we signed for something we tried to do that, not like these old men who would sign for anything and try and get out of it'. Those who like to keep to deadlines/the rules are more concerned by them, 'we can't bear the deadlines' whereas other farmers are described as 'not playing by the rules'. Being realistic at the beginning of the scheme about what can be achieved has helped deal with rules and prescriptions 'We didn't go for some things because we didn't think we could do it and so we had less money'.

In the most part TG interviewees did not appear to find prescriptions difficult or onerous to stick to, some issues however were identified. A recurring theme was that the deadline dates prescribed were restrictive as they were inappropriate or inflexible 'especially when 'the weather isn't on your side'. This was the case, for example, for hay cutting and establishing root crops:

Turnips - you have to get them established by 1st July, that's a bit too soon really, needs to be a week or two later then in Feb the lambs could go straight on. That's the only thing, they start to go to seed when you plant them early.

However, most TG agreement holders who encountered problems with deadlines due to the weather approached their PO for an extension, and POs are thought to be reasonable allowing some flexibility. However one agreement holder noted that seeking permission to perform certain operations eg cleaning ditches, could be a problem as they were dependent on the weather and there was only a small window in which to carry out operations. One couple became very anxious when it was too wet to meet their deadline for hedging, they did not realise they could ask for an extension until they rang up. Some agreement holders questioned whether the PO's would be so co-operative now that they were from WAG rather than CCW and one agreement holder said 'I think I would just do it now' [and not consult the PO].

Some specific management issues that were unresolved included a change in requirement for swede cultivation after the first five years from plough to direct drill. For one agreement holder this represented a cross compliance issue on a riverside field, as he said: 'I wouldn't be happy to plough there' and having failed to argue his case regrettably 'chucked it [that option for that field] in'.

A number of TG agreement holders held the view that there should be more flexibility in the stocking density and grazing prescriptions so that livestock numbers could be matched to the seasonal variations in grass growth and therefore carrying capacity of the land. There was a general view that prescriptions did not take account of different circumstances: 'What they think will work in Aberystwyth might not necessarily work down here. Different areas have got different needs.' Similarly from a habitat perspective one agreement holder felt that the prescribed stocking density was too low to control the rush on the wet field he wanted to preserve and that farmers should be given the freedom to identify the appropriate stocking rates for their specific locations. He complained that he was only allowed three cows on one or two of his fields and that as a result one field was full of rushes. This was despite topping it every year and grazing with Welsh Black cattle which are supposed to graze the rushes: 'they don't touch the rush as they still have enough grass growing and the rush gets out of hand'. He continued:

The stocking rate could be higher but it depends on individual farms and individual fields. It is all very well for a field officer to come and say "I will allow you to have 3 cows on 5 ha", but they don't know the ground like the farmer does. We should be able to say that three cows there is nothing that will in fact spoil the ground. In some of the schemes instead of three cows a year you could perhaps have nine cows for three or four months. I think sometimes that farmers should be able to determine himself what is the right number of cattle. When a project officer eventually does come out I will ask about extra stock or whether we could top it twice a year. I know that they are looking at the benefits of saving the insects and birds that are nesting in the bottom but we wouldn't do anything in the nesting period anyway.

However for another TG agreement holder (newcomer), who was a wildlife enthusiast, the scheme allowed too much grazing, it was her belief that the stocking rates were set high to attract farmers into the scheme. This agreement holder felt that there needed to be more flexibility to adjust stocking densities to encourage the spread of wild flowers. Another comment was made about the over wintering stubble option which was seen as too restrictive, one agreement holder felt that he should be allowed to put manure on for the birds once they had cleaned the stubble. Four TG interviewees (these tended to be 'traditional farmers') had strong views about the prescriptions being too regimented. As well as lack of flexibility there were concerns that the prescriptions are in some cases counter-productive:

The management prescriptions appear to have little logic to them and they don't seem to take real note of what is happening on the ground in response to the prescriptions and changing where necessary. I have been very disappointed with the scheme in recent times and the financial side has suffered as well...There needs to be far more flexibility from individual farm to individual farm and much more notice taken of what is happening in response to the management put in place – issues such as not grazing are making a complete mess of things and the very species they are trying to protect and encourage are disappearing as a result and nobody pays a blind bit of notice. They are too strict and inflexible and many are simply not achieving what they have set out to achieve – wildlife is disappearing as a result of management supposedly designed to encourage it.

For TG agreement holders who are also in the organic scheme some experienced little problem in complying with both schemes, some agreement holders argued that as they were already organic and as such further rules did not represent a problem and that 'you find a ways of working with them'. However some issues of incompatibility were identified:

Organic farmers are actively encouraged to get rid of weeds but TG margins encourages them, so there is a conflict there. If there is a problem you can get permission to spray but being organic we don't want to do that

Similarly another TG agreement holder left the organic scheme because he needed to control the scrub on the fen meadow and found the only way to do this was to cut down the trees and treat the meadow with Roundup which meant they could not graze the fields under the organic scheme. Furthermore the issue of fertility was mentioned, for hay meadows TG agreement holders are encouraged to reduce fertility to encourage flowers whereas that is not totally compatible with the organic scheme where there is a need to keep the fertility. However agreement holders can add FYM and it would appear that this does not present too much of a problem.

One newcomer TG agreement holder made an interesting point, he felt it would have been better if TG had not been so regimented in its timeframe and workload. For small holders without a lot of experience he suggested that a mix of training and work in the early years to ease them into the scheme would have been beneficial.

For ESA, hay meadow management appears to be the main area of contention, for one agreement holder 'hay meadows is the only prescription that was slightly negative. We had to cut it slightly later and it didn't really fit in with our programme'. For the same reason another had elected not to take up the option:

We thought it was a bit late to cut it and last year it would have been a disaster. I don't like being restricted when I could have cut my hay. We like to cut the hay in June if we can because it is so much nicer then and once the butts go old and it is not so good for the sheep anyway I don't think.

Another agreement holder who was restricted in applying fertilisers in a couple of places said it had 'tested him after 10 years' and he would liked to have done some liming, but found there was no flexibility.

5.3.5 View on payments and paperwork

It was commonly agreed that whilst capital payments were adequate they do not now reflect increasing costs of materials. For those farmers who did a lot of work in the first five years this does not present too much of a problem but for those with further commitments it does:

The payments are in no way near enough on the hedge work. They were quite good five years back but now the costs have gone up by about half. It is way, way off now.

The grants we have got in for fencing and double fencing and hedging and coppicing they are probably covering 30% of the actual cost which means I am putting an awful lot of my own money into it in order to get the job done.

ESA agreement holders agreed that the payments certainly helped, that they could not have afforded to have carried out hedge and fence maintenance without the scheme but that material and contractors costs had risen. It was felt that a lot of people will not be so keen on these schemes in the future unless the payments increase to enable them to carry out the works, otherwise 'it is costing them too much out of their own pocket'. Annual payments as mentioned earlier can make a contribution to the business. And in the most part these were judged to be 'well put together and quite fair really. I'm happy to do and receive what we have'. One newcomer agreement holder noted that the TG scheme did not make up for the productive loss caused by keeping the fields in a

biodiverse state and that, while she could make up the difference from her own pocket, other farmers were forced to intensify other parts of their farms. Some ESA interviewees raised the issue of insufficient compensation for loss of production: 'It was basically the hay meadow because the crop was way down and the money you had to spend to buy the extra didn't compensate for what you lost'.

Paperwork does not appear to represent a problem for TG agreement holders. They described it as very straightforward, the forms being laid out well. Although it was acknowledged that some effort had to be made when the TG agreement holders started the scheme to read the information properly and understand the prescriptions, then, 'as long as they don't change the rules you should be ok'. It was acknowledged that 'if you are suddenly confronted with whole lot of paperwork it can be daunting' but that you become familiar with it and even if a mistake is made the form will simply be sent back. One TG agreement holder complained about the bureaucracy, he was surprised that even though he applied to TG in 2003, his site visit was not until 2006. There were no issues with ESA paperwork raised by the agreement holders.

5.3.6 Environmental knowledge and awareness

Generally TG agreement holders concurred that they have gained knowledge about the environment as a result of joining TG. While some are specific about knowledge gains, usually referring to an increased awareness of flowers and birds, others have the sense that they are generally more appreciative and tuned-in:

I have become a lot more aware of the environment since we joined the Tir Gofal scheme and to appreciate it a bit more.

It grows on you as you go down that road, definitely I know a lot more since I joined the scheme.

I think so –we're more interested in environmental since joining TG. Yes we're spraying less and using less fertilizer so this makes you think about it definitely.

The scheme hasn't improved my environmental knowledge or understanding as I have always been that way inclined, but it has helped to pull everything together.

Some developed a more in depth understanding, one TG agreement holder, for example, said that he now understands more about the different kinds of habitats that are found in hedges of different sizes and why it is important to have a mixture on the farm. Others welcomed having the environmental assets of the farm pointed out to them: 'Some of the features they saw [TG staff] I wasn't aware of I must admit, and I was quite interested for them to point it out... rare orchids and butterflies and various things like that'. It also helps agreement holders to realise that what they see on their farms as common place are in fact highly valued as one explained:

I said to one of the scheme people one day there is this little moss it is like a venous fly trap. "They are rare" they said, but they are not rare out there. Because we have such a lot you don't even think they are rare.

Newcomer TG agreement holders in particular appear to have gained knowledge. More than one newcomer mentioned that they had learnt an immense amount about practical conservation. They have been eager to learn about the reasons behind the different management prescriptions, some have taken a keen interest in the grassland habitats and now claim to have an intimate knowledge of the key species and their distribution on the farm. Putting the scheme into operation has also taught them a lot about the effects of different types of stock grazing and how to manage grazing regimes

to promote greater biodiversity. As one said: 'The scheme was helpful because when I came I read the instructions and followed them and later gradually learned why they were valuable'. Some recognise that they are going through a process of learning but that the POs are often learning as well:

A project officer came out one day and I said 'we won't put any animals out on that grassland' because on the ESA they told us not to put them out at a particular time. But this project officer said "oh, but you must because when the orchids seed if you don't have a bit of poaching those seeds won't go back into the ground to grow'. It is quite nice because they learn things and we've learnt things. They have obviously learned things along the way. Because we used to make fun of them because we had a rare plant up on the hill and they decided to fence it. But how did it get there? It has always been there. But in their wisdom they decided to fence it from the sheep but then the Molinia came up and killed it.

