



**Countryside and Community Research Institute**

# **Evaluation of key factors that lead to successful agri-environmental co-operative schemes**

**Vol I.**

## **Final Report**

Prepared for Welsh Assembly Government  
by the  
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## **Executive Summary**

### **Purpose of project**

1. Collective landscape-scale land management can deliver many biodiversity benefits and also help in overcoming problems associated with diffuse pollution, soil erosion, flood storage capacity and common land management. Whilst there is support for collaborative action within agri-environment schemes in Wales, there is still uncertainty about the appropriate design and delivery of such schemes. As a result the Welsh Assembly Government appointed the Countryside and Community Research Institute to identify appropriate policy approaches to achieving successful agri-environment co-operation in Wales.

2. The aims of the research project were to identify:

- the extent to which agri-environment co-operation exists in Wales;
- the challenges to securing successful agri-environment co-operation in Wales; and
- appropriate policy approaches to achieving successful agri-environment outcomes.

### **Methodology**

3. The research involved three phases. The first phase was an extensive literature review to critically examine behavioural change mechanisms within agriculture that are available to policy-makers to secure agri-environmental outcomes. The second phase involved a review of 25 co-operatives which had the aim of trying to secure environmental outcomes on farmland. For each co-operative the review identified structures and sources of funds and where these schemes had been evaluated, listed outcomes and key factors that have led to success. The third phase involved an in-depth analysis of three farmer co-operatives in Wales, including face-to-face interviews and participatory workshops.

### **Key points from literature review and review of co-operatives**

4. *A mix of approaches* can be the most effective way to encourage behavioural change. Providing economic incentives, particularly capital grants, can enable change by introducing farmers to the possibility of engaging for the first time in an agri-environment programme. The use of advisory mechanisms is also effective as they can be adapted to meet farmers' different needs and foster voluntary change in behaviour. Increasingly market-led mechanisms are used to encourage behavioural change as they offer opportunities for farmers to add value to their products by highlighting their environmental credentials and use of farm assured schemes.

5. *Human development approaches* are increasingly used in agriculture extension. Rather than focusing on getting across a pre-determined message in a top-down process, the aim is to facilitate group action and learning. Gradually more emphasis is placed on localising behavioural change programmes ranging from formulating the problem, to providing local examples for farmers to learn from.

6. The review also identified the following successful ways of encouraging agri-environment co-operative working:

- *Developing partnership working* by creating trust between stakeholders and creating a better understanding of viewpoints.
- *Identifying triggers for co-operative working* which has often been problem solving or a perceived external threat.
- *Selecting and training group facilitators* to assist in group capacity building and scheme development.
- *Developing trust and reciprocity* which is the principle behind the many mechanisms and incentives aimed at creating collaboration.
- *Providing financial incentives for collective action* to cover the additional costs of collaboration and perhaps the costs of increased management and risk.
- *Providing formal collective contracts* which allow some autonomy, enabling groups of farmers to determine the allocations of costs and activities amongst themselves.
- *Recognising that not all neighbours can co-operate*, farmers who have lived and worked closely to each other for many years may not have any common values or shared social or business networks.

### **Case Study Evaluations**

7. In discussion with the Steering Group, three initiatives covering different aspects of Welsh land management interest and focus were selected for in-depth study. These were:

- Pontbren Farmers Group – a group of 10 farmers undertaking sustainable farming practices on a contiguous block of land, near Welshpool, Powys;
- Dolaucothi lamb – a group of 8 farmers marketing their own lamb on a National Trust estate in Carmarthenshire; and
- Ireland Moor ESA agreement – a group of 100 commoners with a collective ESA agreement on the common land known as Ireland Moor, near Builth Wells.

### **Key points from case studies**

8. *Benefits of co-operative working*: The key to successful co-operative working was the development of social capital within the groups, resulting in increased social interaction and the “feeling of belonging”. As social capital was built within the group, members were more willing to provide advice and mutual support to each other. Group membership then opened up new opportunities that would have been impossible to access by the farmers individually. Furthermore, through involvement in group activities individuals developed both social and technical skills. Following the success of collective activities and the development of human capital, members’ business confidence increased. They were then more willing to try new ideas and to take on new projects and social capital was further strengthened. The benefits of group working also went beyond the immediate group, including the use of local contractors and improving local access for recreationalists.

9. The case studies also revealed the following key success factors in undertaking farmer collective action for environmental outcomes:

- *Key individuals* with the skills and determination to move the group forward. They initially invested much of their own time and resources in making the group a success.

- *Effective facilitators* who provided the group with ideas and advice on securing funding.
- *Strong social cohesion* due to existing kinship ties and long term associations.
- *Small, manageable group size* which made it easier to maintain and develop good personal connections between members.
- *Finding own solutions* within the group which meant that the concept of change and adaptation had strong ownership.
- *Development of own implementation rules* as the groups placed a high value on retaining farm autonomy.
- *Flexibility in member involvement* which meant members were free to be involved in activities, as suited them individually.
- *Payment systems administered by the groups* who developed their own equitable distribution of funds to members.
- *Self-regulation and monitoring* which ensured high standards of work and low administrative costs.

### **Key Recommendations**

10. Considering appropriate mechanisms to be used in new agri-environment schemes and ways of developing agri-environment co-operative working through farmer engagement and group capacity building, the following key recommendations emerged:

#### *Co-operative approach*

11. The research demonstrated that the environmental benefits of co-operative working can go beyond those that could be achieved by individual actions. Within groups, environmental messages are more likely to become embedded and create a positive social norm and the scale of environmental activity can be enhanced through subtle social pressures. Effective collective working also has long-term benefits in that it develops social and human capital and builds confidence for members to undertake other activities to benefit themselves into the future.

**Recommendation 1:** Develop a group agri-environment scheme to enable collective action to achieve environmental outcomes.

#### *Partnership approach to finding solutions*

12. All three case studies highlighted the value that farmers place in being involved in the process of problem framing and resolution. Endogenous solutions are more culturally embedded and long lasting, and less liable to decline once the external influences are removed. External agencies need to develop knowledge alongside farming communities.

**Recommendation 2:** Encourage a partnership approach between existing or embryo farmer groups, and facilitators and scheme officers in the development of local scheme implementation/tools.

**Recommendation 3:** Increase the provision of training in partnership working for those agency and advisory staff involved in partnership liaison.

**Recommendation 4:** Involve group members in on-farm research to develop solutions.

#### *Scheme flexibility*

13. Locally determined solutions are likely to create more ownership of a scheme and thus a more sustained change.

**Recommendation 5:** Ensure enough flexibility in the scheme to permit local management solutions to develop.

**Recommendation 6:** Allow some flexibility in local scheme objectives and mechanisms to enable re-orientation, if necessary.

#### *Farmer engagement*

14. To effectively engage farmers in co-operative agri-environment schemes project officers/facilitators need to have a clear understanding of the history and culture of existing groups and the range of local issues. With this understanding they need to adapt and develop structures and processes to make them accessible and relevant to farmers. Without some local sensitivity, mechanisms for a new group scheme may fall short of engaging farmers effectively across the variety of likely target areas.

#### *Economic incentives*

15. Economic incentives can encourage engagement in agri-environment schemes and induce positive environmental behaviour amongst farmers, but more questionable is whether there is any corresponding attitude change. Scheme agencies will need to use their local knowledge to ascertain that farmers are fully signed up to the co-operative approach when offering economic payments. New groups could be offered seedcorn support for an initial planning stage after which they can apply for a full formal agreement using some form of independent legal status in order to release the scheme management funding.

**Recommendation 7:** Offer payments that at least cover the cost of management activities associated with running and belonging to the group.

**Recommendation 8:** Offer capital grants at an early stage and encourage the use of local contractors and suppliers to maximise the socio-economic benefits to the wider local economy.

**Recommendation 9:** Offer two funding packages – a startup package and a longer term agri-environment scheme management package, following attainment of group legal status.

#### *Knowledge and information*

16. The case studies have highlighted the value that farmers place on knowledge exchange and information to improve their economic situation.

**Recommendation 10:** Offer farmers learning and training opportunities as an incentive to get involved.

#### *Marketing Advantage*

17. Farmers may wish to participate in a joint agri-environment scheme in order to develop an environmentally-friendly brand for their product. Schemes should promote farm products and the link between product quality and the upland environment and provide support for direct marketing.

**Recommendation 11:** Provide assistance for groups in developing their own products and brands, either through a grant to employ consultants or through a scheme.

#### *Access to diversification funding*

18. As the group matures and develops greater confidence, the facilitator should be tasked with helping it access funding for other activities. This prospect of further funding at a later stage would offer an additional incentive for farmers to become involved.

**Recommendation 12:** Allow facilitators to assist group in accessing other funding sources at a later stage as an incentive to group formation.

#### *Common concerns/conflict/interest*

19. Many collective action projects appear to stem from shared interests and goals amongst members. In attempting to engage farmers in collective action it may be beneficial to identify local features or resources of value that are unique and threatened and which might be protected through their actions.

**Recommendation 13:** Identify common value situations that can bring farmers together.

#### *Work with existing groups or networks*

20. Existing groups or networks are more likely to succeed as they have developed factors of trust, familiarity, and respect that can only develop through time. When working with new groups, ideally members should be known to each other or be part of some existing local informal social networks, which will predispose them to work together. Successful groups will take time to establish, to develop into maturity and then to deliver real change in land management.

**Recommendation 14:** Work with existing groups where they exist.

**Recommendation 15:** If working with new groups, members should be known to each other through informal social networks.

**Recommendation 16:** Allow 10 years for new groups to develop to full activity.

#### *Facilitation*

21. The case studies highlighted the benefits of a facilitator or co-ordinator to support farmers in gaining access to information and knowledge, and developing collective action within farmer groups.

**Recommendation 17:** Appoint or formally recognise a facilitator for each group, and identify individuals with the right personality, locally-based and respected by farmers.

**Recommendation 18:** Set up a fund to pay for each facilitator and group establishment.

**Recommendation 19:** Provide facilitators with training in facilitation skills and in participatory and communication methods.

#### *Start small and simple*

22. Start with small groups of farmers, as it is easier to achieve good communication and effective monitoring with fewer numbers. Also aim to achieve simple land management changes early in the process to motivate farmers to join the scheme.

**Recommendation 20:** Start with a small group of farmers aiming to achieve simple land management changes in order to increase chances of success.

**Recommendation 21:** Start with options that produce tangible outcomes and benefits, such as small-scale capital works or promotional events.

#### *Group Structure*

23. Provide assistance in establishing an appropriate legal entity and determining the group constitution, including membership criteria, allocation of responsibilities, decision-making procedures and financial management.

**Recommendation 22:** Provide legal support in establishing a constituted group.

**Recommendation 23:** Provide assistance in developing group decision-making processes and sanctions.

**Recommendation 24:** Allow farmers to select membership of the group.

#### *Scheme payments*

24. The scheme should operate a payment system based around the delivery of a single payment to a locally based accountable structure that is in turn responsible for allocating the funds to individuals. This approach would reduce the amount of agency time spent on individual negotiations and leave the responsibility for resolving any disputes between members with the group itself.

**Recommendation 25:** Where appropriate, offer a single payment to properly constituted groups, along with responsibility for dividing it up between members.

#### *Group monitoring and sanction setting*

25. The case studies have demonstrated that less external compliance monitoring may be required with co-operative schemes, as there is usually an element of self-policing reinforced through peer pressure and reputation effects.

**Recommendation 26:** Encourage a process of self-policing and sanction setting to ensure compliance with scheme agreements.

**Recommendations 27:** Provide farmers with the opportunity to undertake their own monitoring activities.

#### *Expose group outcomes to public*

26. Acknowledgement and interest by outsiders helped to increase group confidence and gave them the self-assurance to pursue other activities.

**Recommendation 28:** Expose group activity success through local publicity, demonstration events, and achievement awards.

#### *Engaging other farmers*

27. A tiered approach to new agri-environment schemes would allow the more reluctant farmers to develop confidence in an individual scheme before moving to a higher tier of collective action with neighbours.

**Recommendation 29:** Adopt a tiered approach to new schemes enabling individuals to move to a higher-tier collective scheme when predisposed to.

**Recommendation 30:** Enable new members to join existing groups, wherever this makes practical sense.

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# **1. Introduction and Methods**

The Welsh Assembly Government (WAG) is currently undertaking a review of all its agri-environment schemes in Wales and the conclusions will be implemented from 2009. One aspect of the review is considering the introduction of a scheme for the delivery of landscape-scale and environmental benefits through co-operative action. Responses to a consultation document on the future of agri-environment schemes in 2003 (WAG, 2003) which proposed such a scheme were positive (WAG, 2003b). Consultees recognised that a scheme for group application would encourage integrated land management, delivering environmental, biodiversity and access benefits at a landscape scale (Mills et al, 2006). For instance, the Environment Agency recognised that the principle of group application is essential to overcome problems associated with diffuse pollution, soil erosion and river corridor habitats (WAG, 2003b). In addition, RSPB Cymru acknowledged that group applications could help tackle biodiversity decline, such as reductions in lapwing and other wading bird populations (WAG, 2003b). Conservation experts believe that large-scale restoration and enhancement is likely to be of far greater benefit to biodiversity than piecemeal projects. A large-scale project can reduce habitat fragmentation and maintain ecological networks (Adams et al, 1994; Kirby, 1995; Whittingham, 2007). The Campaign for the Protection of Rural Wales (CPRW) felt that group applications will be particularly beneficial in the management of common land, through enhancing distinct landscape patterns and historic features, such as medieval open field patterns, prehistoric landscapes and ridge and furrow grassland and providing strategic new access routes (WAG, 2003b).

Others have also recognised that collective action can aid effective land management more generally through: sharing and minimising costs; harmonising multiple objectives; sharing knowledge; sharing and mobilising resources; increasing credibility of actions and objectives; allowing flexible, locally relevant responses and rules; and, building capacity to cope with future changes (Pollard et al., 1998; Yaffee, 1998; Ostrom, 1999; Wondolleck and Yaffee, 2000; Cline and Collins, 2003, Mills et al, 2006).

Research has shown that UK farmers have a relatively limited experience of co-operative working and particularly for environmental outcomes (Davies et al, 2004; Mills et al, 2006). However, it is also evident that co-operation does occur within the agricultural sector under some circumstances, such as the sourcing of agricultural inputs, machinery rings, product marketing and sharing knowledge in agricultural extension activities, for example in farmer discussion groups. There is also evidence of informal co-operative arrangements with one or more neighbours (MacFarlane, 1998; Short, 2000; Burton et al, 2005). Farmers themselves apparently also recognise the increasing importance and need for collaboration as a survival tactic (EFFP, 2004).

Whilst there is support for collaborative action within agri-environment schemes in Wales, there is still uncertainty about the appropriate design and delivery of such schemes. As a result the Welsh Assembly Government appointed the Countryside and Community Research Institute to identify appropriate policy approaches to achieving successful agri-environment co-operation in Wales.

## **1.1 Aims and objectives**

**The aims of the Research Project were to identify:**

- the extent to which agri-environment co-operation exists in Wales;
- the challenges to securing successful agri-environment co-operation in Wales; and
- appropriate policy approaches to achieving successful agri-environment outcomes.

**To achieve these aims the Research Project had the following objectives:**

1. Review mechanisms for behavioural change in relation to agri-environment schemes.
2. Review agri-environment co-operatives in Wales and identify the key factors that have led to success.
3. Identify structures and sources of funding for all current agri-environment co-operative ventures in Wales.
4. Where schemes have been evaluated, list outcomes.
5. Evaluate three different approaches to agri-environment co-operative approaches in Wales, including the Pontbren Rural Care Project. These case studies were selected to:
  - identify the effects of co-operation on farmers working co-operatively;
  - highlight the outcomes of co-operation;
  - identify the key factors that have led to their success; and
  - suggest how these factors could be used for the benefit of future co-operative ventures.