This comment concurred with others from TG agreement holders who felt knowledgeable already and thought that they knew more about the wildlife on the farm than their POs. One agreement holder had strong views that the TG POs should listen to the farmers more and learn from their experiences of managing the land and the environment. Equally other agreement holders did not think that they have become any more aware or knowledgeable than they were before they joined the scheme. These tended to be the traditional farmers.

For two of the ESA agreement holders interviewed the scheme had not really increased their environmental knowledge or awareness/attitude (largely because they had not changed practice). The other two claimed that they had become more interested in the environment because it is 'nice to see the wildlife' and that it made them aware as prior to the scheme it was 'just a push for food all the time'.

5.3.7 The future for TG and ESA agreement holders

Views diverged about what will happen when/if TG ended. Those who already had a low-input farming system were more likely to continue with the same practices if TG finished, some mentioned some changes that might be necessary such as reverting some practices like stream-side corridors putting unimproved grassland back into productive use through draining and fertiliser applications. However they suggested that other things would stay, such as the hedges and fencing. Another agreement holder concurred saying he would increase production (although he recognised the environmental consequences) and he would look for other strategies to earn money:

In the future- if we didn't have that [TG] you would try to put the sheep back up again to try and get some more lambs off, or double suckle some cows or cut right down so that you don't have the work and Edward could go off in the lorry a bit more. But then you might have bushes growing all over the hill again.

However, some agreement holders, whose original trajectory was to improve the business by intensifying the enterprises, explained that taking the TG route had opened their eyes to a different way of doing things. They now prefer the less intensive route seeing it as more caring. One agreement holder said that he now did additional work, which is not required that: 'when there is a hedge or fence that needs doing and its on the scheme we tend to do a little bit extra to complete the job although its not in the scheme'. In this respect, agreement holders intended to carry on with the 'TG ethos' when the scheme ends.

When viewed in terms of what would have happened without TG, some agreement holders said that the farm would have to be a lot more intensive, that little environmental work would have been

done, and that the habitats would have suffered under a more intensive system. In some cases the alternative would have been to increase stocking rates or as one said 'get the spud boys in' (rent land out to potato growers) which was not appealing. Some however believed that not joining TG would have made little difference to their actual farming system, they would still have had low stock numbers and not added fertiliser. Most said that they would have done boundary maintenance without the capital payments albeit at a much slower pace. TG payments have clearly enabled some farm business to survive without resorting to intensive production, the only other option available to some farmers. These agreement holders tended to be those reliant on farm income.

ESA agreement holders were considering other schemes, but were hesitant because they wanted to be sure there was not too much bureaucracy involved, that there was value in joining and that the schemes were easy to understand: 'I would definitely be interested in going into a new scheme. The new scheme sounds like it will be very green, I'm not sure I will understand it'. One agreement holder emphasised simplicity and lack of bureaucracy as key components for any future scheme he might consider:

I haven't looked into them deeply. But when Tir Gofal first came out I had briefly read about it in the papers and when it said you had to measure the square metrage of your hedgers I thought, no. If it gets that intrusive and complicated then no. If they simplify it which I think that this new scheme might do, that might be worth looking at. For me it needs to be simple and I don't have to take a tape measure out.

5.3.8 Impact on local rural economy

TG capital payments for hedging and fencing were recognised as helping to create extra employment in the area. Many people have been able to go into contracting on a full-time basis on 'the back of TG'. Contractors can be independent or linked to local farming families in some way. Farmers themselves have been able to diversify into gate and stake making. One agreement holder's farm expansion plans included setting up a contracting business for his son as TG has created a lot of demand of skilled labour in the area.

We have two sons and one is quite keen on farming, at the moment the elder one is at agricultural college, we would like him to come home (to farm), we don't want to discourage him but we don't think the farm would sustain another family, unless he had another job. But that's one thing that's good about TG it has given opportunities to young people, to build stone walls, fencing, heading, planting trees and things. It's a skill isn't it? My son could work at home and also go off and do the same for other farmers in a way.

All ESA agreement holders agreed that local contractors have benefited from ESA, as one observed: 'I know the suppliers we used said it was one of the best schemes that they have ever had because they knew that there would be a regular supply of work was going to come in'. Equally they acknowledge that these contractors will suffer when the scheme ends: 'If times are hard, farmers can pull up the drawbridge and it is the supporting industries that suffer'. One newcomer suggested that using contractors may not be the best solution to building a skilled labour pool and that training the smallholders would bring economic and social benefits to local areas as well.

5.3.9 Agreement holders experiences: summary

The experience of TG is variable, the majority interviewed regard participation as a great opportunity particularly in terms of restoring boundaries and adding capital, functional and aesthetic value to the farm. They appear to have gained in terms of the business, the farm environment, personal satisfaction, and environmental knowledge. Some interviewees experience was more neutral whereas for others the TG experience was disappointing and brought problems. For those already implementing low-input systems (traditional farmers electing for farm less intensively and newcomers) the changes required to farm management have been minimal, however some farmers

experienced unexpected problems (and additional costs) as a consequence of stocking restrictions. The latter were more likely to be traditional farmers with a more commercial approach. Where changes to the farming system had been small the impact on business was also minimal however for those receiving substantial annual payments, the regular income brought security and, in some cases, a lifeline to the farm security as well as an opportunity to keep a son/labourer on the farm. A generally positive impact on the environment was noted by some farmers although they were not specific. Negative environmental impacts were also identified and these were related to misgiving about the efficacy of certain prescriptions and to their lack of flexibility and inappropriateness to local conditions. Those with the misgivings felt they had gained little knowledge from being in the scheme. Some claimed to have become more knowledgeable about the environment, those who benefited most were newcomers. All agreed that capital payments needed to be higher to reflect rising material costs but paperwork was not thought to be a problem. The positive impact on the rural economy was widely acknowledged. These experiences would clearly impact future decisions about scheme entry, however some, despite having a negative experience with regard to prescriptions, felt that they could not afford not to be in the scheme.

5.4 Non-agreement holders

5.4.1 The Sample

Of the twelve interviews with non-agreement holders, three were conducted with farmers who had been in ESA/Tir Gofal but the agreement ended and they did not enter another scheme (sample 4); four with farmers who had expressed an interest/applied to Tir Gofal but had withdrawn their application (sample 5); and five with farmers who have never registered an interest in AES (sample 6). Table 2.4 provides the sampling details.

5.4.2 Capacity

5.4.2.1 *The farmer and farm type*

The details are provided in Table 5.2. All of the interviewees were from a local farming background except for two who had farmed before but moved into the area. The ages ranged from 34-69, with no clear relationship to sample type.

In sample 4 the farms were UBS, with the size ranging from 72-101ha. In sample 5 two were dairy farms (24 and 121ha) one of these was organic, and two UBS, one 404ha in size. Farms in sample 6 were UBS (36 and 140ha), beef, sheep and pigs (19ha), lowland beef and sheep and dairy.

The dairy farmers (sample 5) explained about the limitations of their farm land and how this affected their approach to production, both recognised that they were not on high yielding land, one organic dairy farmer remarked:

We have always been mindful of what we could get out of the land. There is no use putting on 300 units of nitrogen on because the land isn't capable of taking it. So you work within the constraints of the business.

The other dairy farmer identified a lot of constraints placed upon his farm, foremost being the exposed coastal position. Also, although the land was not designated LFA, it had many of the characteristics (largely grade 3 or 4 land). As such about third of the farm was not productive and is made up of 'habitat', woodland and wetland. This constrains the stocking rates. Another interviewee (expressed an interest in TG but withdrew) who farmed 404ha UBS said: 'We are lucky that we have

got the land to be extensive'. He explained the importance of looking at costs and profits and remarked on the competitive nature and mindset of local more intensive farmers:

They need to sit down (intensive farmers) and look at their costs as well. You can be going flat out, but take all those costs away and reduce your stock and you might be in exactly the same place. Your profit at the end of the day might be no different. We know a good half dozen farms round here that (say)... I've got a hundred cattle, well I've got 200, How many sheep have you got, 2000, well I've got 2500, or will have by next year... I've put fertilizer on last week and next year they will be a week in front. There is that going on but we're not like that.

A dairy farmer (sample 5) demonstrated how some farmers make strategic decisions about their businesses. The farmer said that the key period in the farm's development was the late 1990s when he considered three different trajectories for the farm business: going organic; expanding the conventional dairy enterprise and concentrating on on-farm processing. He discounted the latter two options because there was not enough land to expand the business, nor enough people living locally to make adding value to the farm products viable. Choosing organic however has meant that he been subject to the vagaries of the markets, and is constrained in future choices due to loans and commitments:

*The window opens for the organic scheme and everybody floods in and then the market goes t*** up and like now my milk price has gone down eight pence in the last four months. So I have gone from a position where I was able to reinvest and grow my business to stay in farming, to a point where, if I didn't have the commitments and borrowings (connected to the business), I would seriously consider where to continue as a dairy farmer, let alone an organic dairy farmer. I would get out of dairy but I don't think I'd get out of organic.*

Given this situation this farmer said he would not encourage his children to continue farming after him. Another dairy farmer chose a different business strategy due to the farm's division by the building of a dual carriageway which left the farm unviable. With only 24ha the farmer decided to diversify into tourism as well as run a small farming enterprise.

One farmer (UBS) (sample 5) who had farmed since his youth and grown the farm to 404ha had bought and sold land over the years as an investment, so the farm had both increased and decreased in size over the years. His investments have meant that he has remained debt free and not reliant on any form of subsidy, SFP or agri-environment payments. He considers his farm to be in the minority in this sense as he believes that 99% of farmers go into schemes primarily for the money and the security of a regular payment. As such this farmer described himself as uniquely flexible being able to adapt to change. In sample 5 one of the farmers had gone through a business transition changing from dairy cows, beef and sheep to predominately cattle. This is because he likes the cattle more than sheep and the prices of sheep have been low. Also he chose to leave dairying because they only had 30 cows and the farm did not suit dairying. The farmers interviewed who had left ESA (sample 4) were UBS, although one farmer wanted to grow the farm and become more intensive, the other two farmers had no plans to expand.

With respect to family and farm life cycle, although some sons were already working on the farms in all the samples, this do not seem to influence any decision to expand the business. However, waiting for the son to make a decision about their farming future did influence future plans. For one traditional beef and sheep farmer (sample E) he had decided last year to start winding down the business until his children had decided what they want to do. This meant that they are winding down the sheep flock. In another case in sample E the future plans were similarly wrapped up with successor:

It all depends on my son. He would prefer to concentrate a bit more on agriculture now that we may be increasing the caravan site in size and in facilities... We looked at agri-environment schemes but we haven't pursued it to that extent.

As with agreement holders the analysis provides a picture of farmers making business and management decisions in response to policy and market changes. They recognise the limited capacity of their land and that their future plans are tied up with farm succession decisions.

5.4.3 Willingness

5.4.3.1 Farmer philosophy, identity and values

Farmers in these samples tend to prioritise farm production; whilst they appreciate the environment, they see themselves primarily as commercial farmers. Even those who derive their main income from a diversification activity still describe themselves as 'commercial farmers having diversified'. One UBS farmers (sample D) described himself as profit maximiser, he explained that although he did value the environment to an extent:

I'm not a bunny hugger or anything [laughs]. There was an old hedge with a few hazel trees I pushed out, the ESA didn't think much of that, it wasn't doing any good or any importance, you got to farm to make things easier. I like to maximise as much profit as I can.

One dairy farmer (sample 5) explained that he wanted to farm the land well, but within the carrying capacity of the land. He described himself as a traditional family farmer wanting to make a living for himself and his family, his identify was as a farmer first and foremost, not as wildlife conservationist:

*Farming is about farming the land, it isn't about farming subsidies, or gorse bushes. Its about practical farming while being sympathetic to the environment. In fact the environment we've got is because of agriculture not despite it. There is a balance. I look at farms that have taken the stock out of the system, and land gone into coastal reversion, and what a b***** mess. If that's the future I may as well pack up tomorrow.*

This view of being a traditional farmer producing food, not environment, differs from the general view of the TG agreement holders, who, although they described themselves similarly as commercial or interested in profit, equally emphasised the importance of balancing the environment. TG agreement holders were also more likely to be pragmatic about conservation environment than these non-agreement holders, recognising that AES was where the future lay and as such they were willing to adapt to benefit from the payments.

5.4.3.2 Motivations for considering TG and reasons for withdrawing (sample 5)

Farmers were motivated to apply for TG because they felt they were doing a lot of environmental management anyway: 'I said to myself we are not far from being b***** perfect on the environmental side of things. We don't use fertiliser,'. The two dairy farmers had had a positive experience with ESA and this motivated them to apply to TG. They envisioned that the TG scheme would be like the old ESA scheme that had fitted in so well with their farming system and allowed them to continue as dairy farms. They thought TG might be similar and provide grants to renovate hedges and fences. However, when they investigated what was in the scheme in detail they found that there was little in it: 'from an environmental or financial reward perspective'. As one observed:

I was very disappointed in the scheme and anything it could have done to benefit us as a business, we were looking to do environmental benefits, taking out awkward corners, putting in trees, as was done under the old scheme. That wasn't there anymore. The alternative forages, like growing rape, where in the past there were payments for doing that, weren't there anymore.

Also they felt that the constraints on the stocking rates were too rigorous and would severely impact on the profitability of the business. For one the stocking rate prescriptions simply made it impossible to continue as a dairy farm. The payments would not cover the loss of income from the dairy enterprise. As such it was a very simple decision not to enter the scheme: 'We would have had to cut the stock by half and that wouldn't work financially. The rewards weren't there financially.'

Additionally one of the dairy farmers was able to get money to fence his land, which adjoined the river, through an SSSI related grant and the grant aid for fencing was available without affecting his stocking density. The organic dairy farmer also pointed out that TG did not work well within an organic dairy system and for this reason he withdrew:

The payments (in Tir Gofal) are towards leaving winter stubble, and that doesn't work on an organic farm. You are not allowed to have clean winter stubbles because you have got to have green cover to lock up any nitrogen; you have to have clover to act as a soak for it. Plus it would leave bare ground for weeds to grow over the winter. Obviously you are trying to get the maximum out of the land without using chemicals and you are trying to get the new crop established. 'The system (Tir Gofal) actually works against me as an organic farmer.

The UBS farmer had similar concerns about how the schemes were implemented and how they interfered with running a farm business where: 'conditions are so draconian we are never going to go into it because it is going to make it impossible for us to farm'. This farmer also said that the major drawback was the restrictions on supplementary feeding since with farms that out winter stock would find it near 'impossible to comply'. He was also not prepared on animal welfare grounds to stop supplementary feeding. He observed that there was a lack of consistency with the environmental management of the land. He has been asked to get his cattle to poach areas of land in the RSPB land that he rented to create Lapwing habitat, while the TG scheme did not permit supplementary feeding in case it caused poaching. The farmer also said that he was unhappy with the extra administration and worry involved in matching the TG application to the IACS form. He had made mistakes in the past and did not want to repeat this.

5.4.3.3 Reasons for not applying to TG

For those farmers who had been in ESA and left (Sample 4), their comments about the experience of ESA were positive and reflect those made by ESA agreement holders. One farmer commented that he had looked at TG but did not have enough points, so he did not make an application: 'We never got as far as trying'. Some things in TG he thought were really good like root crops and as he already had some arable plots which he did not fertilise he felt he could implement such options easily. He would definitely be interested in another scheme with lower thresholds although it would depend on financial incentives and what management changes were required. The other farmers said that they would probably look at another scheme, that he haven't thought about it yet, the ESA experience had not put them off, they: 'just haven't got around to it'

For those interviewees who never registered an interest in a scheme (sample 6) they had considered TG at some point but decided not to apply, primarily because they did not have enough points unless they changed management and they were reluctant to reduce their stock numbers. In addition the waiting list was 2-3 years. They are not 'scheme-averse' in general, for some the timing was wrong, for others they would keep an open mind.

One farmer who had been in ESA for 10 years looked at going into TG but found a two year waiting list. Also he could not get enough points without changing a lot of the farm. He said that he 'didn't have a lot of waste land' and that to get points you also had to keep Welsh Blacks cows which he hated. He said he would also have to reduce stocking density, reduce fertilisers and plant 20 acres a year with crops on land that is too wet for cropping. He plans to leave it a few years and see if any

other more suitable schemes come along. He would be interested in a scheme that does not affect his farming. He does not want to cut stock numbers down as this would affect his income. In general he feels that the prescriptions for hay meadows 'are trying to turn the clocks back when we need more food for a growing population'. He is not one of 'these big fertiliser boys', but he wants to keep things as they are, he doesn't want to cut back.

Similarly another farmer in this sample said he would be interested in a new scheme but does not want to have to reduce his stocking density. He understands that if he does not go into the new scheme he will lose out because it incorporates Tir Mynydd. He is hoping that farming prospects improve so that he: 'does not have to bother with any schemes'. One of the farmers in this sample wanted to join TG as it would complement his tourist business on the farm but the three year waiting list put him off, also the life cycle of the farm meant that the timing was wrong:

We have looked at Tir Gofal but we did not pursue it. I'm going on in age and my son was a bit young. He was too young and I was too old. We will definitely be concentrating on that kind of thing in the near future. I think it will fit in very much with what we want to do. There is the need for developing habitats which complement the visitors interest. We have corners of fields that we would like to do. As far as we are concerned we would have joined but the waiting list when we did make enquiries was frightening..... I am aware of the excellent work that Tir Gofal has done and we only hope that this new scheme will help us to catch up with what we have missed out on.

5.4.4 Engagement

Most of the farmers interviewed said they would discuss things with other local farmers before going into any scheme. There was a sense that scheme uptake was high although these comments often came from ESA areas. For farmers who had withdrawn TG applications (sample 5) they were happy with the information and advice given. The PO made it clear that the stocking reductions required would probably not suit their way of farming, but this became clear only after he had begun putting in an application. One farmer would not have started the application if he had known about the stocking earlier. All the comments about ESA PO support were favourable.

There were strong views from non-agreement holders about WAG's AES policy. Some felt that hill farmers with 'waste land' were being rewarded unfairly: 'that there are those farms with waste land that are getting 10-11 k a year for doing nothing. If you have 200 acres of moorland then you can get into Tir Gofal'. One farmer wished he had some 'waste land', but all his land is ploughable (not that he ploughs it). He felt that most of the money is going to these hill farms who produce 'poor quality stock which often have scab'. He argued that he looks after their farm and keeps it tidy unlike the hill farmers but is getting no reward. Another farmer suggested that farmers with few environmental assets were being rewarded as well:

The schemes are all cock-eyed. You look at some farms that are sterile and you wonder why the hell are they in this scheme. They take the bog-standard payments and that's it. But people like us that have got valuable environmental bits...

His suggestion was that the productive land should be left out of any scheme, as achieving any environmental gains on productive land was too restrictive on farming practices, he argued: 'WAG are missing out, what they have to say is leave your good land out and farm that as you would and we'll just deal with (the high value land). Because there are conditions on everything'.

With respect to engagement with the public more than one farmer noted that the farmed landscape and environment as a consequence of farming practices and thought that this was not valued by the public nor were farmers rewarded for management of the land:

A lot we do for the environment we don't get paid for, it would be nice to get some recognition for what we do, a lot of farming isn't bad is it? A lot of tourists get the countryside for nothing.

5.4.5 Non-agreement holders: summary

Non-agreement holders tend to identify themselves as traditional commercial farmers producing food, not the environment. Whereas agreement holders also defined themselves as commercial family farmers they were more likely to mention managing the environment as part of the farming system than the non-agreement holders interviewed. Non-agreement holders appear to be more locked-into a farming system and less adaptable than agreement holders and less likely to consider AES for pragmatic reasons. Those with a production-mindset want to expand and maximise output from the farm, as such AES were seen as incompatible with their farming goals. However while some hold a negative view about AES believing that farming subsidies (AES) is not really farming, others hold a positive view, but find that circumstances do not allow them to take up the AES opportunity at the current stage in their farm life cycle. For example, the son maybe too young and the father too old to commit to another 5-10 years.