## **1.2 Research methods**

To achieve the above objectives, the study involved three workpackages, as follows.

### **Workpackage 1: Literature Review of Behavioural Change Mechanisms within Agriculture**

A central objective of the literature review was to critically examine behavioural change mechanisms within agriculture that are available to policy-makers to secure agri-environmental outcomes. Six themes were agreed with the Steering Group

which acted as a guide to the content and structure of the literature review. These were:

- Economic mechanisms
- Advisory and institutional mechanisms
- Mechanisms for enabling co-operative behaviour
- Regulatory mechanisms
- Market-driven and voluntary mechanisms
- Integrated mechanisms

The review also considered behavioural change mechanisms and approaches, used in other areas of policy, such as rural development and woodland management. The literature search encompassed publications in the UK and internationally, including government and agency-commissioned reports and policy documents, academic journal articles, book chapters and relevant reports in the farming/land management media in relation to behavioural change mechanisms.

Within each theme, the review aimed to draw out the effectiveness and advantages and disadvantages of the different behavioural change mechanisms. The ultimate aim was to help inform policy makers of appropriate approaches to consider when developing co-operative agri-environment schemes. These are presented in Section 5 of the report. The review employed a high degree of critique, analysis and synthesis and covered over 300 publications.

## **Workpackage 2: Review of agri-environment farmer co-operatives**

The initial aim of this workpackage was to review agri-environment farmer co-operatives in Wales where collective action has been promoted in order to achieve environmental outcomes. An initial investigation identified very few such co-operatives in Wales, so in agreement with the Steering Group the review was extended to include both national and international farmer co-operatives. For each co-operative the review aimed to identify structures and sources of funds and where these schemes had been evaluated, list outcomes and key factors that have led to success.

The review was achieved through a search of published literature and internet resources on recent land management projects which have adopted a co-operative approach to achieving environmental outcomes, including project and evaluation reports. To supplement the review a number of telephone discussions were undertaken with selected key organisations with experience of group actions or landscape-scale agri-environment needs, including Wales Co-operative Centre, PLANED, Wildlife Trust for Wales, IGER, and Organic Centre Wales.

A total of 25 co-operatives were reviewed. All had the aim (*inter alia*) of trying to secure environmental outcomes on farmland. They ranged from those that were 'bottom-up' farmer led co-operatives to those that were agency-driven partnership projects. The co-operatives were grouped as follows:

- Management agreements across landscapes in Wales;
- Management agreements across landscapes outside Wales;
- Farmer-initiated activities outside Wales;
- Marketing groups in Wales with indirect environmental impacts;
- Facilitated farmer groups;
- Water catchment partnerships; and
- Groups with wider community involvement.

A summary of the initiatives is presented in a table. A one-page fiche with further details was also prepared, for each initiative.

The ultimate aim of the review was to identify the key success factors of these initiatives, from which lessons could be learnt. Findings contributed to section 5 of this report. A secondary aim of the review was to establish a broad base from which to select case studies to be investigated in workpackage 3 of the project.

### **Workpackage 3: Evaluation of co-operatives**

Following discussion with the Steering Group, three co-operatives in Wales were selected as case studies for in-depth analysis. The aim was to include a range of co-operatives using different approaches to achieving their outcomes. The group selected were:

- Pontbren Farmers Group – a group of 10 farmers undertaking sustainable farming practices on a contiguous block of land, near Welshpool, Powys
- Dolaucothi lamb – a group of 8 farmers marketing their own lamb on a National Trust estate in Carmarthenshire
- Ireland Moor ESA agreement – a group of 100 commoners with a collective ESA agreement on the common land known as Ireland Moor, near Builth Wells.

A four stage approach was taken to data collection and analysis.

#### **Stage 1: Farmer interviews**

The researchers undertook face-to-face, in-depth, semi-structured interviews with members of each group and where appropriate other family members who may have views on the impact of the groups. All 10 members of the Pontbren group and 8 members of the Dolaucothi lamb group were interviewed. Due to the large size of the Ireland Moor group, a sample of interviewees was selected; nine members of the group's central committee and one landowner. Most of the interviews were recorded with agreement of the interviewee and transcribed. The interviews lasted between 45 minutes to 3 hours. The main focus of the interviews was to determine:

- farm and farmer characteristics;
- experience of co-operative working;
- affect of co-operative working on farm management and business;

- the impact on members' lives;
- the impact on the wider rural economy; and
- the long term outlook

In addition, questions were asked about the members' social networks – those people who were important to the co-operative or farm business - in order to inform stage 2 of the case study evaluation. The interview schedule for these interviews is presented in Appendix 1.

With the Pontbren case study, discussions were also held with Bangor University who had previously undertaken interviews with the Pontbren group under the Flood Risk Management Research Consortium and who were able to provide additional information. Additional financial data on Pontbren were also obtained from the Farm Business Survey (FBS).

Some of the data from the interviews were analysed using the software package Nvivo. The use of this specialist software allowed the team to bring the data produced into a common 'workspace'. This facilitated the development of a consistent and rigorous analytical framework.

A cross-case analysis was used to highlight the common themes between approaches used in the three case studies. The analysis also identified the key factors that help bring about co-operation. All those involved in interviewing contributed to the analysis. One team member was involved in all three case studies in order to strengthen the comparative element.

## **Stage 2: Social network analysis**

The social network questions asked in the farmer interviews were used to undertake a social network analysis of each group. The interest in social networks can be seen in part as a development of the old adage 'it isn't what you know but who you know' in that we get a lot of information about the world and chance to discuss our ideas. Some people help us re-affirm our identity and build our daily world, other people, those who we generally see less frequently, bring us new or challenging information, that can change our world. It is now a cliché, and not strictly accurate, to say that we are all connected to one another by 'six degrees of separation', that six contacts in a row connect most people to most other people, but it expresses a truth that some social networks can actually be very small. Often through a network we are connected to more important or influential people, who we would generally have little contact with. These people may not be known to us directly, but their role in a network can be central introducing new ideas or opportunities be that in commerce or daily life.

By the same sorts of logics sometimes our social networks can be too small, connecting us to only people like ourselves, narrowing our view of the world. In narrow networks that do not link to broader groups or outside the common denominators that underpin most networks, information can stop flowing and the group may begin to become inward looking and potentially stagnate. Networks

need to be tight enough to bond and trust one another, but loose enough – connected to other groups and people - to allow change and newness in. A balance that is often dynamic and difficult, but necessary.

Often in a common sense kind of way we can work out a lot of our social networks, and use them in our daily lives – who do I know who knows about.... Yet formal investigation of the networks can reveal many features that would not be apparent. The social network analysis approach allowed the social networks of the groups to be graphically plotted, which facilitated the identification of sub-groups and the role of ‘brokers’ between groups. It enabled an assessment to be made of the networks of the whole co-operative, a network ‘map’ to be plotted and the role of individuals within this network. In analytical terms this provided the research team with a means of understanding the dynamics of the co-operative, and the role of individuals within it.

Social network analysis allows the formal modelling, investigation and measurement of the structural properties of a network, rather than a simple description. This modelling is undertaken using specialist software (UCINET 6 in this instance) and through a common questionnaire, that specifies the role of individuals within the network and their frequency and form(s) of contact, as well as how long members have been known to one another. This formal modelling enables structural measures such as *density* and *centrality* to be calculated. Briefly, *density* measures the completeness of a network, and ranges from a maximum of one if all individuals named are known to each other, and zero if the converse is true. The density of a network may be important in determining whether knowledge is transferred to others that have roles in their work or business. On the other hand, *centrality* measures the number of ties that individual network members have with each other, thereby identifying the most important or prominent actors in a network (Butler et al. 2007). As well as providing measurement, these networks can be plotted to provide a graphical way of interpreting and comparing different networks.

The social network analysis also had three functions in this project:

- it allowed comparison between the public narrative of the co-operative and participants’ understanding of how it actually operates;
- it helped identify who should be interviewed and invited to the workshops to discuss the wider impacts of the co-operative in the area; and
- it allowed the composition of the different co-operatives, their dynamics and structures to be compared.

### **Stage 3: External beneficiaries’ interviews**

A number of interviews were held with people or organisations outside of the three groups who had benefited in some way from involvement with the group, whether financially or socially. A template questionnaire was devised and questions were asked either by telephone or face-to-face. The questions related to financial benefits from involvement with the group; the extent to which this contributed to their annual income; and any social benefits derived from involvement in the group’s activities. The numbers interviewed depended on the case study: Pontbren (6); Dolaucothi (3); and Ireland Moor commoners (5).

Identification of relevant people or organisations to contact was achieved through the farmer interviews and the social network analysis. Some details, such as payments to contractors and suppliers were supplied by the groups.

#### **Stage 4: Workshops**

Following completion of the literature review, farmer interviews, social network analysis and external beneficiary interviews, the fourth step in collecting data for the case study evaluations was to convene workshops within each case study area, with co-operative members.

The primary aim of these workshops was to obtain feedback on the interview findings and to identify some policy recommendations for future agri-environment schemes, which are presented in Section 5. Invitations were sent to all group members and also to other participants invited on the basis of their role in the wider networks of the co-operative, as well as those identified by the research team as playing a strategic role. The numbers attending the workshops were: Pontbren (11), Dolaucothi lamb (2), and Ireland Moor (38).

The workshop started with an introductory presentation by the research team, which included the research project aims and objectives, and emphasised that the workshop were actually part of the research, not a dissemination exercise. The workshop was then divided into two sessions. The first session presented the results of SWOT analysis undertaken on the groups using data from the interviews. The research team invited feedback on these findings with the aim of seeking to ensure that they had understood the facts about each co-operative. In this way the workshops added to the quality of the research findings and provided an opportunity to gather more information. During the second part, the research team facilitated a brain-storming session to develop ideas from participants' own experiences of the appropriate design and delivery of future agri-environment schemes. Findings from the three participatory workshops are incorporated into the case study sections and policy recommendations. The outputs from the workshop are presented in Appendix 2.

#### **Workpackage 4: Analysis and policy recommendations**

A SWOT analysis of each case study was undertaken to evaluate the Strengths, Weaknesses, Opportunities and Threats of each group. These were revised following discussions at the workshops. The output from the case study interviews and workshops were analysed and the benefits of co-operative working and key success factors were identified. Using these findings and drawing on theoretical and empirical literature review and review of co-operatives, the research team put forward recommendations for appropriate mechanisms to be used in new agri-environment schemes in Wales and ways of developing agri-environment co-operative working. They also identified gaps in current research and presented recommendations for further research.



### **1.3 Report structure**

Section 2 identifies the main findings from the literature review and the review of co-operatives in terms of appropriate mechanisms to be used in new agri-environment schemes and how to secure environmental outcomes from co-operative action. Section 3 of the report provides details of the three case studies based broadly around the headings of: farm characteristics, group establishment, motivations and vision, group activities, institutional arrangements, impact on farm business, human and social capital, impact on wider community, future plans and SWOT analysis. The output from the case study interviews and the workshop are analysed in a systematic way in Section 4, with a comparative analysis of the case studies identifying benefits of co-operative working and key factors that can lead to successful collective action. The key aim of the research was to identify policy recommendations and Section 5 does this, examining appropriate mechanisms to be used in new agri-environment schemes and farmer engagement and group capacity building approaches to developing agri-environment co-operative working. This section also makes recommendations for further research.

The report is accompanied by a second volume containing the full literature review and review of co-operatives. These provide a greater depth of information, understanding and appreciation of the material which is summarised in Section 2 of this report.

## **2. Findings from Literature and Review of Co-operatives**

This section draws together the Literature Review and the Review of Co-operatives (see Volume II) to identify areas that provide us with guidelines and lessons for both developing appropriate mechanisms to be used in new agri-environment schemes and for identifying successful ways of encouraging agri-environment co-operative working.

### **2.1. Appropriate mechanisms to be used in new agri-environment schemes**

#### *Providing economic incentives*

The literature suggests that financial inducements within agri-environment schemes (AES) can have a beneficial effect on farmer behaviour by introducing farmers to the possibility of engaging for the first time in an agri-environment programme. Financial considerations appear to often override attitudes in deciding to implement an agri-environment scheme, so if payments are sufficient they can be an effective way of getting farmers to change practices. In particular, capital grants are seen as a way to address 'barriers to change' and enabling change. They also have the potential to bring wider socio-economic benefits to the local rural economy through the use of local contractors and suppliers. However, payment is not a sufficient condition on its own to promote positive environmental behaviour. If farmers join for purely economic reasons this may circumvent the need to change attitudes in order to produce behavioural change, enabling farmers to avoid fully processing the core issues when implementing the practice. Where behaviour is changed without corresponding changes in attitudes, it is potentially unsustainable without continued payment and farmers may revert to old practices once the scheme stops. The issue of whether environmental payments lead to permanent attitudinal change among farmers has received little attention in the literature yet is critical if we are to understand whether there are likely to be any long-term positive behavioural changes resulting from such schemes. For example, little is known as to whether once farmers have engaged in a project, this then impacts positively upon their management of other areas on the farm, or their likelihood of engaging in other environmental projects. The question of the additionality provided by AES is also uncertain. Farmers tend to enter AES when the required management changes are minimal and often schemes may pay farmers for activities they would undertake anyway.

#### *Use of advisory mechanisms*

Advisory mechanisms are important as they can be used to engage with farmers to different degrees and can be adapted to meet farmers' different needs. Through communication with farmers it is possible to foster voluntary change in behaviour. Advice can enable the learning that is often needed to ensure better (and sustained) adoption of practices. One to one advice, in particular, has a very influential and

significant role on the farm and is often favoured by farmers. Group learning processes are also popular and enable learning, reflection and education, as well as the development of social capital. For advice to resonate with the audience, it has to be seen as relevant and important. It needs to offer a clear financial dividend and/or be fully compatible with running a successful business. The literature also suggests that advice should be of a problem-solving nature ie: being able to offer advice to help farmers address current concerns in respect of new legislation or take up new opportunities in respect of grant schemes, time-saving techniques or innovations in business management. Advice has been an important element in AES programmes enabling schemes to be more effective.

Just providing advice is often not enough on its own to bring about behavioural change, as many farmers are constrained in their farm activities (capacity to change), they also have different predispositions towards environmental messages (willingness to change).

#### *Market-led mechanisms*

There is potential for encouraging higher standards of management practice on farms using market mechanisms, such as farm assured schemes (FAS). There are also increasing opportunities for farmers to add value to their products by highlighting their environmental credentials. This type of voluntary mechanism appeals to farmers who want to avoid stronger forms of public regulation. However, FAS do not always change long term attitudes, often farmers comply just to keep a contract and can revert to more damaging practices if the contract ends or becomes financially unattractive. Nevertheless, these mechanisms may have the potential to be incorporated into AES.

#### *Mix of approaches*

Whilst the literature identifies a range of mechanisms that can be used to influence behaviour, including economic incentives, advisory and institutional measure, legal and regulatory measures and market-led and 'voluntary' mechanisms, most studies suggest that a mix of approaches can be the most effective way to encourage behavioural change.

#### *Human development approaches*

There is an increasingly recognised need to involve the farming community in the process of problem framing and resolution. Extension theories are beginning to see knowledge as negotiated and constructed rather than linearly conveyable, and effective knowledge exchange as being two way. 'Bottom-up' approaches, such as the Leader approach, have proved successful when partners have some form of self-regulation and control over the project. They often also develop a wealth of new ideas, which lead both to more holistic projects and to an increase in the capacity of communities to design and manage further activities. A variety of institutional mechanisms is based upon encouraging and facilitating farmers to work together in groups and encourage greater interaction between farmers and extension agents. Agricultural research and extension organisations have, to a varying degree, employed human development methodologies such as the Farming Systems

Approach (FSA), Participatory Rural Appraisal (PRA), Participatory Technology Development (PTD), and Adaptive Management techniques. Action-research based, iterative programmes have also become popular. These have enabled professional advisors/researchers and farmers to seek to learn together and develop the most appropriate ways of moving forward in a specific context.