Non-agreement holders are not scheme-averse and had considered TG. However they found that they were not eligible or that TG would not fit into their farming system. Specifically the destocking would be required and restrictions on outwintering were thought to be detrimental to the farm business. As such, for them, there were no financial rewards for joining TG. In this respect they differ from TG agreement holders who identified financial and environmental benefits of joining TG. Some interviewees had been conditioned by being in ESA which was not as rigorous as TG, in the future they wanted schemes to be like ESA, easier to get into and less demanding.

There tends to be some resentment amongst non-agreement holders that some farmers (agreement holders) with 'waste land' can get into TG so easily and are rewarded, whereas farmers (non-agreement holders) without 'waste land', who were farming 'well', were not eligible and were not rewarded. This highlights a lack of understanding of the aims of the TG and reveals that non-agreement holders tend to identify a good farmer as one who produces food rather than one who protects the environment. In contrast agreement holders had concerns about TG was being 'watered-down' and as such attracting farmers who were less committed to the environment.

5.5 Views on changes in farming in general in the area

In general terms agreement holders recognised a pattern of increases in farm size and a concomitant reduction in the number of holdings. Several agreement holders commented about the overall decline in dairy farms: 'There used to be 15-16 dairy farms in the valley and now there are only two left'. This was described by one as 'a big blow to the community'. In terms of dairying there was a belief that farmers have taken the decision to spend their single farm payment on modernising and expanding their systems. The few remaining farms have largely stayed conventional and concentrated on bulk milk production as a commodity rather than producing for the premium market. To meet modern regulations however requires massive investment that is beyond the scope of the smaller dairy farms. As a result many have given up the enterprise and gone into beef and sheep. There was also the belief among some that the land was not suitable for dairying in the first place. Now sheep and beef rearing is seen to dominate although it is not seen as viable or sustainable for the next generation to inherit without some form of off-farm income. The future of

farming was envisaged to be only possible with larger farms, 'a minimum of 600 acres as opposed to family farm of 100 acres.

The pattern of expansion and amalgamation has meant that farmers taking over farms tend to sell off the (often derelict) farm house, sometimes with a bit of land, to newcomers to do-up and set up a smallholding. Thus land ownership patterns changes are affecting the community as well. The decline in the number of sheep, and the resulting environmental consequences, were also mentioned:

Since the Single Payment there has been a reduction of sheep on the mountain. There is now not enough sheep to graze the mountain and once it has gone to scrub you can't get it back. You only have to listen to the shearers and they say there is not half as much work as there was three or four years ago.

Agreement holders did not see themselves at the forefront of structural change but they all seemed to be able to mention some one who had taken a different path (and have a different outlook) to themselves. An agreement holder referred to one dairying neighbour who had expanded:

They spent one and three-quarter million on the buildings and now have 900 cows. They have around 125 acres of their own and all the rest is rented... You can't get your head round it sometimes, it's got to be a factory.

Such farmers were described as having less time and needing to work harder, with bigger, faster machinery and being all together more cut-throat: 'You need less labour and to use your brains not your brawn'. One agreement holder observed:

Those boys will go on farming because they are very, very competitive but there doesn't seem to be an end to the borrowing. Now one is putting up a chicken shed and so another one is putting up a chicken shed and it is massive. Of the ones that are in farming and are in their early 20s they want to have the biggest tractor, the better tractor, the biggest fertiliser spreader. They want the most ewes never mind if they are lame or thin, or the best quality ewes.

There is also a general picture of decline in landscape and community accompanying the trend for larger farms. As family farms can not afford the investment needed to keep them competitive with the larger farms they are being bought out. More farmers are retiring and fewer sons are taking over:

There is only around here two sons where it would have been practically everyone and there would have been two or three on each farm. They are just not doing it. All the old ones are going on and there is nothing coming up behind. I don't know about the future for the community.

A general consequence of all these change is that the social network is breaking down. In one case one farmer's neighbours had no successor and the farm was gradually being run down which meant that the bordering fences were not being fixed. The farmer had to write a letter to the neighbour to get the fence fixed. There is also sense that such farmers have less time for tending the land: 'you used to see people draining and then fencing you don't see so much of that'. They also noted that as farms get bigger animal welfare suffers because looking after animals 'isn't a paying job. You see a bit of mud here behind the ears and you can see that they have scab. You can see it all over the country, lame and carrying a back foot. The bigger the farm the more of that goes on'. With respect to the state of farming in general, few commented perhaps reflecting the fact that prices are currently favourable. Indeed one farmer noted the current buoyancy, with good prices for meat and SFP and AES payments that contribute towards the farm business. However he noted that the future is less rosy as these support payments disappear, input prices might rise and meat prices will

possibly fall (reacting to exchange rates and beef imports). Other future concerns which were raised are the requirements for electronic tagging and animal disease which is making some think seriously about the farm's future.

There was a general belief amongst UBS farmers that the change from headage payments to the SFP had allowed the farms to become more extensively stocked. There was also the sense that in the future with incomes falling: 'it makes you look to schemes for financial incentives'.

6 Project Officer Workshop results and analysis

The workshops took place following the announcement by the Rural Affairs Minister about the change in approach to land management schemes in Wales, as such, although the research results were reviewed, much of the discussion turned to the future scheme that will replace Tir Gofal, (although there was high level of uncertainty about the proposals).

6.1 Feedback on the research

When considering the motivation for joining an AES like TG, geography is an important factor, as it dictates opportunity, both in terms of habitat and in terms of what sorts of capital payments are available. For example in lowland areas where farms tend to be improved there is less habitat and less capacity to change the system, whilst in the upland National Park areas payments for capital works (walling) are a strong incentive. Many production-oriented farmers in lowland areas would not consider TG, it is not on 'their radar', some may have become too intensive to change, they also have to consider other factors like flooding, which takes land out of production. Some workshop participants asked should we accept that some areas of Wales need to remain as production-oriented land, and will never be included in an AES?

In terms of joining an AES, commercial farms would consider joining a AES like TG as a business decision, and as such the process of deciding/joining/implementing scheme options for them is straightforward. This contrasts to the number of smallholders who are in TG who are regarded as high-maintenance and tend to choose a number of options and require a high level of support. Farmers who have come from a previous scheme tend to find the joining paperwork easier.

The figure from the survey of 25% farmers who did not say they would renew should be treated with caution as this is much higher than WAG statistics (10%). Many who do not renew do so for personal reasons / family circumstances.

It was unanimously agreed that capital works are an important incentive for joining an AES. Capital payments are seen as an enabler for boundary maintenance. The high visibility of the managed hedges, walls etc also attracts other farmers to the AES. Equally, management payments are important in that they can provide a salary for farm workers and sons often allowing them to stay on the farm. It is also well recognised that AES payments support a wider economy, many contractors have set up since TG was established in Wales. These provide walling, hedging fencing services (important in upland areas) as well as arable contracting (for arable options in lowland area).

The survey analysis suggested that non-agreement holders were more definite in their plans about succession and were more likely to grow or intensify the farm business in the future. This non-member group however might be more forward-thinking group and possibly have a greater number of owner-occupiers compared to tenants who are often constrained. The sample from Farming Connect also might be biased towards relatively larger and more intensive farms than the average. Dairy has been much publicised as being linked to the scheme but POs have not seen the evidence to support this publicity.

With respect to the impact of TG on the farm (practice and business), those farmers with less habitat to offer have to make a bigger change in their farming system than those with habitat (to achieve sufficient points). In this sense the scheme is seen as rewarding those with habitat whereas it is felt

it should be equally important to encourage improvements in farming which lead to environmental gains. However this was not seen as a lowland (less habitat) and upland (more habitat) issue since the changes required on upland farms can be large if they need to reduce stock, as they have to make other arrangements (find other land) for their stock. It is clear that many TG farmers are heavily reliant on the annual payments and there are many concerns about the loss of TG. These farmers have adapted their farming systems to accommodate the scheme requirements and earn the regular payments, often making significant changes. All POs agreed that TG was a good, well paying option for a number of farmers.

The SFP has helped to encourage entry as there is less need for high stocking in order to maintain subsidies. AES is increasingly seen as the way forward. In 2014 the historic aspect of the SFP will end and this may increase interest.

History shows that there is a 'recognition' effect when farmers can take ownership of the scheme and start to understand the impact of changes. What was 'waste land' is now seen as having a value. In particular, farmers like seeing more birds.

In terms of inappropriate prescriptions, two examples of the negative impact of TG prescriptions were discussed (Molinia encroachment and increased upland ewe fertility- see full report in the Appendix for details). In these cases, TG prescriptions brought unanticipated outcomes and represented difficulties for some systems. The examples demonstrate that implementing new management for environmental outcomes is a learning process, and prescriptions cannot hope to be accurate from the beginning. Flexibility in the implementation of prescriptions, with farmer input, is seen as important. There is an argument for bringing farmers on board, asking them to farm for environmental outcomes and making schemes less prescriptive: this would suit the more educated and motivated farmers although others might struggle.

TG is a whole farm scheme but many farmers often separate out the land that is under higher tier/more restrictive management prescriptions from that which is just in the general part of the scheme. Some also rent new land so they can manage their grazing more efficiently and sometimes they do not want this to be part of the scheme, so it does not have to be entered.

With respect to engagement, farmers appreciate support from their PO. This support is critical when joining the scheme, at the 1 year servicing visit and at the 5 year review. At other times farmers like to know that 'their' PO is available at the end of a phone. TG POs also tend to act as the one-stop-shop for farms to access other organisations and sources of grant aid. It is not clear to the POs to what extent farmers influence their neighbours with respect to AES, there are clusters of TG farms but this may be due to habitat or other factors. Any association or organisation of TG farmers is thought to be a good thing but needs facilitation. For those that say they were not influenced by speaking to neighbours, they may have been influenced by watching what neighbours were doing. With regard to public engagement, farmers want recognition for their efforts. Farms that have educational visit may feel that this helps redress the media coverage, which they feel is adverse. Some TG farmers (although not all) are interested in the environmental impact on their farms and would appreciate feedback and an end of agreement interview.

If TG eligibility rules had less emphasis on habitat it would attract more people, if it was tweaked it would enable a greater suite of outcomes to be delivered. TG is meeting a number of objectives already and it just needs some adjustment to meet further objectives such as carbon storage and water quality. As such a brand new scheme is not needed. TG agreement holders are already in clusters and this could be harnessed through appropriate recognition in the targeting approach for the new scheme, to create landscape-scale AES.