### *Group learning*

The literature review reveals an increasing use of group learning approaches, such as farmer development groups, in facilitating behavioural change and sharing best practice. Groups are a particularly effective way of facilitating learning, confidence-building and the assessment of new technology and management options. Participation in education and group activities has been linked to a capacity to change and community learning has been found to play an important role in modifying values and increasing the probability of change. Also, collective responses can lead to farmers developing solutions from within their own local knowledge. Working with groups may be particularly useful in cases where there are pre-existing heterogeneous groups (agri-cultures, farming styles, etc.) as these groups may have pre-established networks along which information (and social pressure) may pass.

However, it is argued that farmer groups should not be expected to solve difficult and complex problems alone and there is still a role for technological innovation within extension services. One potential problem with developing solutions to environmental issues with farmers is that their understanding and awareness of environmental problems can be limited and they have a tendency to favour those actions that fit in with the existing farm system. In this case, collectively developing solutions with farmers may involve an iterative process of informing farmers about the issue within their local farming context, followed by a reassessment of potential solutions. Such an approach to problem-solving is likely to take time, but may also be more likely to succeed where farmers develop a sense of both personal relevance and self-efficacy. Some commentators suggest a combination of different strategies with emphasis placed on empowering people and groups to engage in ongoing experimentation, learning and human development, with extension agents contributing technical know-how where appropriate.

### *Localising understandings of knowledge*

There is strong evidence for the need to consider localising all aspects of the behavioural change programme ranging from formulating the problem with the local community, to providing local examples for farmers to learn from. Some thought may also be given to localising even the development of scientific understanding that underpins advice. This would provide farmers with an opportunity to contribute to research at an early stage, learn along with the scientists and, through this engagement, socially confirm the legitimacy of research findings. The review suggests that to be most effective advice and information must be from a locally known and trusted and credible source. Also important are sources with similarities to the group, in-group influence, and making messages personally relevant – all of which can be enhanced through localised programmes.

## **2.2 Developing agri-environment co-operative working**

There is a range of possible opportunities for enabling collective action among farmers from formal and external coercion to extremely informal and internal mobilisation of social capital. Co-operative action itself can span a wide range of activities and goals ranging from informal 'neighbouring' activity to large multi-partner formal partnerships. It can also range from 'bottom-up', farmer-led co-operation to agency-led collective action.

### *Developing partnership working*

In situations such as flood management, where there are many stakeholders involved, partnership working can lead to collective action and result in behavioural changes in farmers. By creating trust between stakeholders and creating a better understanding of viewpoints positive environmental changes can occur. Some large-scale partnerships generally have a broad remit and seek to engage a wide diversity of stakeholders in exploring management options in relation to many different areas of interest. They are generally voluntary partnerships, but are often stimulated by statutory requirements and regulations. The extent to which these foster collective farmer action, however, needs to be considered. Although nominally bottom-up and consultative, these partnerships often do little more than include farmer representatives as partners.

### *Identifying triggers for co-operative working*

Co-operative working could be enabled if points of engagement are identified. The trigger to farmers co-operating has often been problem solving: for example, coping with wildlife damage to crops, adapting to water scarcity, pressure from a water company or objecting to prescriptive agri-environment schemes. A perceived external threat can encourage farmers to group together, particularly if it is a threat to something that farmers value which is local and unique, such as local traditions, breeds, or way of life.

### *Selecting and training group facilitators*

The use of a facilitator is important to assist in group capacity building and scheme development. They can play a crucial role in supporting farmers in gaining access to information and knowledge, and developing collective action. The literature suggests that facilitators need to be highly skilled and good communicators and act as conduits of information in both directions between farming and policy. The key is to ensure that facilitators are familiar with farming practices as well as environmental practices to enable them to produce a balanced and informed view of the situation.

### *Developing trust and reciprocity*

The principle behind the many institutional mechanisms and incentives aimed at helping to create collaboration is to nurture exchange and reciprocity and so increase trust and confidence in co-operative working. If members are not known to each other, trust can take time to develop. In this situation the process of group establishment should be an organic one, which is not forced or undertaken too quickly.

### *Financial incentives for collective action*

Farmers are more likely to work together when the potential benefits of co-operating outweigh the costs. The literature suggests that financial incentives for co-operation should be provided to cover the additional costs of collaboration and perhaps the costs of increased management and risk. The literature identifies options for group payments, including additional payments for each additional participant in a group, giving a significant number of extra points for group applications, or a payment by results approach deferring part of the payment until targets or milestones by the group have been achieved. However, as described above, whilst economic incentives play an important part in changing farmer behaviour and practices, there is no guaranteed positive effect on personal attitudes. For collaborative activities to work it is important that all members of the group are actually signed up to the aims and objectives of the group.

### *Collective contracts*

The literature identifies the notion of using more formal 'collective contracts'. Such contracts, made between government and a group of landholders on a collective basis, allow greater discretion to scheme participants to determine the way in which requirements are defined and payment rates are determined for individual scheme members. These more formal collective contracts allow some autonomy enabling groups of farmers to determine the allocations of costs and activities amongst themselves. They have their own responsibility for the implementation, monitoring and enforcement of the terms of the contract.

### *Green marketing schemes/branding*

In terms of incentives for collective action, market driven mechanisms have become increasingly significant. Commercial co-operative marketing ventures draw together farmers with other stakeholders and have been identified as a possible strategy for more integrated rural development. There are clear incentives for farmers to join as they can be income-generating schemes, achieving environmental benefits (if a truly green scheme) and improving links between customers and producers. Some co-operative producer groups, although concerned primarily with production have demonstrated indirect environmental benefits. However, these approaches require business skills in marketing and promotion, as markets can be hard to establish and maintaining brand and product quality is demanding.

### *Not all neighbours can co-operate*

The literature stresses the importance of recognising that not all neighbouring farmers can co-operate. There are examples of populations of highly differentiated neighbouring farmers who are unable to form a coherent group. This is particularly the case if the neighbours' social and work networks mean that their paths rarely cross and there is little regular communication between them. This is of particular relevance for area-based initiatives where collaborative management responses are sought. It cannot be assumed that farmers who have lived and worked close to each other for many years will have any common values or shared social or business networks.

### 3. Case Study Evaluations

#### 3.1 Pontbren case study

##### Farm characteristics

The Pontbren Group is comprised of 10 hill farmers based in Llanfair Caereinion, near Welshpool, Powys. The 10 members farm a contiguous block of around 1,000 hectares of land along the Nant Pontbren, a tributary of the Severn.

The farms range in size from 50 ha to 186 ha with an average size of around 115 ha. Eight of the farms operate cattle and sheep systems, one manages a sheep only enterprise and the other is a dairy farm. The farms vary in their stocking densities and profitability. Livestock numbers range from 390 to 800 breeding ewes and 8 to 55 suckler cows. Prior to joining the group many of the farms had high stocking rates having intensified under the Farm and Horticultural Development Scheme (FHDS) in the 1970s and 1980s. At this time incentives were given to improve grassland and increase stock numbers.

*“The stocking rate in 1970 was 147 breeding hill ewes and 23 suckler cows...we had the FHDS in 1970s and that gave us 70% grant for draining and 50% grant for re-seeding. By the end we were running 1000 mule ewes, much bigger ewes, and 75 suckler cows and you can see the difference in stocking rates....In the process we removed a lot of hedges, destroyed a lot of habitat”. (Group member)*

As many of the farms were heavily stocked before CAP reform they are currently benefiting from the historic Single Payment scheme (SP) which makes a significant contribution to the farm output. SP contributes to between 24% to 35% of a member's total farm output by value, whereas environmental payments contribute on average to around 12% of the total farm output. All farmers are in the Tir Cynnal Scheme and none are in Tir Gofal.

On the majority of farms outside sources of income contribute to the household income. On only four farms is the farm income the sole contributor to the household income. On a number of farms the spouse works off-farm and on two farms the members work full-time which restricts their involvement in the group, but offers other benefits (one works for an agricultural supplier which has provided materials to the group and the other works in livestock quality evaluation which has assisted when exploring the development of the Pontbren brand).

The group leader was responsible for establishing the group. He is supported by his wife who provides help with administration and organisation of group meetings. There is a wide range in ages from 30 to 66 years of age. With the exception of the

leader all members of the group were born on their farms and were known to each other from childhood. Many attended the same school and chapel.

### **Group establishment**

Group development commenced with one farmer's personal interest in developing shelterbelts on his farm. Coed Cymru (an organisation which provides training and advice to landowners on managing their woodlands and producing timber for sale) advised on shelter belt planting. This farmer had had previous contact with Coed Cymru with a view to producing timber products from his farm woodland. Following an ATB farm walk on this farmer's farm in 1997 to view the shelterbelts, two neighbours also expressed an interest in doing something similar and a group of three was formed. There was a concerted effort to obtain funding for environmental work on their farms. They applied for Tir Gofal, but prescriptions were inflexible and did not suit the fairly intensive nature of their farming systems. They recognised that funding for the management changes they wanted to undertake was likely to be more forthcoming if a larger block of contiguous land could be put forward. Thus in 2001 the group of three approached seven neighbours to ask if they would be interested in joining. All seven were keen to join which resulted in the present group of 10 farmers.

The group leader is keen to emphasise that Pontbren was never an environmental scheme. The environmental benefits that have accrued are due to changes in the structure of farming and their wish to reinstate some broad principles of more sustainable landscape husbandry.

### **Motivations for joining**

Motivations for joining the group differed. However, at the heart was the recognition that the farmers were caught on a productionist treadmill and that with the high stock numbers, the hedges and woodlands on their farms had become degraded. There was recognition that the land needed improving from an environmental viewpoint. This in turn would also help production by providing shelter for the sheep.

*"What we went through during the FHD scheme in 1970s we had to unpick some of this because it has gone beyond control, it was so labour intensive, high cost, high output and we wanted to get back to a situation that we could control. This is what the group worked on then. For example, during lambing we could have one person working nights because we were lambing and calving at the same time, 2 people doing days, buying loads and loads of straw from as far away as Lincolnshire, the feed lorry up here 2 or 3 times a week. It really was unsustainable. You couldn't run fast enough to stay in front. A lot of farmers must have felt the same" (Group member).*

Some farmers were also concerned about leaving a legacy for future generations.



*“At the time we were all getting tired of working hard and producing cheap meat for the supermarkets and getting ripped off. It’s not only trying to make a living but it is also a way of life. From my point of view I’ve done all the land improvements and I thought what can I do to make a mark before I drop my socks? – trees and hedgerows”.* (Group member)

There was also dissatisfaction with the available agri-environmental schemes. Some of the farmers had previously looked at agri-environment schemes, such as Tir Gofal, but were unable to qualify. They found the schemes too autocratic and inflexible and often not relevant to their farming systems. Therefore, the group has sought funding which allowed them to have control over implementation.

### **Group Aims/Vision**

The group has two main visions. The first and overriding vision is to develop more sustainable farming systems which will allow them to continue farming in the long term. A more recent vision has been to try to influence government policy in supporting sustainable agriculture in Wales. The Pontbren farmers are part of a Pontbren Co-ordination Group comprised of representatives from Environment Agency, Forestry Commission, Countryside Council for Wales, Coed Cymru, Centre for Ecology and Hydrology, WAG, Wildlife Trust. This group is used to disseminate and discuss ideas and findings arising from Pontbren activities.

The group has had increasing direct contact with policy makers who are interested in their approach, including some elite actors, such as Prince Charles, and the Agricultural Ministers, Carwyn Jones and Elin Jones. They are currently hoping to influence policy makers to incorporate elements of their approach into new schemes.

### **Group Activities**

#### *Direct land management change*

The first activity undertaken by the group of ten was livestock de-stocking with funding for income foregone provided by WAG in 2001. Eight of the members undertook this activity. Those that took part reduced their stock by 20% (average for the group), ranging from 90 to 300+ ewes per farm. Some members considered this to have been the most beneficial activity undertaken by the group. It provided an incentive for the farmers to get off the productionist treadmill. It has enabled them to cut livestock costs and in most cases improved lambing percentage. For some a reduction in labour requirements has also provided them with more time to concentrate on other activities.

*“We couldn’t house all our ewes before de-stocking, but we can lamb them all at the same time now which really helps”* (Group member).

As with all group activities, it was optional for group members to de-stock and two of the younger members, who had smaller flocks which they found manageable, did not de-stock.

Some of the members may have considered reducing livestock numbers anyway following removal of headage payments under CAP reform, but not by as much. Others may consider increasing stock numbers again once the de-stocking payments stop, although most think this is unlikely with current feed and fertiliser costs.

The de-stocking payment was used to match fund environmental work on the farms for 3 years funded by the Big Lottery Fund Enfys scheme and assisted by Coed Cymru. This scheme provided match-funding for hedge planting with double fencing, tree planting and pond creation and restoration, stream management and bank protection with fencing. To date, Pontbren farmers have planted 120,000 native broadleaf trees (the majority grown in the group's nursery), regenerated 26.5 km of hedgerow and created 0.02 km<sup>2</sup> of new ponds. They have also fenced off areas of wetland and broadleaf woodland within their farm areas.

#### *Associated diversification*

Other activities undertaken by the group involved joint purchasing of a wood chipper, part-funded by Welsh Development Agency. This has been used by some group members to chip cuttings from their hedgerow and woodland restoration work. Chippings are used for livestock bedding and three members are producing compost from the chippings. Glasu is providing funding for experimentation with the compost on the farm and there is the potential to bag and market it commercially.

One member of the group has established a tree nursery, mostly funded by Glasu. Seeds are taken from the farms and the chipping compost is used. Trees are sold to the group members and external farmers.

A sub-group of five members were involved in selling their lamb at local markets for a while until costs became prohibitive. The group is now exploring opportunities for selling their lamb through a supermarket. With funding from the Prince's Charities, ScottishPower and WAG they have recruited a consultant to help them secure a supermarket contract. Some members of the group have explored the potential for game bird shoots on their farms. Group members have also benefited from bulk purchasing of materials for hedge and tree planting and fencing and also from an increase in sharing transport arrangements for livestock.

#### *Research and development*

Observations of the impact of tree shelterbelts on water runoff generated research activity on the farms which eventually led to the Flood Risk Management Research Consortium (FRMRC) hydrology project. This is collaboration between research councils, Universities (University of Wales, Bangor, Nottingham and Imperial College) government departments and agencies, and industry, which is exploring the effects of different land use, agricultural drainage and tree shelter belts on runoff and

monitoring the flows in a network of drains, ditches, small and large streams to understand the generation of river flows.

### **Institutional arrangements**

The group is set up as a limited company with a constitution and all farmers in the group are Directors and considered equal. The Wales Co-operative Centre helped with this process.

Group size was determined by the farmers as to what was manageable. There have been discussions about expanding the group, particularly in light of the recent failure to secure a supermarket contract due to their limited lamb numbers. Some are keen to expand the group if this means securing a contract, others are more reluctant. Some feel that increased numbers would make group administration and communications harder and others fear that it may disrupt the current group rapport. Most are comfortable with the current group size of ten.

Group members have various roles, some of which are rotated. The group leader, with support from Coed Cymru, initiates most new ideas which are then discussed amongst the group. There is also a core group of 3-4 members who support the leader by assisting with the functioning of the group and pursuing the development of ideas (see Figure 3.1).

The frequency of group meetings depends on current activities. Initially, during its establishment the group was meeting once a week. More recently they average about two meetings a month with fewer occurring during pressure points in the year (such as during lambing and at market times). Most of these are evening meetings and they are informal but minuted. The meetings are chaired by the leader and everyone in turn is given an opportunity to have their say. The leader's wife is responsible for organising these meetings. As very few of the members use email most communication is by telephone which can be very time consuming. Arrangements are in place so that particular members in the group are responsible for contacting other group members.