Older farmers find the paperwork a problem. Also the media coverage of cross compliance checks, when payments have been delayed as a result of AES payments and calculations being checked against IACS, may have led to the perceptions from non-agreement holders (revealed in the survey) that the paperwork was difficult.

There has been a missed opportunity to undertake a baseline study and monitor the environmental impact of TG/AES. POs have the skills to carry out the baseline survey but not the time or resources at present. Farmers arguably also have the skills to monitor changes on their farms, although the reliability of their information was questioned. If farmers were involved in monitoring it would encourage pride in what they are doing, and ongoing learning.

6.2 Views on transfer to Glastir

There are deep concerns about the loss of TG (these echo those concerns raised by farmers in the interviews) and the impact this will have on the farm business, the local economy and the environment. POs agreed that TG agreement holders would certainly see the new scheme as a backward step. Loss of annual payment would mean employees and sons might have to leave the farm while loss of capital and annual payments would have a detrimental impact on local contracting businesses [this is based upon the assumption that Glastir will only offer the basic level scheme to most existing TG farms, because they will fall outside the target areas for higher tier management]. It was anticipated that former TG agreement holders would resort to ploughing up species-rich pastures to increase production because they would no longer have the money coming from TG (if they are not in the target area) to compensate for lost income.

There are concerns about the relative absence of POs planned for the new scheme. Experience of delivering TG, particularly in the early days, proved that POs were invaluable in explaining the scheme to farmers and showing them how it could work on their farms. They can help the farmer to make an application that is realistic by tailoring the scheme requirements to the farm, identifying the appropriate amount of work/change they can commit to. Applications to the new scheme without PO support will lead to a high risk of non-compliance if this early support is not available. Farmers will tend to be unrealistic in their application and options in seeking to gain the maximum amount of payments. It is possible to achieve objectives for the environment and for the farm business, but farmers cannot do this without assistance.

The last ten years' worth of agreements is an important investment that should not be lost with the change to the new scheme. There is a risk of losing a cohort of committed people. There is a need to keep existing AES farmers in the scheme/ programme, that they represent a very important reservoir of environmental capital, as well as farmer know-how and commitment to environmental outcomes. It takes time to develop a good level of understanding about how to manage land more sustainably and these people should be supported. As such the targeting choices applied to Glas Tir will be critical. WAG should take this experience seriously and build upon what it has from the previous scheme: we don't want to go backwards. Old agreements were targeted and hit some targets well, at least at the level of the individual agreement.

There is a danger of watering down scheme benefits. The higher-level scheme agreements will target previous AES areas and there may be an impact on payments for management. This will hit the habitats that form that payment, the employment and time on the farm and the use of contractors and traditional skills. There is a need to consider the impact on wider species/ countryside as well through linking corridors.

The capital works element is important as it attracts farmers to join, has a visible impact and when work is done by contractors this generates local employment.

7 Overview: farmers' motivations for entry into and exit from agri-environmental schemes

7.1 Introduction

This synthesis chapter aims to provide an overview of the results and analysis from the three sources: telephone survey, interviews and workshops. It then uses this overview to describe the process farmers go through when making decisions about AES. The survey enables the patterns and relationships to be revealed concerning the factors that influence (non)-agreement holders' decision making with respect to AES. The interviews enable deeper exploration into some of the issues, while the workshops provide a different perspective from the project officer about farmers' behaviours and about the role of engagement with policy makers and deliverers. In general there is good agreement between the different sources of information with interview and workshop data supporting, and adding to, the survey results.

7.2 Capacity

Capacity was found to be an important determinant of AES uptake, in particular farm resource, farm system and farm life cycle. Whether the scheme fitted in with the farming system was cited as a key factor explaining entry into or exit from TG. Low-input farmers or farmers on marginal/unimproved land found that their farms lent themselves to TG, they were often already using little fertiliser and keeping stock levels low, this was because of the limitation of the land or in some case because of a reluctance to improve the pasture and a positive decision to keep inputs low because of environmental beliefs and lifestyle/family factors. As such TG aims were perceived to be compatible with the current management (and values) and little change in the farming system was needed.

Conversely intensive/dairy farms found that their farming systems were incompatible with TG, and indeed that their farms were ineligible. This was clearly the case amongst dairy farmers and larger hill farmers who argued that restrictions on stocking rates and over wintering (and the associated negative financial impacts) were the key factors for not joining. The survey shows that nearly a quarter of the unsuccessful group interviewed were dairy farmers, also that nearly a fifth of those who had never joined AES are mainly dairy holdings. These people were not averse to schemes per se, as they had been in ESA, but would only consider them if they fitted around the farming system. Some farmers had looked into or even applied to TG but found that the restrictions were too harsh. The POs suggested that production-oriented farmers in lowland areas have become 'too intensive to change' and as such would not consider AES. The survey results support this analysis. They show that unsuccessful applicants and those who had never been in a scheme selected the 'more management flexibility' before 'payments' as a factor that would make the scheme more attractive to them. The survey also found that the most frequent response from the non-agreement holders when asked which of the eight statements best reflected their current position was 'I have studied the schemes and the management prescriptions are too demanding, and this is evenly divided among the three samples.

Interestingly in the survey non-agreement holders former ESA (34%) and those who had never applied (29%) said 'I have considered them [schemes] and may apply in the future'. This demonstrates the dynamic nature of farming, often these farmers are constantly considering their options and would apply to a scheme if there were benefits to the farm business. This was reinforced in the interviews which revealed that some farmers are constrained by current circumstances also that some farmers are constantly scanning for options to improve their farm business

The survey results indicated that the agreement holder sample was older than the non-agreement sample. This is surprising given the comments from agreement holders about older farmers being more resistant to AES, also the observations that they are less likely to commit to AES unless they have a successor. It may however suggest that older farmers are opting for less intensive (and less demanding) systems and possibly reflect a higher proportion of semi-retired newcomer farmers entering TG. It might also suggest that younger farmers are more keen to grow, develop and improve the agricultural business and therefore less likely to consider entering an AES. Comments about the changes in farming in the local area suggest that younger more competitive farmers are running (and developing) large intensive farms.

The life cycle of the farm, particularly the succession status, was also shown to be important in the analysis. The survey suggested that non-agreement holders were more likely to have identified a successor, whilst the interviews revealed that agreement holders hesitated about entering/renewing scheme if they were too old and their successor was too young, or if they did not have a successor. Non-agreement holders also expressed uncertainty about what their successors' plans would be for the farm. The POs noted that often the reasons farmers do not renew or join AES are personal, for example, illness, age or selling the business. It would appear that some non-agreement holders do hold positive views about AES but find that circumstances do not allow them to take up the AES opportunity at the current stage in their farm/family life cycle.

The survey also found that over half of the non-agreement holders indicated that they planned to grow/intensify the business compared to just over 10% in the agreement holders groups. Most agreement holders interviewed did not plan to expand or grow the business, although this was linked to the reason for joining the scheme (TG). Those agreement holders who had joined for pragmatic reasons did not rule out expansion and growth whereas those agreement holders who joined because they wanted to maintain low-input farming were less likely to have such plans. Plans for growing or diversifying the business were often tied up with a successor coming home to the farm. Diversification activities were more common amongst the TG agreement holders interviewed compared to non-agreement holders, as was membership of OFS and reliance on non-farm income. There was a sense that TG agreement holders had chosen a different business trajectory compared to some of their larger conventional neighbours who were described as expanding and intensifying.

The survey analysis showed that non-agreement holders (unsuccessful applicants) had the highest proportion of business income from agricultural activities suggesting a reliance on agricultural income compared to agreement holders. This was reinforced in the interviews which suggested that agreement holders new to the area and to farming were more likely to have non-farm sources of income compared to traditional local farmers (agreement holders and non-agreement holders). There was no obvious difference in agreement holders and non-agreement holders in terms of the presence of major loans impacting the business. The interviews suggest that those who had moved into the area and bought farms in the 80-90s did have loans and mortgages to service, however in most of these cases they supplemented their farm income with non-farm sources and as such were not constrained in their farming/AES decision options by the loan.

7.3 Willingness

Farmers' views about conservation and AES were sought in the survey and interviews to explore whether these might explain their (un)willingness to enter a scheme. In the survey almost all of the respondents (agreement holders and non-agreement holders) agreed that conservation should be an integral part of agriculture, however, those currently in AES agreements are more likely to strongly agree. Also agreement holders had a higher level of agreement with the statement that farmers' should take responsibility for the environment. When asked in the survey if they considered conservation activity to be detrimental to efficient agricultural activity, only those coming to the end of their ESA agreement and in Tir Gofal tended to strongly disagree. This concurs with the interviews which showed that the majority of agreement holders found TG compatible with their farming goals, although they did recognise that they were not farming intensively and that for some more intensive farmers TG would limit their opportunities. Interestingly, in the survey the vast majority of agreement holders and non-agreement holders agreed that AES are the most effective way to involve farmers in conservation matters. This was supported in the interviews where agreement holders and non-agreement holders alike were positive about AES. However, some individual non-agreement holders emphasised food production over conservation and were philosophically opposed to AES. Overall the survey and interviews have shown that while agreement holders are more positive about (and felt more responsible for) the environment than non-agreement holders, the difference between the groups is not strong and all farmers appear to be supportive to some extent of a positive association between conservation and agriculture. This suggests that from an environmental perspective most farmers are supportive of, and would be willing to consider, AES. It also suggests that a negative attitude towards the environment is unlikely to explain unwillingness to enter a scheme, that there are other factors at play. However having said this, agreement holders and non-agreement holders alike, when interviewed, referred to other local farmers, often neighbours, who were, in their view, farming with no regard to the environment. This suggests that either this cohort has not been captured in the survey or that farmers' attitudes towards conservation and farming do not always reflect their actual behaviour.