There is no coercion for members to participate in activities. Decisions are taken individually about which activities to become involved in. For example, some members opted not to de-stock. This flexibility and adaptation to individual needs is highly valued by group members.

“The truth is that we are working together, but under no pressure to do anything if we don't want to. You do what you want to do, or what suits you. What people don't want in anything they join is pressure to do something that doesn't suit you” (Group member).

The group is also self-regulated. In the case of the Enfys grant (which supported the majority of the hedgerow and shelterbelt development) the group decided on the

standards to which members should work. The members greatly appreciated this autonomy, rather than having to adhere to agri-environment scheme prescriptions.

*“We were our own bosses. This is what we liked about it, being our own boss. There is nothing worse than being told by someone else how to do something and you half know that they’ve failed themselves. That really does get to you. With Pontbren no one interfered with us. We chose what we wanted to do, but there was a standard” (Group member).*

Certain members of the group were appointed inspectors to check the quality of the work. These inspectors would change every year to keep the continuity. This was evidently an extremely effective way of monitoring as reputation effects ensured compliance and a high standard of work.

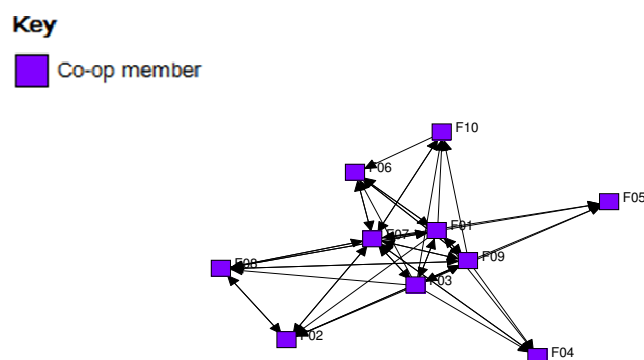
*“The members wouldn’t even think about doing something underhand or shoddy or not up to standard, because they are not only letting themselves but they are letting the group down and this is a big thing” (Group member).*

The group also administered the Enfys fund. The money was distributed equitably between the group members regardless of farm size. This approach was suggested by a member with one of the largest farms and was considered important to encourage the smaller farms. Through self-regulation the group was able to keep administrative costs low.

### Network structure

The social network analysis of the Pontbren group confirms many of the findings of the interview data.

**Figure 3.1 The Pontbren group network**



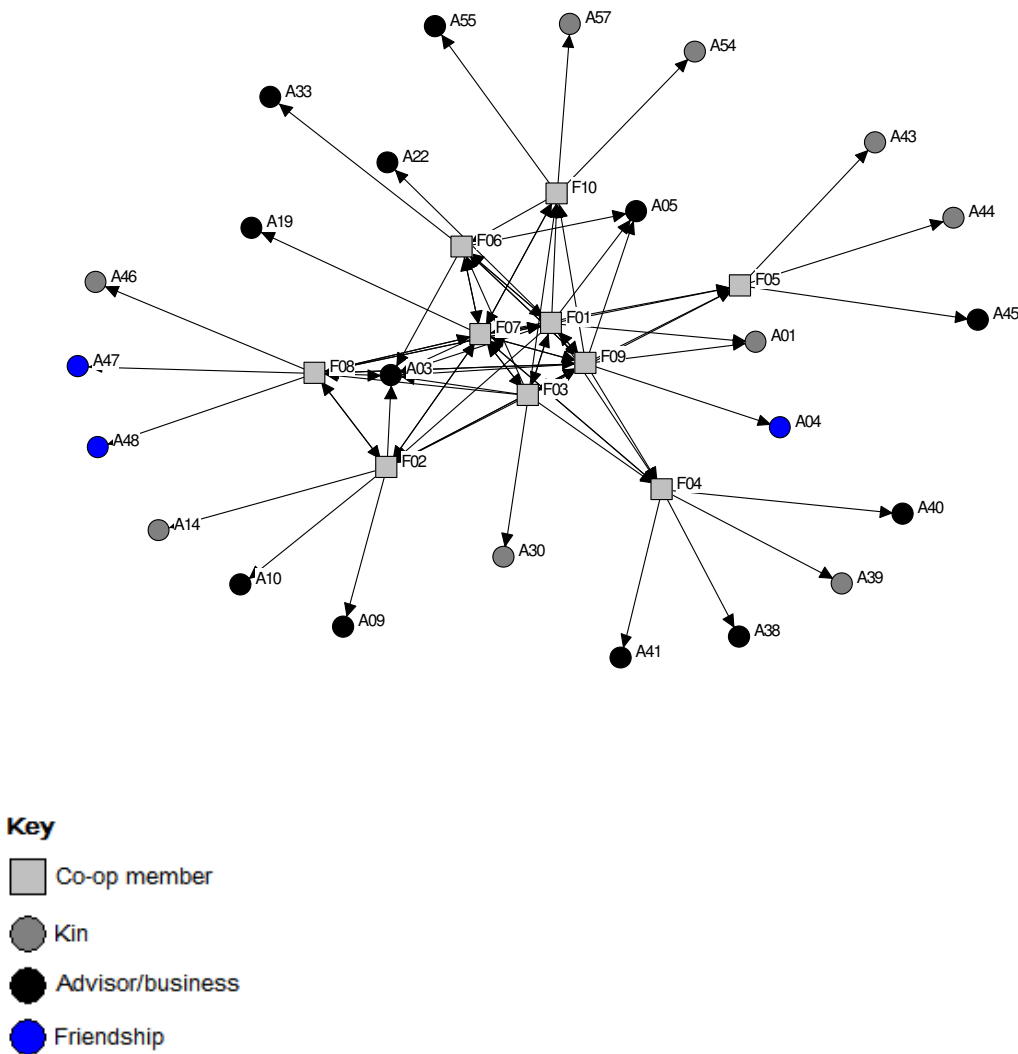
Density of network = 0.544

Directional graph (diagraph) – arrows show the direction of relationship (out degree)

As Figure 3.1 illustrates they are a tightly integrated group, with a density in the network of 0.544. There are four members in particular who are central to the group network.

Figure 3.2 below clearly shows the diffuse routes through which the Pontbren group gathers information and advice. Whilst there are two key people in the middle of the group who are named by several members of the group, each individual in the group retains their own pathways to advice. In part this is because the focus on the group is on a particular matter and every group member needs to maintain their own flows of information that are specific to their enterprises. It also suggests a certain robustness for the group as no one member is dependent on the group for all or even most of their business information. Closer examination of those contacts does suggest that only a few of them are elite actors in either policy or business networks, and are often localised. This could be a strategic weakness for the group.

**Figure 3.2 Flow of advice into the Pontbren group**



## Impact on farm businesses

De-stocking has had the largest impact on the members' farm businesses. However, due to fluctuation in prices and costs over the period it is difficult to identify any positive financial impacts. The FBS data reveals that the difference in the group's average farm output before destocking (2002/03) and with de-stocking payments (2004/05) was around £24,000. Over the same period those that did not de-stock saw an increase in average farm output of £18,000.

Several members mentioned an increase in lambing percentage and lamb size since de-stocking.

*"We have lost those little lambs that were under 14.5kg. If you were to add kgs of lamb I'm certain that would certainly be more than it was. I suppose we were keeping too many and you ended up with smaller lambs"* (Group member).

*"By getting rid of roughly 25% of your breeding sheep, you were getting rid of the 25% of the bottom end and the problems and so you were left with a decent flock of no-problem sheep, something you could build on"* (Group member).

Also with fewer ewes there have been substantial savings in feed and labour. Many of the members have also changed from larger mules to smaller Welsh sheep breeds which have reduced costs.

One distinct advantage to the members' farm businesses is the ability to access funding to help re-structure farming systems and undertake environmental work which would not have been available to them as individuals.

*"As a group you can probably attract more funding. Everyone seems to listen to a group. If you've got 10 of you around the table instead of one you are more likely to get noticed. I think definitely you've got more clout in a group"* (Group member).

There also is evidence that group membership has increased business confidence and offered a greater sense of security to try something new. As one member expressed it....

*"I think the social comfort of being in the group, you can't value it. You've got somebody to talk to. I think it gives you more confidence to try things"* (Group member).

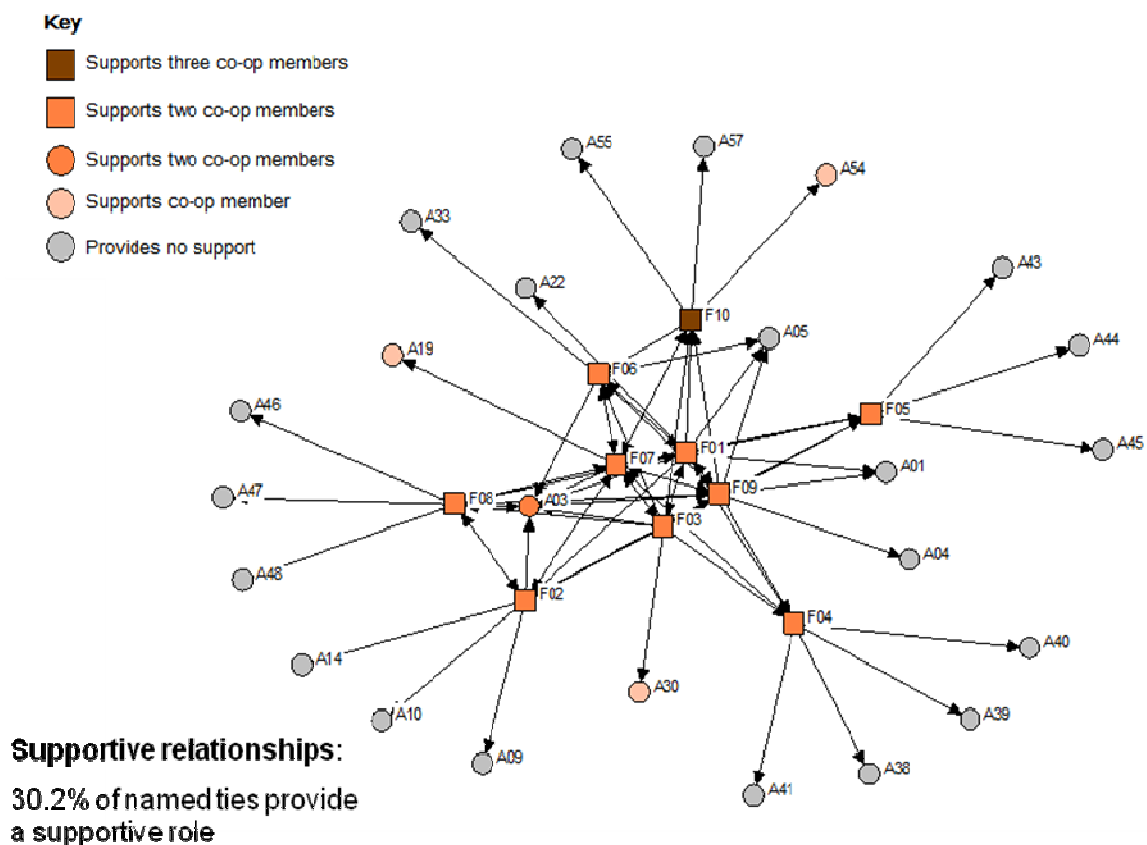
Greater business confidence has also emanated in part from a greater sharing of information. Although members were known to each other before joining the group they did not exchange information to the same degree. By engaging in collective action they are benefiting from shared knowledge exchange and information, which improves their economic situation.

*"I would now have a word and ask where are you buying your meal from this year, where are you buying your fertilisers, what price are you paying, do you suggest I go there?" Something I wouldn't have asked before" (Group Member).*

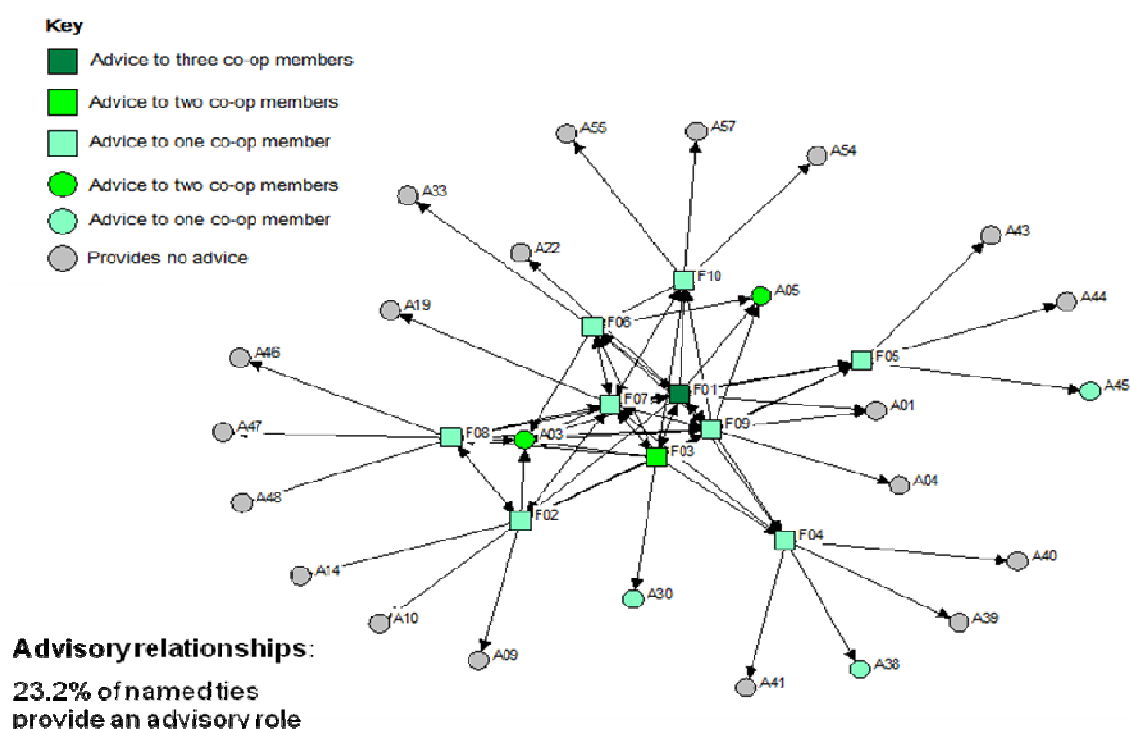
In addition, as part of the de-stocking programme financial data is collected annually for each farm by the Farm Business Survey unit at Aberystwyth. This information is shared with the farmers who have found it an extremely useful management tool.

*"We're all monitored by Aberystwyth. It's a bit of a wakeup call. They work out your costs and profitability. It has been worrying sometimes, especially on the cattle side" (Group member).*

**Figure 3.3 Pontbren support network**



**Figure 3.4 Pontbren advice network**



Figures 3.3 and 3.4 highlight the importance of the group in offering support and advice. When spouses/partners/parents are taken out of the analysis the co-op is the most important source of support for its members. All group members were named as providing support and advice. For some group members the group is their main source of support and advice, whilst others have a broader range of contacts.

*“One benefit is the advice you can get. If you’re not sure of something you can ask someone else. Possibly before we would discuss our better points, but not the problem points” (Group member).*

A few outsiders have also played a key role in supporting the group. In particular, David Jenkins from Coed Cymru has offered advice and support from the outset of the group.

## Human Capital

Through group activities the members have gained many new skills. They have undertaken some formal training, including a food hygiene course and some have completed a gun safety course. Also as a consequence of their environmental work, members have improved their environmental knowledge and for many, tree and hedge planting were new skills. Furthermore, as a result of close co-operation between group and Coed Cymru and other stakeholders conducting research activities on the farms, the group are more aware of the role of trees in farm hydrology and biodiversity.



*"I've never planted trees before. I've learnt more about wildlife. It makes you think. I've started reading my bird books!"(Group member).*

There has also been individual development within the group, particularly with the farmer involved with the tree nursery, for which he had no prior experience.

The members have also hosted many visits for other groups and elite actors who were interested in their work and their approach. This interaction with others has broadened their horizons and made them realise that people think differently and have different outlooks.

*"As you get out and about and meet more people you get a different look on things and you try and see outside the farm" (Group member).*

The group has worked as a team in hosting these visiting groups and through their hospitality has developed good social networking skills.

### **Social capital**

All members emphasised the importance of the social benefits of group membership. This was particularly appreciated by those who spend more time on the farm and have fewer social networks outside the immediate area.

For some, group membership was of particular importance during Foot and Mouth Disease of 2001. Many of the members felt very isolated at the time, particularly those who were at home on their own with elderly parents and were unable to attend market, their usual source of contact with people. These members really valued the companionship from meeting with their neighbours regularly and this helped to cement bonds.

*"At the time of Foot and Mouth if it wasn't for the group we would have pulled all our hair out!" (Group member).*

A great deal of trust appears to have developed between members and this has facilitated co-operation. This was assisted in part by the strong kinship bonds that already existed. Most members are distantly related and many are fourth generation farmers, with the group leader being the only member not born on the farm. Also most of the members went to the same school and part of the same local chapel system. Two of the groups are also members of other farming groups, but these tend to focus on farming practice and not the social elements.

The farmers have always tended to co-operate with neighbours in the past by assisting with tasks, but since forming the group there is much greater reciprocity and support for members at the level of farm decision-making. Members value the fact that they can ask for help and welcome opportunities for reciprocation.

*"It's nice because you belong all of a sudden to something. It didn't happen before although we've obviously been neighbours all our life, but not as close. Farming is the pits of a job and that support from others means a lot. (Group member)*

*"I do feel that Pontbren has really brought us much, much closer together. It is much easier to ask people for help if you need it. We haven't fallen out". (Group member)*

Furthermore, the group is based on respect for each other and they value their reputation for reliability.

*"The one thing I like more than anything is the companionship and the closeness and to be able to rely on people. You know that if you ring them you can rely on them and that they can rely on you.....And respect as well, you have to respect each other as well because there is a lot of give and take. That is one of the most important things in it all, is that we think of one another". (Group member)*

There is also evidence that members are prepared to co-operate for the benefit of the group even when it may go against their personal principles, for example one member's dislike of game bird shooting, or preferences. One farmer has a long-standing marketing contract with Waitrose for his lamb, but is prepared to relinquish this if the group secures their own supermarket contract.

### **Impact on wider community**

The group was keen to highlight that most of the Enfys grant received for environmental work and their own match funding went to local contractors and suppliers. In total between 18-20 local contractors were used. These were mainly farmer's sons who had their own smallholdings and machinery. The group also bought the fencing materials in bulk from a local firm. Of the Enfys scheme funds of £98,000 and the match funding from the members, £172,422 went to local contractors and £131,283 to local suppliers.

*"Any money that comes into the Pontbren account doesn't stay with us it goes back out again. The young farmers and farmers' sons, they used their Dad's tractor and bought a bit of fencing equipment and they worked with us. They earned quite a lot of money. What work we didn't do ourselves was done by these lads. So it came into Pontbren and back out to their pockets and to local suppliers. It was all local, nothing went beyond a few miles radius". (Group member)*

Interviews with a sample of contractors revealed that working for the group under the Enfys scheme contributed to between a quarter to half of their annual income and provided them with work throughout the summer and winter months.

Other beneficiaries outside the group include local accommodation providers who have provided accommodation for those visiting for a number of days, including the researchers.

The group has considered school visits but is concerned about insurance issues. They did run a Children's Wildlife group for members' children when they were younger, with assistance from Wildlife Trust and Hawk and Owl Trust. The children learnt about wildlife on the different farms and participated in the tree planting. They met once a month on a Sunday and often had someone from WT or Hawk and Owl Trust to assist. The adults, as well as the children, learnt much from these activities.

The group has hosted numerous farm walks. Participants have included Churchstoke WI, Cyd Coed, Farmer's union of Wales, Farming Connect, Clun Valley Farmers, Montgomeryshire Field Society, local training groups, National Farmers' Union, Royal society for the Protection of Birds, Scottish Agricultural College and Yorkshire Water. They have also provided facilities for a number of demonstration events, particularly for Coed Cymru, Glasu and Forest Research.

The research community has also benefited from involvement with the group. A number of students have undertaken MSc and PhD research projects on the farms and Bangor University have shown around overseas students. The group have also provided their farms as a research site for the Flood Risk Management Research Consortium (FRMRC), Coed Cymru, Glasu and Forest Research and a monitoring site for Hawk and Owl Trust.

The policy community has also benefited from tours of the farms to explore ideas for future schemes.

### **Future plans**

The group has not prepared a future plan as they feel this is impossible with the current fluctuating policy and market climates. The general feeling amongst group members is that activities have currently come to a standstill, due to an inability to secure more funding. The group is in need of new initiatives and a new direction.

The current activity the group is pursuing is to establish a group marketing outlet for lamb. Through funding from the Prince's Charities, ScottishPower and WAG they have recruited a consultant who is helping them source a marketing outlet for their lambs. They were let down by one supermarket, which has knocked their confidence. One of the problems is that they cannot supply enough lamb for the supermarket contracts, but produce too many for local farmers markets.

Most of the members would also be interested in more funding to undertake hedgerow and woodland planting. On some farms only half of the hedgerow work has been done. Also in 4-5 years times those hedgerows that were planted will need laying (plething).

One member has considered putting up a tourist chalet around the new ponds when they are fully established. Others have considered renewable energy sources, such as wind and hydro-electricity. Some have suggested the possibility of more bulk buying as a group, such as diesel. Another suggestion is the establishment of a farm shop. However, new labour is required to run such businesses. It would also require training and resources.

There is the general belief amongst members that the group will remain sustainable into the future, even if key members left. A number of members now feel they have the confidence to keep the group going. One particular strength of the group is that they will remain a support network for each other even if group activities cease.

*“If there is no progress for the group to be made that would be a difficult one. You need to be active to keep a group interested. I wouldn’t like to see that happen. If it did happen the group of people wouldn’t disintegrate. They will still be there as they’ve always been” (Group member).*

## SWOT Analysis

A SWOT Analysis was developed from the main points that emerged from the interviews. The analysis was presented at the workshop and modified as a result of feedback from group members.

### Strengths:

- **Strong social cohesion** – this has been key to co-operative success and is due in part to existing kinship bonds and informal social networks.
- **Competent and imaginative leadership** – the leader is innovative and constructive.
- **Members provide support to leader** – there is collective commitment from the group and a core help with the functioning.
- **Support from key individuals and institutions** – David Jenkins from Coed Cymru in particular has been instrumental in helping develop new ideas and accessing funding.
- **Development of greater business confidence** – more open to innovative ideas.
- **High standard of self monitoring and quality control** – this has kept administration costs low and given the group some autonomy.
- **Equitable distribution of grants between members** – encouraged smaller farmers to participate.
- **Extent of external beneficiaries** – significant multiplier effect on local economy from use of local contractors and suppliers.
- **Interest from policy-makers** – the group feels empowered that they can influence policy.

### Weaknesses

- **Little financial gain for a lot of effort** – activities have not yet translated into economic gain or profit but this would change if supermarket contract is secured.
- **Small margins mean that the group is vulnerable to external pressures** – as revealed when increased processing costs made the local marketing of their lamb prohibitive.
- **Unable to secure funding for further environmental work** – although this is something they are still pursuing.
- **Vulnerable as weak bargaining power in market** – not enough sheep on offer to secure a supermarket contract.
- **Excessive (un-rewarded?) time taken up in handling visitors** – started to be more selective about which visitors to host and are considering charging for their time.

### Opportunities

- **Growing demand for branded products linked to environmental benefits.**
- **Increased financial support for farmer groups** – particularly if biodiversity benefits of landscape-scale activity are proven.
- **Recognition of positive contribution to reducing flood risk in lowlands** – on-going research at Pontbren suggests that shelterbelts are reducing run-off. The downstream benefits could be quantified.
- **Renewable energy opportunities** – there is plenty of wind and rain!
- **Bulk purchasing to reduce costs** – complicated by fact that members use different suppliers, but there could be future opportunities.

### Threats

- **External pressures prohibit financial viability of farm business** – if financial pressures mean members have to sell their farms.
- **Energy to continue under constantly changing policies and static real incomes.**
- **Opportunities for new funding are reduced.**
- **New generation not interested to continue** – lack of successors may mean group does not continue in the future.
- **Lack of time to develop new ideas** – need time and funding to develop new ideas.
- **New members may destabilise group.**
- **Lack of stability preventing long term planning** – given rapidly changing pace of market and policy conditions unable to plan for the future.

## **3.2 Dolaucothi case study**

### **Farm Characteristics**

The Dolaucothi Group is comprised of 8 family hill farms on the Dolaucothi Estate, near Pumsaint, Carmarthenshire. The Estate is owned by the National Trust, who run the Gold Mines that are also part of the Estate.

The farms range in size for 80 – 140 ha, most of the farms run both sheep and cattle, with two having only sheep and one only cattle. The different farms vary in size, stocking density and the balance between the importance of the difference livestock. This is in part a reflection of the topography of the different farms, the other land available to the farmers and the other sources of income available to the family. The largest sheep farm has over 800 breeding ewes, plus over 40 head of cattle and has nearly 145 ha available to it of mostly very high grazing land, whilst the smallest farm has 80 ha and 450 sheep on valley pastures. All of the farms keep some cattle, although they vary in importance within the farm business. This diversity is continued in one farm being fully organic, one just entering the process of organic conversion and the others working within a range of agri-environmental programmes, mostly ESA or Tir Gofal, as well as farm assurance and Freedom Foods.

All of the farmers reported working to improve the quality of their sheep production, with a focus on lower stocking densities, better genetics or combinations of breeds for the ewes – which differed between farms and the use of various assurance schemes. Three of the farmers reduced their own stocking densities, whilst the others, who entered farming more recently either through taking on the tenancy or from their fathers, did so as part of that process of transition. The process of reducing stocking density went hand in hand with the environmental improvement of the farm, mostly through better hedging and fencing, although some work has also been done to farm buildings.

All but one of the farm families has a source of income from outside of the farm, although for the majority of the families income derived from the farm is their major source of income. Three of the farmers have invested in enterprises off the farm that are not only an important source of income for them but also an important source of information to the co-op. Between the group they have diversified into consultancy, property, holiday accommodation, catering and some contracting.

### **Group Establishment**

The group has no formal leader but it was initiated by one member who was training as a facilitator for Agrisgôp and started with the Estate on which he farms, through a grant for £1800.

The entire group reports a key motivation being that they had nothing to lose by taking part – lamb prices were at rock-bottom and co-operation would be a positive

way forward. This account, although genuine, masks a history of some co-operation occurring as part of being tenants of the National Trust, when issues were often taken up by all tenants together. Also there is a thread of kinship within the group – there is one set of brothers, as well as three members being second cousins.

*“We knew we would get on before we joined the group. Since we started we have come even closer together. It has been going for 4 years and yes it was an easy decision to join, I had nothing to lose”. (Group member)*

That most of the group feels that it was a natural and easy thing for the group to cohere, belies the effort that has gone into making it work. The whole group share a common set of perceptions that there was ‘nothing to lose by joining’, and view the group as having faced no substantial problems. This is re-enforced by the common perception ‘that they all went to school together’ when in strict fact some of the group had left school before others in the group were born. Rather what these suggest is a common set of identity and shared problems, in which other possibilities have been closed off. Although most members feel there are few rules to the meetings the founder was clear that there were, such as ‘no airing of dirty linen in public’ and that meetings are not ended until a problem is solved, a discipline the entire group observed.

Functionally, the group meets as and when it needs to, more often during the lamb contract supply period (see below) or when other projects are in hand. Two members act as the spokespeople of the group, travelling to meetings, pitching for the group, one of this pair has been described as the group’s secretary but this is a strictly informal role. It is these two in the group who are the first to answer enquiries, have the most outside contacts and elite contacts, although they are not as dependent on their farm incomes as others in the group.

### **Group Activities**

The principal activity of the group to date has been a collective marketing initiative via the local abattoir Dunbia, for lamb that has their provenance sold to Sainsbury’s. Only 6 of the group actually take part in the sales of lamb, as one member sells his lambs in May and the other has organic products. The lambs are sold through the autumn, with the farms being responsible for making the required order; the lamb having the Dolaucothi name, and since they have won a National Trust award, the NT logo. Each farmer is responsible for taking his own lambs to the abattoir, and Dunbia pays each farmer directly with no money passing through the co-op.

The initial pitch that got this contract is part of the confidence and history of the group, as an approach was made directly to Sainsbury’s with two of the group members travelling to Sainsbury’s HQ to make the presentation directly. Since that time most of the group has come to know the Sainsbury’s buyers, and Justin King, Chief Executive of Sainsbury, as well as other executives as they have made visits to the farms. The group actively fosters a vibrant set of networks reaching through the industry, into the policy domain and throughout the food chain. The confidence

produced by being able to conduct this themselves has been very important in developing the group, as many of the members have emphasised the importance of farmers representing themselves 'rather than sitting by the aga', if they are to get ahead. Although the focus of the group is often on the marketing activities, it is much wider in scope than that for those taking part in it.

### **Future Vision**

The new departure for the group is taking over the lease of the pub in the village. In the past the pub, which belongs to the NT, has been a key community facility. Despite its proximity to the Gold Mine, a major visitor attractor and a reasonably busy road, previous tenants have failed to make a success of the pub leading to it being closed for some time. The group are in the process of taking on the tenancy of the pub, with a view to making it a showcase for local produce, offering some accommodation and returning it to being a facility for the community. At this stage the success of this project is dependent on the group being able to access funding, and develop a business plan.

### **Institutional Arrangements**

As noted above the institutional arrangements of the group itself are very flexible in that no money passes through the co-op rather the group meets to discuss, co-ordinate and share. This is changing as in taking on the pub lease more formal structures have to be formed to limit individual liability and prepare to control much larger sums of money.

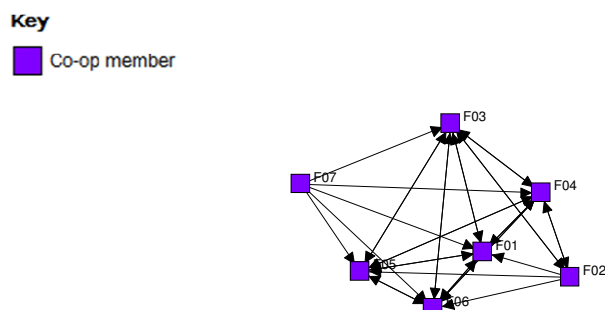
It could also be seen that the group has made very good use of its position with regard to several larger and more powerful institutions, in that it has been able to come together on the basis that all of the group are tenants of the NT, and through winning food awards which have been used in marketing. Dunbia have been key brokers in the process, as they have been able to process the lamb in a way acceptable to Sainsbury's, and provide a key role in that contract. Similarly, Sainsbury's have been able to showcase lamb with a distinct provenance and the apparent backing of the NT. The group has been very effective in using the broader institutional landscape to their advantage.

### **Network Structure**

The social network analysis of the Dolaucothi group confirms many of the findings of the interview data, that as Figure 3.5 suggest they are a tightly integrated group, with a density in the network of 0.762, which indicates bonds of trust and reciprocity.