7.4 Motivations

The results from the survey, interviews and workshops all concur that the most important motivation for farmers when applying to join schemes are the capital payments for boundary maintenance/restoration. This was the overriding case for ESA agreement holders. Some farmers who have bought run-down farms found the payments particularly useful in this respect. Also although some said they would have carried out the work without the payments, they were motivated to join TG as it enabled them to accomplish the job at a quicker rate and with the encouragement of the scheme. The interviews found that, although capital payments were the main incentive, some TG agreement holders were attracted by the annual payments as well. There is a geographical component noted by the POs in terms of which payments are more attractive, in the upland National Park areas payments for capital works (walling) are a strong incentive, whilst the annual payments are more attractive to larger farms (often lowland) that can offer a number of options including arable, hay meadows, educational visits. In this respect there are links between motivation and farm capacity. After payments, agreement holders in the survey rated 'to encourage native plants and wildlife' or 'landscape' as important when applying for AES. The interviews also found that most TG agreement holders were motivated by payments which would enable them to continue farming in a way that allowed the environment to be protected, thus payment and environmental protection were interlinked motivations. However the interviews also found that some farmers saw joining TG as their only option for sustaining the farm business, it offered a lifeline

and presented an opportunity that was too good to miss. Indeed in some cases farmers claimed that they could not afford not to join, even when they did not support the aims of the scheme.

With regard to reasons for not entering AES, management flexibility with options and prescriptions, payments and paperwork were the main concerns of non-agreement holders in the survey. Non-agreement holders in the survey demonstrated negative perceptions about AES, they are skeptical about hidden costs and the level of payments being sufficient to cover the work costs, and perceived that paperwork, joining and implementation will be problematic. However of these issues inappropriate or non flexible prescriptions were mentioned most frequently as reasons for not joining AES in the interviews, although the lack of financial reward to compensate the management changes required was also mentioned. Non-agreement holders (50% n the survey) perceived that AES interfered with the running of the holding. This was clearly demonstrated by the remarks from non- agreement holders who had withdrawn their TG applications, particularly dairy farmers. The results indicate that scheme design is more of a perceived limitation than scheme process.

7.5 Scheme experience

In the survey all three types of agreement holders were positive about renewing or joining another scheme. Interviews supported this revealing that most agreement holders found the experience of being in a scheme (ESA and TG) to be positive. However there were some TG agreement holders who had had negative experiences with TG finding that it did not fit into their farming system and as such brought problems. With respect to payments, over half of all three types of agreement holders surveyed did not agree that scheme capital payments covered the costs of the work involved. This was backed up by the interviews, and it was widely agreed that due to rising costs of materials the payments were no longer sufficient. The survey result, that a third of agreement holders found that the schemes have hidden costs that they had not anticipated, was supported to a lesser extent in the interviews.

After payments, agreement holders in the survey said that, 'more management flexibility with options and prescriptions' would make the schemes (TG and ESA) more attractive to them. The extent of this dissatisfaction with prescriptions and flexibility did not emerge in the interviews. Although agreement holders could cite areas for improvement, it did not appear to be a particular concern for most. However, some individuals strongly criticised the TG prescriptions, both their inflexibility and their effect. Interviews and survey results showed that most agreement holders found that schemes did not interfere with the running of the holding.

The survey, interviews and workshops found that paperwork was not an issue for TG or ESA agreement holders. However the survey suggested that there is a perceived paperwork issue among those who have not entered an AES. This did not feature strongly in the interviews with non-agreement holders, their concerns were more focused on whether the scheme fitted in with the farming system, although one interviewee did note that he would be resistant to any unnecessary bureaucracy. The POs suggested that poor press regarding payment delays due to cross checking IACS and AES might explain this poor perception.

Current agreement holders who have had no previous experience of AES were the most likely to agree that the AES had increased their environmental knowledge. In the interviews the newcomers to farming experienced the most benefits from joining the scheme in terms of gaining knowledge and practical skills. Not all agreement holders agreed that they had gained knowledge, traditional local farmers tended to say that they were already knowledgeable and that their own knowledge was under-valued. ESA agreement holders in the interviews were least likely to agree that their

environmental knowledge or awareness had increased. POs suggested that some agreement holders might not recognise any gradual accumulation of knowledge.

In terms of environmental impact 75% of agreement holders surveyed agreed that AES improved the landscape of their holding and increased native plants and wildlife. There was also general recognition in the interviews that AES brought environmental gains and agreement holders tended to mention birds and wild flowers. Some agreement holders, however, were not convinced that any changes had occurred arguing that birds numbers had not increased as expected and that not much had changed. A few TG agreement holders strongly believed that the prescriptions had been detrimental to the environment. Interestingly the majority of non-agreement holders (60%) surveyed agreed that AES had led to improvements to the countryside, landscape and native plants and wildlife. Although not necessarily directly supported in the interviews, the non-agreement holders interviewed did have positive views about the AES in general.

Some TG agreement holders who had significant annual payments found that these provided a regular income to the farm and helped to buffer the business against the vagaries of the market. In doing so they allowed the farmer to plan ahead and take on an extra farm hand or allowed the son to stay on the farm. In some cases they were seen as essential for the survival of the farm. Other TG agreement holders (including smaller farms and newcomers), however, with smaller payments did not consider that they had any impact on the farm business.

7.6 Engagement

Most agreement holders in the survey who were coming to the end of their scheme thought that 'more feedback on the impact of the scheme' was needed. For most agreement holders interviewed, some indication of how they were doing and some recognition of what they were achieving would have been welcomed. For those nearing the end of their TG agreements, whose last PO visit was five years earlier, they were feeling out of touch.

In the survey and interviews existing and previous agreement holders all tended to agree that schemes they have entered had been easy to join, although around 25% in the survey felt that joining had not been easy. None of the agreement holder interviewees, however, expressed any concerns about the joining process, whilst they recognise that some of the rules on first reading could be daunting, they praised the actual forms as being very straight forward.

The role of the PO is endorsed by all types of agreement holders in the survey (around 90% agreeing that the PO clearly explained what they needed to do in relation to scheme entry and implementation) and in the interviews. The interviewees explained that POs were most helpful when a farmer first joined in assisting farmers in choosing appropriate options and gaining eligibility. More recently, with less POs and the transfer to WAG, the lack of assistance and contact has been noticeable. This is linked to the comment about poor feedback.

Although recognition from peers and from society is considered important in the literature and in other studies, there was little evidence in the research of this providing an incentive to join. In two cases TG agreement holders sought recognition for their environmental efforts by entering competitions but this was after they had joined TG. Indeed it was more likely that peer pressure prevented farmers from joining TG initially when there was a general reluctance amongst the farming community to engage with the scheme. The mindset of less educated and more conventional farmers was thought to make them reluctant to embrace any change. This is linked to a

cultural aspect, a shared understanding that AES challenges the identity of what being 'a farmer' means and a belief that AES agreement holders are not 'proper farmers'.

It would appear that farming networks are not particularly strong and that other farmers had not had a big influence on agreement holders' decisions to join TG. The interviews suggested that while some farmers did consult neighbours about the scheme before applying, this was not seen to be major influence. When asked in the survey 'who was most influential in your decision to join or withdraw from a scheme? In the majority of cases the respondents indicated that it was their own decision (78%). Again this is counter to the literature that suggests that networking with peers can influence farmers' decisions about participation.

7.7 The process of deciding about AES entry

With respect to TG the results have shown that there is a complex interplay between the many factors that influence farmers and the many different contexts in which they operate. The framework for analysis which identified three overarching and interlinked determinants of farmer behaviour: capacity to change, willingness to change, and engagement with the scheme encapsulates these. The complexity, and balancing, of factors involved in farmer decision making about scheme entry, renewal and exit is better understood as a process whereby the two elements that precede decision making; willingness (will the action satisfy a motivation?) and capacity (does the opportunity exist?) interact to result in an action: joining or not joining an AES. Engagement can interact with both elements by encouraging motivation and enhancing opportunity. This process is shown in Figure 7.1 and is described in detail below as a series of questions that farmer must consider.

7.7.1 Willingness- motivation to enter AES

7.7.1.1 *Does the scheme offer farm business rewards?*

The study has shown that there are many different types of motivations at work amongst agreement holders and non-agreement holders, however for farmers reliant on farm income the decision with respect to joining (renewing and leaving) an AES like TG is ultimately a business decision. Farmers are motivated extrinsically by the rewards of capital and annual payments. It is not the money per se that motivates the farmer, it is what the money can achieve in terms of improving the farm business that is the incentive. Capital payments are clearly a key motivation for farmers deciding to join ESA/TG because this enables them to restore fences, walls and hedges. Well maintained boundaries make the fields more stock proof and help the farmer to work more effectively, they also make the landscape look tidier and better kept. Thus the payments improve farm functioning and appearance and, as such, represent a farm investment. The state of the farm is a consideration, a run-down farm or one that has been newly purchased and being developed can benefit particularly from capital payments. Thus this motivation is linked to farm capacity (farm resource and life cycle). The encouragement and timetable provided by a scheme to undertake capital works is an additional attraction.

Farmers are motivated by annual payments, these can provide a regular income to the farm and as such help to buffer the business against the vagaries of the market. In doing so it enables the farmer to plan ahead and perhaps take on an extra farm hand or allow the son to stay on the farm. For more vulnerable farms a scheme payment can offer a lifeline allowing the farm to continue. The motivations here could be described as being aspirational in terms of securing the family farm future, as such the farmers' values and goals for the farm and family underpin any financial decision.

Opportunities for receiving annual payments are also linked to capacity (farm resources and systems)

In some cases willingness is associated with general adaptability and progressiveness. Farmers with an opportunist or pragmatic approach towards AES who are willing to consider any trajectory for the business are motivated if AES potentially brings business rewards. This is a characteristic associated with younger, more educated and newcomer agreement holders. However a progressive approach must be underpinned by capacity in the farm to adapt, often a function of farming system, loans, non-farm income and life cycle.

Some farmers will not be motivated (extrinsically) by AES payments. This might be because there is no perceived business reward, they may have already completed boundary restoration or their business income may already be sufficient. They may have chosen a business trajectory of pasture improvement for a higher stocking rate which is providing financial rewards (which might be compromised by joining an AES). Equally they may be a tenant who believes that the landlord will raise the rent if they join AES. In these cases farmers will not be extrinsically motivated to join an AES.

7.7.1.2 Does the scheme offer social rewards?

Some farmers will be motivated by influence and recognition from their peers and from the public in general. Although there was little evidence from this research of these rewards providing an incentive to join, some farmers are motivated by the prospect of gaining respect from their peer group, from the POs and from the public. Equally, however, peer pressure associated with any negative views and reluctance amongst the farming community to engage with the AES may motivate farmers not to join.

7.7.1.3 Does the scheme satisfy personal values?

Farmers are also intrinsically motivated to join AES when they see a scheme offering something that is inherently interesting or enjoyable and appealing to their own strong personal sense of environmental responsibility and accountability. The research has shown that farmers tend to demonstrate both extrinsic and intrinsic motivations and it is common for agreement holders to explain their reasons for joining schemes in both environmental and financial terms. Where the AES aims are compatible with the farmers' own philosophy and values for farming then any economic/business-based decision is reinforced. Often the two motivations are intertwined. For those that want to continue farming as a way of life or as a 'traditional farmer' with a goal of 'making a living' then an AES can be the 'means' needed to satisfy these goals. For some agreement holders, who are more idealistically motivated, their decision to join an AES might relate to their moral convictions about stewardship of the land and being 'a good farmer'.

Some newcomers farmers might prioritise the environment above the farm business. In these cases a decision to join an AES like TG is not necessarily a business decision, more of value decision and intrinsic motivations override extrinsic ones. However this is often only possible when non-farm income supplements the farm income, and as such is linked to the capacity of the farm to support this philosophy. Others, although holding environmental values, are (or need to be because of farm capacity) more pragmatically motivated and see continuation of their business as the prime motivation for their joining an AES.

Some farmers are not intrinsically motivated to join AES since the aims are perceived as being incompatible with their values and detrimental to their goals for the farm. This can be the case where farmers describe themselves as commercial or intensive. In some cases farmers

fundamentally disagree with subsidies or AES support and they are unwilling to engage with the schemes' ethos. Farmers who do not have a positive attitude towards the environment or a supportive philosophy and set of values and goals will tend not to opt for an AES like TG. However according to this research the majority of non-agreement holders were positively disposed towards protecting the environment and AESs suggesting that this would not be a key determinant of farmers' decision not to enter a scheme.

7.7.2 Capacity

7.7.2.1 *Is the farm eligible?*

Once motivated the farmer must consider whether the farm is eligible and whether the farm has the capacity to enter an AES, this is a function of the farm resource, farming system, farm life cycle. The research has shown that farmers with valued historic features or habitat, whether by virtue of geography or through positive management, meet eligibility (for TG) requirements more easily whereas those with few of these features have not been able to join. In this case they may be willing and motivated but farm capacity limits any opportunities.

7.7.2.2 *Will the scheme fit into the farming system?*

Fitting in with the farming system is key factor for many farmers. Many agreement holders were attracted to TG because they were often already using little fertiliser and keeping stock levels low. As such TG aims were perceived to be compatible with the current management and little change in farming system was needed. Where the AES does not (is it is perceived that it will not) fit in with the farming system and changing the farming system to meet scheme requirements will threaten the farm business, farmers will not join. This was demonstrated by the non-agreement holders (dairy and UBS farmers) who withdrew their applications to TG when they realised that they would have to de-stock and not out-winter livestock. The research found that farmers are not averse to schemes per se (they are willing) but would only consider them if they fitted around the farming system and were not detrimental to the business.

7.7.2.3 *Will the scheme fit in with the farm life cycle?*

Further capacity issues include the length of the scheme, the presence of a successor and the life cycle of the farm. There is a reluctance to sign up to TG where the father is too old and a successor either not identified or is too young to take on the necessary labour/management requirements. If the father is also uncertain of the successors' proposed trajectory for the farm, then he will be reluctant to commit the farm to an AES for 5 –10 years. Thus, again willingness to join can be constrained by farm capacity.

7.7.2.4 *Can the farm business adapt?*

The ability of the farm business to adapt is a consideration. This is a function of farm life cycle, business trajectory and investment, source of income and loans. Farmers with non-farm income are more adaptable and able to take AES opportunities as they can sustain the farming household without intensification.

7.7.3 Engagement

Opportunity to join AES can be enhanced through engagement by encouraging motivation and capacity, as indicated by Figure 7.1.

7.7.3.1 *Is the scheme easy to join and administer?*

Ease of joining will help to influence decisions about entering the scheme. The research showed that although agreement holders found joining and implementing the scheme (TG), and the scheme paperwork, easy, there was a perception amongst non-agreement holders that paperwork and implementation was difficult and, as such, a barrier to joining.

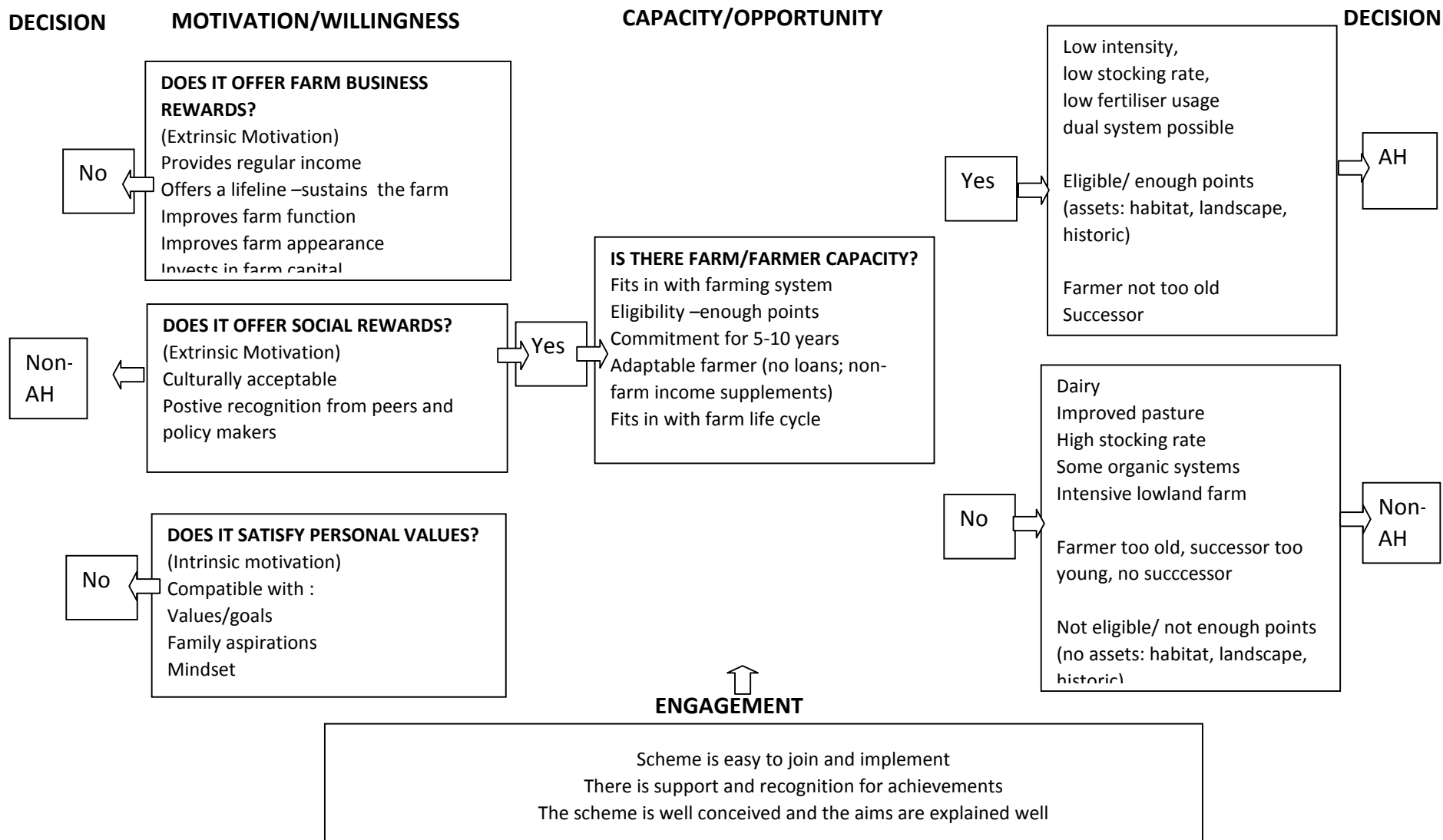
7.7.3.2 *Is there support and recognition of achievements?*

Although not directly responsible for farmers' decisions to enter an AES, the research has found that the role of the PO is central to engagement and successful implementation. The input of the PO at the application and early stages of the scheme, appears to have been vital in ensuring that agreement holders were both eligible and able to implement the chosen options. Without such assistance agreement holders claim that they would not have had enough points or would have chosen options impossible to manage or detrimental to the farming systems and business. Farmers are encouraged when the scheme provides them with a framework for environmental management and a time limit and plan for capital works. Feedback about the achievements of individuals and the scheme in general from policy makers and scheme deliverers can encourage agreement holders to continue in schemes, it can also enhance learning. Lack of PO engagement and recognition of agreement holders' achievements can negatively influence decisions about renewal.

7.7.3.3 *Is the scheme well conceived and are the aims explained well and acceptable?*

Farmers will engage with schemes if they think they are well conceived and they understand the aims. They are more likely to support schemes that they feel are fair in terms of eligibility, where farmers are rewarded for outcomes. Evidence of prescriptions being well thought through and monitored is important, as is the willingness of those delivering the AES to value farmers' local knowledge/experience and to make changes to prescriptions when necessary.