**Figure 3.5 The Dolaucothi group network**



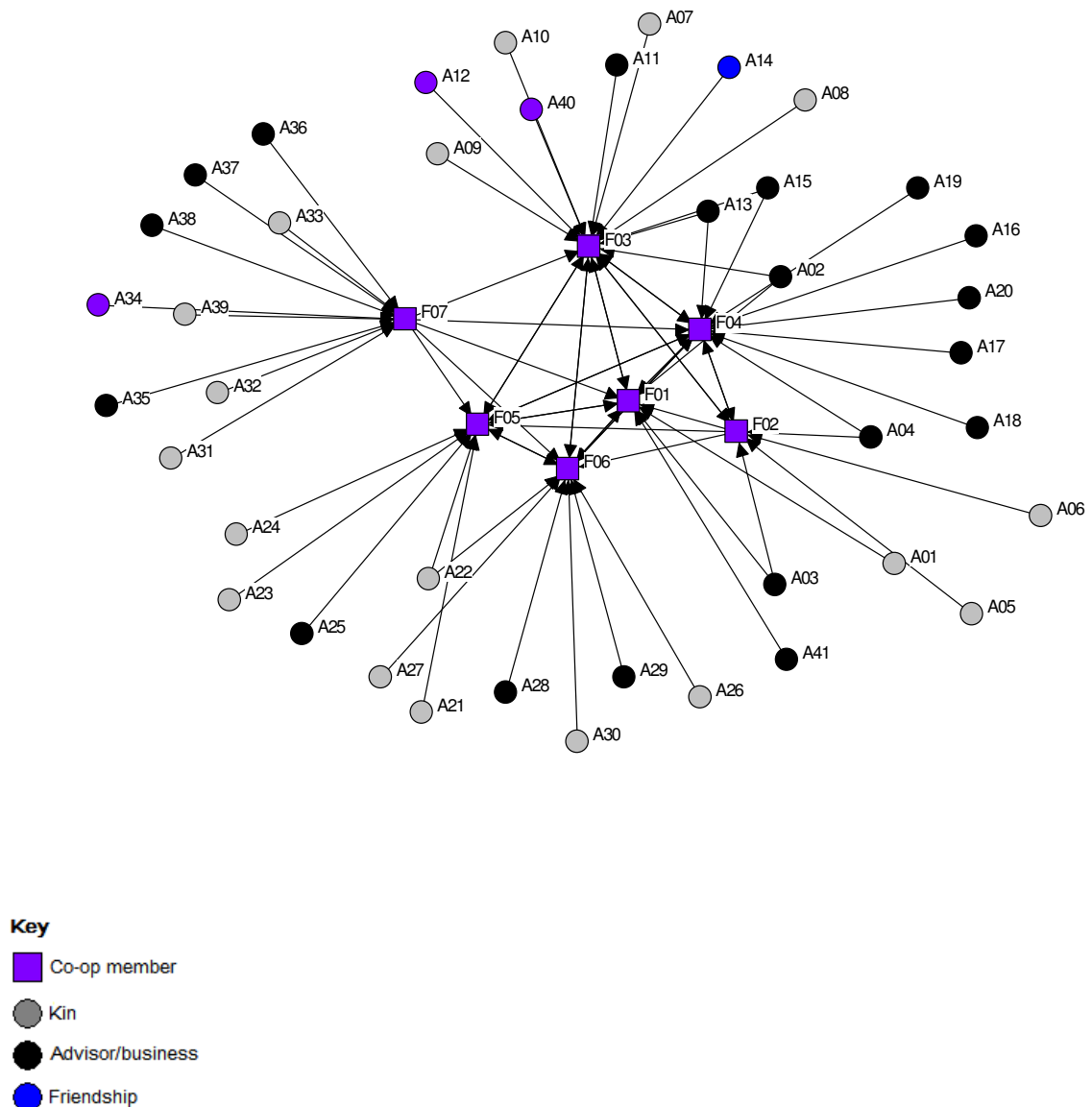
**Density of network = 0.762**

**Directional graph (diagraph) – arrows show the direction of relationship (out degree)**

That two of the group members are mainly responsible for making outside contacts and being the ‘face’ of the group can be clearly seen in the figure below (Figure 3.6) where two members have the most outside contacts. Yet all of the group maintain their own lines of advice and information separate to those of the group, suggesting that although they do have information flowing through the group they also have a degree of independence. This indicates that group members are not dependent on the group for information or particular individuals within it, but that there is a good base of advice and support throughout the group. Some of the shared contacts for advice and support are powerful actors within the food chain, but others are local people who have a deep experience of farm businesses. Friends appear to play a small role in the group, but this is an underestimation of friendship within the group, as many people play a number of roles – business associate, neighbour or supplier and friend, few people have the singular role of friend.

This figure also demonstrates the depth of the network around the Dolaucothi group, as each member has a network of kin around them. Although the formal members of the group are the men who are the ‘farmers’, all the group named their wives and children as being an important part of their business network. Re-affirming that these are very much family farms upon which not only the livelihoods of families depend but also much of their aspiration and heritage as a family group. Therefore the group represents families pooling their aspirations and opportunities in a common venture.

**Figure 3.6 Flows of advice into the Dolaucothi group**



### **Impact on Farm Businesses**

Two of the group do not sell through the marketing contract, but even they have seen benefits to their farm businesses. One of the key features of the group is that members retain autonomy over the management of their own business, and how it is managed. Those in the marketing contract have become involved in farm assurance schemes, and Freedom Foods, but these are indirect results of being in the group. As well as the importance of the contract and assured prices that it brings, which allows for planning and some stability, it is in building the confidence of the business principals that the main benefits of the group can be found.

## **Human and Social Capital**

In terms of formal qualifications the group has not undertaken any new courses as a result of group membership. It is in the area of informal and inter-personal skills that the main developments have taken place. Firstly, through working with one another in the group people have become confident about managing their farms, and are open to talking through 'all sorts of things'. To that end the group has ended some of the isolation that many might experience working in a remote business that is based on family units.

They are all agreed that they are more confident in taking on projects, that before the group none of them would have imagined taking on managing a pub. In part this stems from their success in gaining the marketing contract, but also from the publicity events that have stemmed from this, as they have been involved in marketing their lamb. Most of these events have been not just off the farm, but out of the area, presenting the group members with a suite of experiences that have widened their understanding of the food chain. Along with these some elite actors in the food chain, particularly from the multiples, have visited the area giving the group access and knowledge of the agenda of these groups.

The success of the group has not met without criticism, or straightforward jealousy. As the group has become more closely bonded, others outside of it have responded negatively to its success. This has not just been neighbours envious of the marketing contract, but also, reportedly, those in institutions whom the group has by-passed in its activities.

## **Impact on Wider Community**

The impacts on the wider community are in many ways quite limited, as the geographic area in which the group is based is dominated by farming, with a limited tourist economy and few other residents. The marketing contract has meant that the group has helped secure those taking part, but a wider economic impact is hard to discern.

The most important impact may be that of being an example of collaboration that is succeeding. It is certainly on that basis that the groups' founder has sought to create several other groups using a similar model. Several of these groups are now in the position of gaining their own contracts with multiple retailers, and achieving the goals that each of those groups has determined for themselves.

## **Future Plans**

If the group is able to realise their ambitions of taking over the pub then their impact on the local community may be considerably greater, as will the structure of the collaborative operations. It may provide an opportunity for the entire group to sell their produce through this outlet and bring the group closer.

## SWOT analysis

### Strengths

- **Members are of diverse ages** – different experiences and perspectives from which the group can get a lot of stability.
- **Strong group cohesion** – the group obviously support one another, allowing some to lead, but equally listen to one another to ensure the group remains coherent and strong.
- **The group is more than the marketing deal with Sainsbury's** – as demonstrated by the group including those not taking part in the contract, the group has made sure that it remains inclusive rather than becoming just a marketing group.
- **Members run their own businesses** – 'Good fences, good neighbours make' (as Robert Frost wrote) families remain able to run their own farm businesses, meaning that they remain independent of one another and so they chose to take part in the group rather than having to.
- **Confidence** – the group has obviously grown in confidence, having been successful it is able to face down problems and overcome things that go wrong, as well as think widely about opportunities. They work from the position of 'no fear' in that they are well positioned and competent to manage their own affairs.
- **Product development** – the group have sought to consistently improve the quality of their products and their farms, as part of an awareness of the needs of the market. This product development is multifaceted, bringing in not only the environmental aspects of production, but animal welfare, farm management, traceability and provenance

### Weaknesses

- **Lack of supply** – if the group had more lamb it is confident that it could sell. One of the unique characteristics of the group is that it is on one estate, so is limited in scale and membership, therefore, increased productivity, whilst maintaining the qualities of the product, is a difficult proposition.

### Opportunities

- **Organics** – given the rise in oil prices inputs are likely to continue to be significant for costs, and the group's involvement in farm assurance schemes, organics could be the next step for the group. The marketing advantage of going organic as a group could be important and gaining access to the support of organic bodies for other forms of marketing useful. It is not likely in the long run to be a decision based on price differentials, but on market leverage. Organic could become one facet of a broader Dolaucothi 'brand'.
- **The pub** – asides from the possibilities of making some return from the pub, managing another business, dealing with another side of the food industry
- **Beef** – lamb is the most obvious product to focus on but beef could be an interesting area to develop. The pub would offer an obvious outlet for a

branded beef, with the further possibility of some direct sales via the pub and related website.

### **Threats**

- **Members retiring** – whilst it would appear that it is unlikely that anyone would leave, the most likely reason for a change in the group would be if someone retired. Although not a pressing threat it is perhaps a useful thought exercise for the group to consider, about how they would integrate a new person.
- **Policy changes by supermarkets** – should the multiples change their policy with regard to the group, then there would obviously be a challenge to the group's current activities.

### **3.3 Ireland Moor case study**

#### **Farm characteristics**

The Ireland Moor group is comprised of over 100 rightsholders on the CL11 common, collectively called Ireland Moor but covering the 2,500 hectares of Llandilow Grapan to Glascwm commons. The hill sits between Hay-on-Wye to the south-east and Builth Wells to the north-west. Of the 100 rightsholders for the common, around 45 place sheep and a few cattle on Ireland Moor. There is a central committee of 10 people and the group is legally constituted with a chair, treasurer, secretary and vice-chair. Nine interviews were conducted with members of the group with the final interview reserved for one of the owners who represents their interest to the group. Five supplementary interviews were undertaken with contractors, the chair of the sheep buyers group, a machinery specialist, a solicitor and the landlord of the local pub.

The farms range in size from small hobby farms of a few hectares, 12.55 ha was the smallest, to larger holdings, 250 hectares was the largest business included in the interviews. All of the farms, except the smallest holding, have sheep flocks with two of the larger farms having only sheep. Of the other 6 all have small suckler cow herds. The farms vary in their stocking densities and profitability. Livestock numbers range from 750 sheep to a total flock of 2,400 breeding ewes and 14 to 80 suckler cows. Prior to signing the ESA agreement many of the farms had higher stocking rates having intensified under the various schemes, the Food and Horticultural Development Scheme (FHDS) was mentioned, in the 1970s and 1980s. They used these incentives to improve grassland and increase stock numbers.

Both the individual farms and the hill were heavily stocked before the effects of the CAP (2003) reforms began to be felt by farmers. The historical Single Payment scheme (SP) remains a significant contribution to the farm income output compared to the environmental payments which contribute between 5% (for most) and 20% (for two farms) of the total farm output. Most farmers were in the ESA scheme on their own farm before the Ireland Moor agreement was signed and thus the environmental payments contributed to a higher proportion per farm than they are now. Some are coming to the end of their farm-based agreements. Only one has so far gone on to enter the Tir Cynnal Scheme and none of those interviewed are in Tir Gofal.

On seven of the nine farms outside sources of income contribute to the household income. On only two farms is the farm income the sole contributor to the household income. Typically the spouse or sibling(s) work off-farm and on two farms the members work part-time off the farm but this does not restrict their involvement in the group. Indeed, in one example, their outside work was recognised as offering other benefits in terms of accessing outside advice and expertise.

The common is owned by a syndicate made up of seven individuals who purchased the hill in 1989. Their aim is to enhance the moor and to reintroduce grouse shooting after an absence of about 50 years.

*“Wales has lost 45% of its heather moorland and this is one of the few remaining examples, but it needs careful management.” [Owner]*

Because Ireland Moor is a registered common there has always been (earliest memory goes back to 1910s) some sort of association. There is documentary evidence of a court leet in 1896 based on the 3 commons linked around a big estate. The graziers used to meet to gather sheep on the hill and this was seen as a collective activity. A more formal association was formed in 1968 when the rights were registered. Various meetings were held and the rightsholders submitted and verified each other's entry and submissions. There were an unusual number of horse rights registered but this is characteristic of the area. There is evidence of quite a few meetings in the 70s and 80s but there was not an AGM every year and the graziers tended to keep to agricultural issues and react to other issues, such as hill fires, as they happened.

### **Group establishment**

The current committee agree that overgrazing was the impetus to the establishment of the ESA agreement. New syndicate owners bought the hill in 1989 and through their representative, Stephen Marsh-Smith (SMS), began to talk with CCW about ways of managing the SSSI more sensitively. SMS approached the committee about the ESA, most of the individual graziers were already in the scheme on their own farm but the requirements for 100% agreement were considered inflexible.

*“It took two years to get into the scheme, but it was ground breaking. We had to determine what was meant by ‘most’ – most of active rights exercised or most of rightsholders. We went for rightsholders, but all the main ones are in the scheme.” [Farmer A]*

All on the committee at that time agreed that the ESA looked like a good possibility so they had various committee and open meetings. Once the ESA was seen as a good option the committee went about collecting the key information. A key person here was Maureen Lloyd, together with the support of the committee. As one member of the committee put it:

*“An essential stage was collecting the information, using the registers as a starting point. [Maureen] told everyone that to be part of the agreement they had to update their entries and prove it. We created a live register, this is really important as the rightsholder on the agreement needs to match what is in the register”. [Committee member]*

The formal aspects of the ESA agreement also changed the nature of the group as the ESA agreement is a legal document and there would only be one agreement with

the association. This meant that the association itself had to have legal status. This was a concern to the group who had to fund legal expertise in drafting the agreement before they could enter the agreement, so there was an element of risk.

*“It’s difficult cos its chicken and egg, we had no money but we got around this by asking for so much money per right for those likely to be in the agreement. We used this to fund the development of a legal document that covered all angles. It was developed to capture all scenarios, including sanctions, and all members invited to sign it. A few are not in but they have a small number of rights between them. [Farmer A]*

The division of the money was also agreed from the start. It became clear early on that the most equitable option acceptable to all was for the ESA payment to be divided equally as a £ per right among both active graziers and those who are not exercising their rights.

The group acknowledge that they had excellent links into the various departments and local government offices, nominating Maureen as the link person. This was important just in terms of knowing that the support was there. It was crucial to have one person within the group who was able to gather relevant information and pull it together as well as acting as the contact with the outside organisations.

Finally, the nature of the group changed and the committee realised that the structure of the committee and how it communicates with the group also need to change. They divided the members of the committee into geographical areas covering the whole of this long, narrow common. Each member was responsible for keeping the rightsholders within their patch up-to-date with events and information regarding the hill.

### **Motivations for joining**

All of those who had significant agricultural interests recognised that the offer of the ESA came along at a low point in farming and so the money that was offered was welcomed. However, this also masks the impact of being in the ESA for their own farm’s benefit. The majority of those interviewed enthused about the scheme, which they would have been in for 2/3 years or more before the Ireland Moor agreement was signed. The comments below are typical.

*“I had not been in an environmental scheme before, it’s a big difference and I’m very proud of how the farm looks now. I planted over 1,000 trees and new hedges, it looks fantastic now” [Farmer E]*

*“It’s a good scheme, look at the quality of fences, the money for materials really makes the difference” [Farmer F]*

*“ESA is brilliant, we planted hedges and fenced off woodlands. We recognise the difference”. [Farmer B]*



There was a strong sense of valuing the traditional care for the hill, certainly among the committee and some of the other rightsholders. The ESA was certainly seen as enhancing this, summed up in this comment.

*"We have a heather moor when most of Wales does not and it is important. It is a huge area and we have felt powerless in the past regarding what goes on there."* [Farmer A]

*"It's a grand moor a lovely place"* [Farmer B]

As mentioned above, it was important that a good number had some experience of the ESA before the possibility of an agreement on the common was mentioned. During the discussions more of the rightsholders joined and this served to increase the knowledge and respect for the ESA scheme as a whole, as well as for the officers involved.

*"The ESA officers worked really hard to convince their superiors as well as the rights holders on the ground".* [Farmer E]

When it came to asking what the group's main achievement was almost all without hesitation said 'getting the agreement signed'. Interestingly, there is a sense that, among those who were taking some responsibility for administering the agreement, they wanted to achieve something that many thought would not happen. In the final stages of securing the agreement, therefore, a reason for joining was that they did not want to fail. The result is a collective pride that it has been achieved.

*"There is envy among other commons that we managed to achieve this, the community can be proud as it would not have happened unless we co-operated."* [Committee members]

### **Group Aims/Vision**

The group has two main visions.

The main aim mentioned by nearly all is to improve the management of the hill. This often stemmed from their own memories of the hill and the increase in bracken as well as the impact of sheep grazing. Most admit that it is looking much better now.

*"We are helping the hill by cutting back, it's looking good now"* [Farmer H]

Related to the first aim, and mentioned by some, was for the agreement to provide a means of reinvigorating the collective, rather than individual, management on the hill. For one or two of those interviewed this meant the introduction of carefully considered self regulation. As one farmer suggested

*"Self regulation is good, the powers to penalise are a step forward, but we have to be neighbours too."* [Farmer C]

A secondary aim was to improve the communication within the group and in developing the sense of community on the hill that is important in terms of its management.

*“Ultimately, I would like to see Ireland Moor maintaining its community, the vision is to link active graziers with other commoners and those who use the moor for a wide range of activities. We do achieve this in part, but could do better”. [Farmer A]*

## **Group Activities**

### *De-stocking*

The major impact of the ESA agreement was on the reduction of sheep from the hill. For most farmers this was additional to the reduction of sheep numbers on their own farms. The responses varied from those who adjusted their systems so that they produced fewer heavier lambs by having a lowland ram. However, some found that the breeding ewes were less suited to the hill.

*“ESA meant we had to cut down on sheep numbers or take more grass keep, in the end I decided to keep a different type of ewe. The breed now is less hardy and I tend to keep flocks on fields” [Farmer F]*

Others had decided to operate a flock just for the hill while changing the rest of their flock.

Although cattle numbers were not part of the ESA agreement there was a corresponding reduction in numbers. Only one commoner put cattle on the hill and they did not receive any payment for these as it was not part of the agreement. However, most of those we spoke to could recall larger numbers of cattle on the hill in previous generations.

### *Environmental work*

Some of the farmers still cut and bale bracken for bedding. This has been the traditional way of managing bracken but it is dying out. Unfortunately, one of the farmers who normally does this could not one year because the bracken in that area had been sprayed.

Bracken spraying is the responsibility of the land owners and they have undertaken extensive management on the hill. They have also burnt some heather to encourage growth and reduce heather beetle numbers.

*“I’ve changed my view of the hill; I know how important it is now. I love walking on the moor. I moan about bracken – who will want it now as sheep money is not good so there is no need for bedding”. [Farmer F]*

*“I’m definitely more aware. I now look at environment and nature and see things like hedges as important. I’d like to see more grouse on the hill” [Farmer B]*

The only negative side that members of the group commented on was the increase in bracken referred to above, as well as the increase in gorse. This they see as a result of the almost exclusive grazing of the hill by sheep and the change in the timing of grazing.

*“Change in grazing and you can see the trees growing now but the bracken is worse and the gorse cover is increasing”. [Farmer G]*

#### *Awareness of other activities*

There was some formal discussion within committee meetings of other activities on the hill. Members were concerned about the growth in the number of 4x4s and motor bikes. Even though this was not part of their remit and there was little they could do, they had contacted the local authority to ascertain the status of the various tracks over the hill.

*“We were worried about the impact of recreation on the moor, seen what it can do in other places and would hate that to happen here. We had a problem with moss pickers but one person took it on and that seems to have stopped now”. [Farmer D]*

#### **Institutional arrangements**

The core to this group is the legal document developed before entering the ESA agreement and signed by all those rightsholders who wished to receive the ESA payment. The ESA required a formally constituted group in order for them to receive the payment as this is paid to a single entity. It required support from the ESA project officer and WOAD that a majority of rightsholders, rather than all of them, would be sufficient for scheme entry. In the end this is about 45 active graziers and around 55 commoners who are not currently exercising their rights signed the agreement, representing 92% of rights holders. However, the agreement is only limited to the period of the ESA agreement.

The agreed document covers all the scenarios that the committee could think of, and crucially, includes sanctions, enabling the group to self-regulate when one of the members breaks the rules of the ESA agreement. This has occurred when a member continued to feed on the hill and after several warnings the committee decided to act and as a result the sanctions meant that this member lost their payment for a number of years.

*“There was a problem with overgrazing and feeding on the hill and this went on even after warnings. The ESA project officers agreed that we should deal with it but emphasised that it had to stop. The committee looked at the sanctions and we agreed to take action, we had to, it was the right approach. Self-regulation is good but you have to be neighbours afterwards – the key is good communication.” [Farmer C]*

The committee structure is strong with Maureen as the secretary and each of the remaining members responsible for informing and disseminating information to a specific group of members. Hence we recorded the quote below from two farmers, who by their own admission were not active members.

*"Yes, I get the information. Maureen is great at keeping us up-to-date"* [Farmer F]

*"I get feedback now, know what is going on. You need small committee to make it work."* [Farmer H]

This structure and enhanced communication has enabled the group to develop a stronger level of trust, especially between the committee and the rest of the group. Interestingly, the second comment is from the owner who has noticed a significant change in the way the management committee is organised on Ireland Moor, something he sees as very positive and largely due to the efforts of a few, notably Maureen.

*"I have no involvement but confident and trust the committee. I saw the original calculations and let them get on with it."* [Farmer B]

*"It's not been like this before, they run a tight ship"* [Owner]

Such a structure does take up considerable amounts of time. In an average week a committee member admitted that he spends around 10% of his time on Ireland Moor issues. During one interview the farmer who was not on the committee thought that they put in so much time that they must be paid. However, this is not the case. However, this does have its advantages as the group feel they are better placed now than other commons.

*"Aren't the committee paid? They can't do all that for free"* [Farmer G]

*"Yes, we are more aware of schemes now and need to keep in. Keep an eye on how things are operating and changing."* [Farmer E]

### **Impact on farm businesses**

De-stocking has had the largest impact on the members' farm businesses. However, this was largely because the ESA payment offset the impact of reduced sheep numbers. Those we interviewed were divided on what might happen if there was no follow on scheme. Some felt that farmers, especially the larger ones would go back to former sheep numbers if a scheme was not there. Others thought that the sheep industry had declined to such an extent and enough had changed the way they structured their breeding ewe flock that grazing numbers would never reach the same level.

*"The scheme is there to keep the moor as it is. I am scared it might get undergrazed the way farming is going. Increasing numbers will be more difficult than reducing."* [Farmer E]

The only other impact is the benefit of knowing more about the policy environment across Wales. There has been sharing of advice and experiences of different schemes. Recently the committee has taken on the resolution of problems caused by horse rights on the IACS form.

### **Human Capital**

The farmers themselves seem to be aware that they have been on a journey since the signing of the agreement and the development of the committee and in the vast majority there is little desire to return to where they had been.

*“When you go out on the hill and you realise that you play a part in its management, seeing all the wildlife and birds. All this is good.”* [Farmer E]

In this sense the farmers have developed, many spoke of seeing the hill differently now when they walk to collect their sheep. There is a sense of a wider purpose that they are acting positively to enhance the hill, that the collective agreement is something bigger than just farming. The increased awareness of other activities is also a factor in this.

Only one of two members of the group indicated that their own confidence or decision-making had changed as a result of the agreement. These were both key members of the committee, but it was clear that they had developed a level of competency and skill that they may not have gained via other means.

While one or two individuals were identified as being key in terms of the functioning of the group it should be recognised that whilst one of them was incapacitated a member from outside the committee stepped up to cover the key tasks. In this sense most saw the group as sustainable and important in the development of human capital, although they would not call it that.

Some members had acquired new skills as a result of meeting people in the group. In two cases this concerned the management of the own land and stock. In one case the new land owner benefitted from the experience of a retired farmer who lived nearby.

*“Lots of help from my neighbour, he is happy to share his skills”* [Farmer D]

### **Social capital**

It is clear from the interviews that this is a deeply rooted agricultural area. Most of those interviewed had always been in agriculture and most of those had been in the area for more than one generation on the same farm. In this sense there is a historic social capital in grazing the hill, to follow on a tradition that can be traced back over several decades or more is something cultural as much as social. But this is not exclusive as new landowners have been welcomed into the group.

*“Grand-father had rights in 1921, used to be a beater back in the 1950s, passionate about Ireland Moor.” [Farmer B]*

*“The group has a feeling of solidarity, even as a new comer I feel involved and working towards a common purpose” [Farmer D]*

Nearly all of the members felt that the social benefits of the group had increased significantly since the signing of the ESA agreement. There is a formal AGM once a year that most members attend in most years. There are also more informal meetings that discuss a range of items, such as books that have been published on the area or films that have been made. These are widely appreciated by the members interviewed.

*“Social benefits, yes, I have nights out!” [Farmer E]*

### **Impact on wider community**

The area has few settlements and is a very strong agricultural community. However, levels of awareness of the ESA agreement among the non-farming community are low. They are aware that it is common land and that local farmers graze the area but not that there is a scheme of management.

The wider community uses the common for a range of activities both formal and informal. There are a number of businesses, such as Freerein, who offer riding holidays where it is clear to see that the hill is an important part of the experience. It would be interesting to see if they would be interested in assisting in the management of the area.

### **Future plans**

The committee are aware of the need to plan for the future and have started thinking about this. An open meeting was held in January 2007 centring on this aspect. The meeting was well attended and some interesting discussions held but the committee recognise that there needs to be more work done on this. All agreed that there needs to be a future plan and that the group should look to continue.

However, most of the other members are looking to the next scheme, if there was to be one. The view of those interviewed seemed to be equally divided between those who thought that there would be another suitable follow-on scheme and those who thought that there would not. Interestingly, only one farmer had transferred to Tir Cynnal when the ESA scheme ran out. Others are considering this or Tir Gofal.

### **SWOT Analysis**

#### **Strengths:**

- Strong social cohesion – the co-operative aspects of the group are seen as a success and this is in part to strong agricultural and community bonds.

- Competent and imaginative leadership – the Administrator has grown in confidence and is innovative and competent and well supported.
- Members provide support to leader – there is collective commitment from the group and a committee help with the functioning.
- Support from key individuals and institutions – especially from the ESA project officers.
- High standard of self monitoring and effective self-regulations.
- Equitable and accountable distribution of grants.
- Interest from policy-makers – group empowerment and view that they are more aware of policy and can influence it.
- Strong legal structure to the group and excellent communication.

### **Weaknesses**

- There has been no significant development of greater business confidence as a result of the group.
- Low benefit for external beneficiaries – small multiplier effect from funding the group.
- Greater deal of effort for a 10 year agreement.
- Unable to secure funding for further environmental work.
- Little co-operation from an economic perspective.
- Excessive (un-rewarded?) time taken up in committee matters.
- Limited ability to control other aspects on the hill such as 4x4s, motorbikes and moss pickers.

### **Opportunities**

- Growing demand for branded products linked to environmental benefits but low awareness among the group.
- Increased financial support for farmer groups but low awareness among the group.
- Recognition of positive contribution to water quality and habitat management.
- Bulk purchasing to reduce costs occurs in other groups such as the sheep buyers group. Something the group could also undertake.
- Link together matching and complementary skills within the group to cover a range of agricultural and non-agricultural areas.
- Broaden the group to include other interests using the hill so use and management are better coordinated and communication is improved still further.
- Use the common to encourage new generations of farmers.

### **Threats**

- External pressures prohibit financial viability of farm business.
- Energy to continue under constantly changing policies and static real incomes
- Opportunities for new funding are reduced.
- New generation not interested to continue.
- Limited innovative ideas for future.
- No long term plan beyond the ESA agreement.

## 4. Overview and Analysis of Case Study Findings

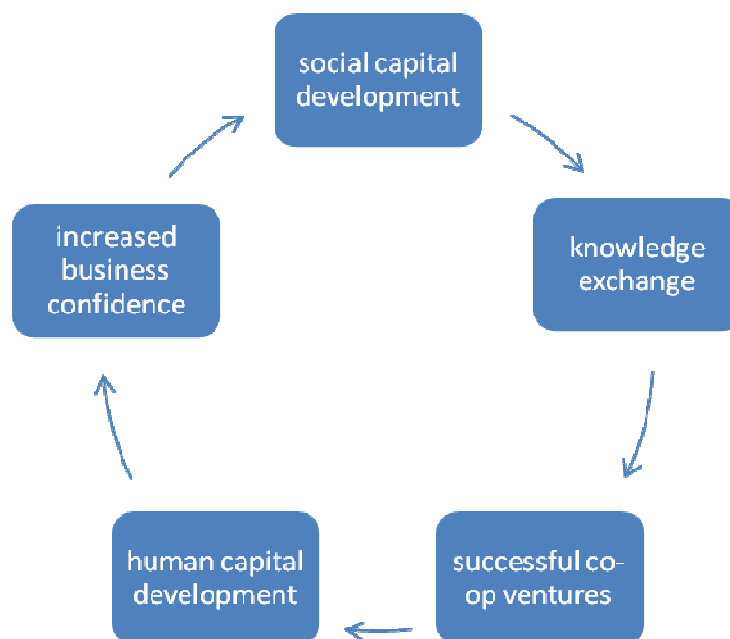
This section focuses on the findings from the three case studies. Firstly, the benefits of co-operative working to group members and others are explored, then the key success factors for the three case studies in terms of group formation, institutional arrangements and activity implementation are identified and ways that these factors could be used for the benefit of future co-operative ventures presented.

The three case studies differ in their motivations for formation: the Pontbren group is a farmer-led group who mobilised themselves to seek funding to develop more sustainable farming systems; the Dolaucothi group is a farmer-led group that formed initially to obtain premium prices for their products; and the Ireland Moor group was developed around an existing framework that was encouraged by outside agencies to introduce more sensitive management on common land. Despite these differences there are similarities in terms of the benefits derived from working collectively and factors that have contributed to their success.

### 4.1 Benefits of co-operative working

The three case studies have demonstrated that substantial benefits can develop from working collectively which go beyond those that could be achieved by individuals. Figure 4.1 summarises these benefits to group members starting from the development of social capital to increased confidence which can have a positive impact on the farm businesses. This a continuous and mutually reinforcing cycle of benefits.

**Figure 4.1 Benefits of co-operative working**





### *Social capital development*

The key to successful co-operative working is the development of social capital within the group. The term social capital was originally coined by Bourdieu (1991) and further developed by Putnam (1995) to refer to social connections, and the attendant norms and trust and reciprocity also associated with these connections. According to the government's Performance and Innovation Unit (2002, 5) 'social capital consists of the networks, norms, relationships values and informal sanctions that shape the quantity and co-operative quality of a society's social interactions... social capital can be measured using a range of indicators, but the most commonly used measure is trust in other people'. Through the building and maintenance of social capital within a group it is possible to create and sustain incentives for collective action. Some degree of trust and reciprocity was already present between Pontbren and Dolaucothi members due to existing informal social networks and kinship bonds. However, social capital on these farms has become eroded since the 1960s as production-orientated subsidies and intensification have made farmers more independent and individualistic, with less time to socialise which has contributed to social isolation. Likewise, on Ireland Moor, there was some contact between graziers before the ESA agreement and an association was in place but other than agreeing dates to place stock onto the commons there was minimal contact between the graziers. Members of all three groups particularly valued the increased social interaction and the "feeling of belonging" brought about by group membership. This was highlighted for Pontbren members during the Foot and Mouth Disease when they were more isolated than usual and were dependent on other members for social interaction. The introduction of social activities within the Ireland Moor group has been particularly welcome and these extend to all rightsholders and not just the graziers who place stock on the common.