Figure 7.1. The process of deciding about entering an AES like Tir Gofal



Entry and Exit from Agri-Environment Schemes in Wales. Final Report October 2009

Table 5.1 Details of agreement holders interviewed

| SAMPLE | FARMER | SIZE ha | CHARACTERISTICS | AGE | EXPANSION PLANNED? | NON-FARM NOW | NON-FARM IN THE PAST | TYPE | SUCCESSOR IDENTIFIED | PREVIOUS or OTHER SCHEME | NOTES |
|---------------|--------|---------|---------------------------------|-----|-----------------------|-----------------|-------------------------|------------|-------------------------|-----------------------------|---------------------|
| TG | | | | | | | | | | | |
| old | | | | | | | | | | | |
| C | R | 228 | family farm | 44 | y | | | ubs | p | | |
| C | J | 117 | family farm | 66 | n | | | lbs | y | | |
| C | M1 | 169 | family farm | 58 | y | | | ubs | y | | |
| C | R | 81 | new to farming & area in 80s | 65 | y | | | | y | | |
| C | M2 | 58 | family farm | 48 | y | | y | lbs | p | | |
| C | | 2006 | 809 family farm (Welsh) | 50 | y | | y | ubs | y | | |
| C | | 2012 | 130 family farm (Welsh) | | y | | | ubs | p | | |
| B | Y | | 60 new to farming & area in 70s | 59 | n | | | lbs | n | OFS | |
| B | S | | 81 new to area in 80s | 66 | n | | y | a,s horse | n | OFS | horses |
| B | J | | 71 family farm | 53 | n | | | ubs | p | OFS | |
| B | | 2050 | 526 family farm (Welsh) | 65 | n | | | ubs | y | ex ESA | |
| B | | 2058 | 209 family farm (Welsh) | 50 | | | | | | Ex National Park scheme | |
| middle | | | | | | | | | | | |
| C | F | 109 | new to area in 80s | 43 | p | | | ubs | p | | |
| C | D2 | 81 | family farm | 62 | | | | ubs | y | | |
| C | C | 4 | new to farming & area | 60 | n | | y | | n | | nature reserve |
| C | H2 | 81 | family farm | 43 | y | | | ubs | y | ex OFS | |
| C | C | 40 | family farm | 59 | n | | | mixed arab | n | | |
| B | N | 56 | family farm | 60 | | | | lbs | | | |
| B | W | 28 | new to farming & area | | | y | y | ubs | | OFS | retired prof |
| B | L | 12 | new to farming & area | 52 | | y | y | ubs | | ex TC | idealist |
| B | DF | 67 | new to area in 90s | 63 | n | | | ubs | | OFS | |
| B | DS | 156 | new to farming & area | 61 | n | | y | ubs | n | OFS | retired prof |
| new | | | | | | | | | | | |
| B | L | 13 | new to area in 80s | 49 | | n | | ubs | n | ex TC | diversified to pets |
| B | W | 281 | new to area in 80s | | n | n | | ubs | n | ex ESA | common land |
| B | H/S | 33 | new to area in 80s | 54 | n | n | y | low c&s | | | |
| ESA | | | | | | | | | | | |
| A | M3 | 26 | family farm | 60 | | n | | ubs | | | |
| A | D | | new to area in 90s | | | y | | | | | |
| A | G | 41 | new to farming & area in 80s | 69 | | n | y | | | | |
| A | P | 166 | family farm | 61 | | n | | ubs | | | |
| NON AH | | | | | | | | | | | |
| D | T/P | 72 | family farm | 69 | | n | | ubs | y | | |
| D | P | 59 | family farm | 34 | y | y | | ubs | p | | |
| D | D3 | 101 | family farm | 67 | | n | | ubs | y | | |
| E | G | 121 | family farm | 42 | n | n | | dairy | n | OFS.ex ESA | |

Table 5.2 Details of non-agreement holders interviewed

| SAMPLE | FARMER | SIZE ha | CHARACTERISTICS | AGE | EXPANSION PLANNED? | NON-FARM I NOW | NON-FARM I IN THE PAST | TYPE | SUCCESSOR IDENTIFIED | PREVIOUS or OTHER SCHEME | NOTES |
|---------------|--------|---------|---------------------|-----|--------------------|----------------|------------------------|-------|----------------------|--------------------------|----------|
| NON AH | | | | | | | | | | | |
| D | T/P | 72 | family farm | 69 | | n | | ubs | y | | |
| D | P | 59 | family farm | 34 | y | y | | ubs | p | | |
| D | D3 | 101 | family farm | 67 | | n | | ubs | y | | |
| E | G | 121 | family farm | 42 | n | n | | dairy | n | OFS,ex ESA | |
| E | LL | 24 | family farm | 45 | n | n | | dairy | | ex ESA | |
| E | H | 404 | family farm | 52 | n | n | | ubs | p | | |
| E | | 2269 | family farm (Welsh) | | | | | | | ex ESA | |
| F | E | 36 | family farm | 60 | | y | | lbs | y | | |
| F | LL | 140 | family farm | 44 | | n | | ubs | | ex ESA | tenant |
| F | S | 16 | new to area in 90s | 51 | | | | bs p | | | butchery |
| F | | 2402 | new to area (Welsh) | | | | | | | | |
| F | | 2403 | family farm (Welsh) | | | | | dairy | | | |

Y= yes, n= no

8 Policy implications: approaches to achieving successful agri-environmental outcomes

8.1 Rewards

Joining an AES is ultimately a business decision for a farmer. Any features of scheme therefore that enhance business income, sustain the business or improve/invest in business capacity will be important. Key amongst these are capital and annual payments. As well as enabling work on the farm, capital payment have indirect impacts. They can increase the visibility of a scheme, they have a visible impact on the landscape and when work is done by contractors (some of whom are farmers) this generates local employment. This helps raise the 'profile' of the scheme amongst the farming community. Capital payments should therefore be a central component of any successful AES. The amount should be perceived as fair or adequate by the farmer and regularly revised to ensure that they cover any rising costs.

The value of annual payments should not be underestimated. They provide regular payments which act as a buffer against changing markets and incomes, they enable the farmer to plan ahead for the duration of the scheme and allow employment of labour/family. Ending a scheme and removing these payments will expose many (some vulnerable) farms who have come to rely on them and this has implications for the sustainability of family farms.

Non-financial rewards are also important to some farmers who have a sense of environmental responsibility. AES that enable the protection of farm environmental features are attractive to those motivated by personal satisfaction.

8.2 Compatibility with the farming system

Understanding the importance of AES fitting in with the farming system and equally the extent to which farmers are willing, or able, to change their system is important when designing and implementing AES. This research has shown that non-agreement holders are not generally resistant to AES per se and are willing to consider those AES that suit their farm, but they are often constrained by capacity. Schemes that are perceived to be too rigorous and have too many conditions and rules will not be attractive. Where an AES requires a large change in the farming system with no obvious financial reward or the risk of financial loss then it will be rejected. Linked to this is the issue of eligibility, where eligibility rules emphasise certain farm features, such as habitat, this immediately restricts a proportion of the farming population (who may be willing) from entering. Thus, although AES are clearly to designed to achieve different aims, in principle the aim should always be ensure compatibility (and eligibility) with the farming systems of target farming population.

8.3 Joining and administering a scheme

Negative perceptions of the ease of joining and administering an AES (apparently held by non-agreement holders) can be corrected using publicity, and other dissemination methods such as POs,

meetings and farm visits. Managing applications quickly and reducing waiting lists are also key to achieving good engagement and uptake.

8.4 Flexibility with prescriptions/ valuing farmer knowledge

Linked to compatibility is prescription flexibility. Allowing farmers some flexibility in scheme prescriptions both in terms of deadlines and management would enable management to be geared more to local conditions. Allowing farmers to use their own knowledge and experience in implementing management options can also improve overall engagement with, and buy-in to, AES and assist with monitoring the impact of prescriptions

8.5 Support

Support from POs is vital. They can help the farmer to make an application that is realistic by tailoring the scheme requirements to the farm and identifying the appropriate amount of work and change farmers can commit to. Applications without PO support will lead to a high risk of non-compliance if this early support is not available. Encouragement provided by the POs is important, as is the framework for environmental management (a time limit and plan for boundary restoration) provided by the scheme.

8.6 Monitoring and feedback

Time and resources should be made available for a baseline study and for monitoring the environmental impact of AES. The use of POs or farmers in a monitoring role should be considered. Using farmers to monitor changes on their farms will encourage pride in what they are doing, ongoing learning and lead to recognition and feedback/dialogue with WAG. Not only will monitoring provide evidence of environmental change, it will also demonstrate these changes to farmers and the farming community and improve overall engagement. Positive recognition of agreement holders' achievements from peers, policy makers and the public will improve farmers experiences of AES, motivate them to renew and motivate non-agreement holders to consider applying. Feedback on achievements is an important element to any scheme and reinforces learning.

8.7 Communication

Interaction between agreement holders should be facilitated and existing clusters of agreement holders should be supported. This will encourage mutual learning and support and help to demonstrate outcomes thereby assisting feedback and monitoring.

There appears to be a cohort of farmers who are resistant to engaging with AES like. These are described as more conventional farmers who may be 'locked-into' intensive systems and therefore unable to change sufficiently without compromising the farm business income. However, for some the reluctance may also be related to a cultural belief that AES is not 'proper farming. Education, awareness raising and dissemination of AES aims and achievements can dispel some misunderstandings and lead to wider engagement, as can facilitating some interaction between current agreement holders and non-agreement holders to help dispel negative perceptions.

8.8 Continuity

Continuity in schemes is important. Any investment in schemes should not be lost as there is a risk of losing both a cohort of committed people and environmental gains. Existing agreement holders represent a very important reservoir of environmental capital, as well as farmer know-how and commitment to environmental outcomes. It takes time to develop a good level of understanding about how to manage land more sustainably and current agreement holders should be supported. Participation in schemes enables learning over the period of the scheme, the value of which cannot be underestimated by policy makers. Continuity also enables farmers to plan ahead and can help with decisions about succession. Continuity is also linked to monitoring and feedback. Farmers and POs believe that long term schemes with consistent aims are more likely to demonstrate environmental outcomes to farmers and to tax payers.

9 References

NB References to Section 3 are available in the full Literature Review

- Agra Ceas Consulting. 2003. Mid-term Evaluation of the Rural Development Plan for Wales 2000-2006
- Agra Ceas Consulting. 2005. Socio-economic Evaluation of Tir Gofal, was published in 2005. Report for CCW
- CRER and CJC Consulting. 2002. Economic Evaluation of Agri-Environment Schemes
- Dwyer, J., Ingram, J., Mills, J. and Blackstock, K., Brown, K. Burton, R., and Slee, B. 2007. Influencing positive environmental behaviour among farmers and land managers
- Mills, J, Gibbon, D, Dwyer, J and Short, C, Ingram, J. 2005. Identification of delivery mechanisms for Welsh top-tier agri-environment schemes. Report to Countryside Council for Wales
- WAO (Wales Audit Office). 2007. Tir Gofal. Report presented by the Auditor General for Wales to the National Assembly for Wales on 15 November 2007
- Welsh Assembly Government (WAG) (2003a) Welsh Farming and the Environment: Consultation on a new approach to an entry level agri-environment scheme in Wales. Welsh Assembly Government
- Welsh Assembly Government (WAG) (2003b) Welsh Farming and the Environment: Consultation on a new approach to an entry level agri-environment scheme in Wales._Report of Responses Received.

10 Appendices

See separate report