### *Knowledge exchange and support*

As social capital is built within the group, members are more willing to provide advice and mutual support. Whilst the Pontbren and Dolaucothi members previously assisted each other with farm tasks the level of support has now increased to the farm decision-making level. For example, whilst individuals may have reciprocated with tasks, such as moving livestock, they are now offering advice about regulation requirements or prices paid for inputs. This mutually supportive culture provided by group membership is highly valued by individuals. This is evident in the Dolaucothi group where two members are not financially benefiting from the group marketing scheme, but value group membership for the advice and support it brings. On Ireland Moor there are several examples of the members sharing knowledge across the group. There have been issues regarding the registering of horse rights and how these are reported on IACS forms with the committee taking responsibility for the whole group and acting on their behalf. Another example is a traditional farmer agreeing to take a share in the pedigree sheep flock belonging to a new farmer in exchange for knowledge and support.

### *Successful co-operatives ventures*

All three case studies have demonstrated successful outcomes from working collectively. Group membership has opened up new opportunities that would have been impossible to access by the farmers individually, whether it be access to funding or providing a marketing advantage. One contributing factor to this success is the desire by individuals not to let the group down. Within Pontbren this has secured a high quality of hedge, tree planting and fencing work and with the Dolaucothi group has ensured an element of reciprocity when negotiating the weekly supply of lambs. The Ireland Moor group has no formal ventures but there is a collective sense of pride that the group was formed at all and a strong sense that they do not want to relinquish this.

### *Human capital development*

Through involvement in group activities individuals appear to develop human capital. Human capital is defined by the OECD (1998, p9) as “the knowledge, skills and competences and other attributes embodied in individuals that are relevant to economic activity.” It encompasses both social as well as technical skills. There is evidence of human capital development within the case studies. Pontbren group members have broadened their knowledge through group activities and attendance on training courses and developed good social networking skills through the hosting of numerous farm walks and farm visits. Several members of the Ireland Moor central committee have developed increasing competence and skills and now feel much more confident and able to speak with government representatives.

### *Increased business confidence*

Following the success of collective activities and the development of human capital, members’ business confidence has increased. They are more willing to try new ideas and to take on new projects, which they would not have contemplated as individuals. In the case of Pontbren and Dolaucothi this confidence has been reinforced by the public acknowledgement of their success and interest from outsiders, including elite actors. The success of the co-operative ventures and increased confidence, further increases the social capital of the group and so the benefits are reinforced. There is little evidence of increased business confidence on Ireland Moor but the committee is aware that they are already half way through their 10 year agreement and are collectively planning for the future.

### *External beneficiaries*

Benefits of group working can go beyond the immediate group. Pontbren’s use of local contractors and suppliers for hedge, tree planting and fencing work meant that funding benefited the rural local economy. Dolaucothi group may also benefit the local community by taking on the lease and renovating a disused local pub, previously a focal point for community interaction. While on the surface there seems to be little external benefit, the management of Ireland Moor has involved using local contractors for heather burning and the spraying of bracken. The Moor is also used for a range of activities, such as long range horse trekking, and these will certainly benefit from the enhanced management.

## **4.2 Key success factors**

### **4.2.1 Group formation**

#### *Key individuals*

Within all three case studies there is a key individual with the drive, skills and determination to move the group forward. These people initially invest much of their own time and resources in making the group a success. The key individuals in Ireland Moor also persuaded the whole group to take a large financial risk in paying for legal advice to formalise the group before funding was secured. In the Pontbren group, one individual has been instrumental in forming the group and driving it forward. Interestingly, he is the only one not born on the farm in the group. Similarly, in the Dolaucothi group one individual, who is also a trained group facilitator, has been responsible for the formation of the group. In developing future co-operative ventures these key individual should be identified at an early stage and offered support.

#### *Facilitators*

The development of each group was supported by a facilitator. This was an individual who provided the group with ideas and advice on securing funding. In Pontbren facilitation was provided by Coed Cymru an NGO with parallel interests to the group. The facilitator is gradually easing out of some of his initial functions, but retains a supportive role. In the case of Dolaucothi the facilitator was also a group member. He trained as a facilitator with Agrisgôp, an action-learning program designed to encourage farmers to find their own solutions to problems. There was no formal facilitator within Ireland Moor but the ESA Project Officer was on hand to support the committee as they took these duties in-house. To achieve success facilitators need to be highly skilled and good communicators. Ideally, they should have received training in facilitation, although this is not the only aspect of an effective facilitator, they must also have the necessary characteristics in terms of personality and confidence. The case studies suggest that a facilitator should ideally be skilled and locally embedded, and/or with a long-term commitment to activities within the target area.

#### *Strong social cohesion*

Strong social cohesion exists within two of the case studies which is in part due to existing social bonds. Within Pontbren and Dolaucothi groups members were known to each other previously through informal social networks, such as local schools, chapels or Young Farmers Clubs and there are some kinship bonds. Likewise there is a strong bond within Ireland Moor, although it is not so exclusively around the moor. As a result of being long and thin and covering over 2,500ha there are several communities within the community around the Moor. Groups such as Young Farmers and the sheep buyers group are active and likely to benefit from the increased social cohesion on the Moor.

### *Social Network Analysis*

The analysis of the different networks of the groups allows some comparisons to be made that reveal not only the similarities but the differences as well. The social network analyses not only graphically represent many of the findings of the qualitative research, but they provide a rigorous support for those conclusions. In statistical terms the Dolaucothi group is more densely networked, although this is easier to achieve in a smaller group, although the Pontbren group report talking to one another far more frequently. This may reflect the purpose of the group or the dynamics of its development. In order for the Dolaucothi group to achieve its goals it needs to be tightly co-ordinated at particular times of the year and as they are based on the same estate a significant common denominator is introduced, whilst the Pontbren group are involved in more extensive activity. The support networks of the two groups also appear to be quite distinct; the Pontbren group derive a lot of support from their co-operative but have sparser networks around their businesses, whilst the Dolaucothi members appear to have a denser network of support around them. This may well reflect the different ages of the group members, the Dolaucothi group often named their children as being a vital part of their business, but for the Pontbren group their children may be too young to provide support or have already left the farm.

The importance of kinship is underlined in both groups, as brothers, cousins, second cousins all play an important role in the groups. Although kinship groups would appear to be an easy guarantee of group cohesion and success, it may also add to the degree of risk as it intertwines kinship with business, so potentially spreading the consequences of failure. In both groups the average length of time other group members have been known to one another is over 30 years, so we might describe them as 'kith' in the archaic sense that they are associates from the same place, rather than people joining together just for business or a particular project. This underlines the seriousness of purpose of these groups as they pool together elements of their community deeply rooted in place, with their family businesses upon which many of the aspirations of their families are reliant.

The Ireland Moor network diagrams are very distinct from the other two groups as firstly we have not been able to interview every member of the group, which is because of the scale of the group. Therefore, such a large network is not likely to be as closely knit or 'dense', but will have a number of sub-groups that may actually be close to one another. The density measurements for a fraction of a large group, do suggest that it does cohere well. In such a situation key brokers between the sub-groups will assume a particular importance, and these are apparent in the network diagrams bringing groups together and helping the flow of information. A second function of it being a much larger network is that those whose activities are affected by the group are much more extensive, although the broadly family nature of the farm businesses is apparent. In line with the observations from the other groups,

these projects are often about a pooling of families' aspirations and routes to support, as much as the substantial purpose of the group.

#### **4.2.2 Successful Institutional arrangements**

##### *Formalisation of group*

All three case studies aimed to achieve some level of formalisation of their group. Groups receiving public money will require some form of legal status. Pontbren Group was set up as a limited company with its own constitution. The Wales Co-operative Centre helped in taking it through the process of registering the Company. Ireland Moor broke new ground by securing the signatures of the vast majority of rights holders to a legal constitution that sat alongside the ESA agreement. This was developed to cover all scenarios and provided the basis for self-regulation, including sanctions such as withholding payment should members of the group not abide by the rules of the ESA agreements. This was seen as a key strength of the group by most of the members we spoke to. Dolaucothi are in the process of becoming more formal with regard to their ambitions to revive the village pub.

##### *Small, manageable group size*

Group members' stressed the importance of keeping group size small. With a small group it is easier to maintain and develop good personal connections between different members. A large group increases the time needed to establish and maintain these connections. Also smaller groups facilitate the ease of monitoring, as individual behaviour is more visible. In the Pontbren group organising meetings is very time-consuming and an increase in group size would only intensify this pressure. In the case of Ireland Moor all 100 commoners are group members. To ensure effective communication the main interaction occurs between a central committee of 10 who meet regularly and deal with the business of the Moor, including the distribution of the ESA payment. Each member of the committee has a group of members within their locality who they are responsible for communicating dates of meetings, decisions etc. Again this was seen as good practice and worked very effectively by all that we spoke to.

#### **4.2.3 Successful implementation**

##### *Finding own solutions*

Within the Pontbren and Dolaucothi groups the ideas for collective action have come from within the group. They have identified their own problems and solutions and in this way the concept of change and adaptation has strong ownership. The Ireland Moor case differs slightly as the landowner initially exposed the problem and external agencies introduced the possibility of an ESA agreement, so that creative and effective solutions could be developed with the commoners. This iterative process took time but ensured that group members developed a sense of both personal relevance and self-efficacy.

### *Development of own implementation rules*

In the case of Pontbren the members themselves decided on the rules and standards for work when implementing the hedge and tree planting scheme. Similarly, Dolaucothi have their own internal system of ensuring weekly lamb supply from different members. With the Ireland Moor commoners the content of the legal agreement to supplement the ESA agreement was determined by the commoners themselves and this included provision for sanctions should any member not abide by the ESA agreement. These provisions have been used in at least one case. In developing future co-operative ventures there should be enough flexibility within the scheme that allows ideas to come from farmers on how schemes are implemented rather than it being imposed by external agencies. Having identified solutions the schemes should enable groups to develop their own rules to meet the scheme objectives as group members place a high value on retaining farm autonomy.

### *Flexibility in member involvement*

In the Pontbren and Dolaucothi groups there is no coercion for members to be involved in group activities. Each member is free to be involved in activities, as suits them individually. For example, not all members of the Pontbren group chose to de-stock and two Dolaucothi members are not involved in the lamb marketing contract. The Ireland Moor group situation differs slightly as commoners with rights to the moor have the opportunity to be members of the group. Almost all commoners are members and once they have signed the ESA agreement they become a full member and receive a payment in line with the number of rights for sheep grazing that they hold. For those who are not members, all small holders, they remain a commoner with rights to graze and are included in social activities relating to the moor but they do not receive any money from the ESA agreement.

### *Payment systems*

Part of this flexibility entails allowing the group to develop their own systems for distribution of funds. In both the Pontbren and Ireland Moor groups there is equitable distribution of funds to members. The decision was made by the group members that the funding should be divided equally despite farm size, in the case of the Pontbren group, or the number of sheep grazing rights on the Moor, in the case of the Ireland Moor group. The division of any possible ESA payment has been the cause of dispute on other commons but in the case of Ireland Moor it appears to have been a very constructive discussion with a keenness to find an equitable solution that is fair to both those who exercise their rights and those who do not.

### *Self-regulation and monitoring*

The Pontbren group has established its own system of auditing and monitoring of activities, both in terms of finance and quality control. The Pontbren Enfys scheme was monitored by group members, with responsibility for inspection being shared on a rotational basis. This ensured a high standard of work as strength of group commitment meant other members would be letting themselves and the group down if they breached the agreement. Self-monitoring also meant that administrative costs were kept low. The Ireland Moor group has instituted their own

sanctions for breaches by individuals of the ESA agreement and these have been used. It required a special meeting of the committee and collection of evidence together with meetings with the farmer concerned. The general view is that this was conducted fairly and in a way that enabled them to continue to be neighbours afterwards. Dolaucothi have entered into a number of farm assurance schemes, such as Freedom Foods or certified farming systems, such as organic. These have instituted an external system of review, which whilst not conducted by group members demonstrates a common commitment to excellence that is shared across the group.

## 5. Implications for Policy

One of the main purposes of this study has been to develop policy recommendations for policy makers who are seeking to promote co-operative working through agri-environment schemes. This section draws together the findings from the literature and co-operative reviews and the case studies and workshops to make recommendations on appropriate mechanisms to be used in new agri-environment schemes and ways of developing agri-environment co-operative working. In making recommendations it is assumed that any new scheme will be voluntary and will involve a basic application process in line with existing agri-environment schemes operating in Wales.

### 5.1. Appropriate mechanisms to be used in new agri-environment schemes

#### *Co-operative approach*

#### **Recommendation 1: Develop a group agri-environment scheme to enable collective action to achieve environmental outcomes**

The three case studies have demonstrated the environmental benefits of co-operative working, which go beyond those that could be achieved by individual actions. The Pontbren group, through planting hedgerows and trees together on a contiguous block of land, has improved the habitat connectivity on the farms. The collective agreement to de-stock on Ireland Moor has resolved problems of overgrazing; and the supermarket contract obtained by the Dolaucothi group has secured environmentally-friendly farming practices on this National Trust estate. The literature suggests that co-operative working can also be used effectively in achieving other environmental objectives, such as reducing diffuse pollution, soil erosion and flood risks. The literature and interview data also suggest a greater recognition currently amongst farmers of the need to work in this collective way.

Another advantage of collective working is that environmental messages are more likely to become embedded and create a positive social norm within the group. The scale of environmental activity can also be enhanced through subtle social pressures within the group. For example, in preparing their application for the Enfys grant, Pontbren members marked on blank maps of their farms the work they wished to undertake. The collective situation meant that farmers felt compelled to commit to more work than they had originally envisaged. Furthermore, in respect of environmental change, it is likely to increase the perceived efficacy of an action if all are working to resolving the issue.

The case studies have also shown that effective collective working has a long-term benefit in that it develops social and human capital and builds confidence for farmer groups to undertake other activities to benefit themselves, into the future.



*Partnership approach to finding solutions*

**Recommendation 2:** Encourage a partnership approach between existing or embryo farmer groups, and facilitators and scheme officers in the development of local scheme implementation/tools.

**Recommendation 3:** Increase the provision of training in partnership working for those agency and advisory staff involved in partnership liaison.

**Recommendation 4:** Involve group members in on-farm research to develop solutions.

There is a range of possible approaches to enabling collective action from formal and external coercion to extremely informal and internal mobilisation of social capital. Co-operative action itself can span a wide range of activities and goals ranging from informal 'neighbouring' activity to large multi-partner formal partnerships. The Pontbren and Dolaucothi case studies are examples of "bottom-up", farmer-led co-operation, in contrast the Ireland Moor agreement represents more agency-led collective action. Despite these differences all three case studies highlight the value that farmers place in being involved in the process of problem framing and resolution. The group approach in the Pontbren and Ireland Moor cases were successful because group members had some form of control over the scheme design, implementation and monitoring. This involvement increases commitment to the scheme and is more likely to result in a sustained change. Whilst exogenous and endogenous solutions may sometimes appear to produce similar outcomes initially, exogenous ones may not be as culturally embedded and long lasting, and more liable to decline once the external influences are removed.

However, it should not be assumed that farmers know all the answers. They may not always understand environmental problems, in which case external agencies need to inform farmers of the issues and through an iterative process collectively develop solutions with them. Such an approach to problem-solving is likely to be lengthy but may also be more likely to succeed where farmers develop a sense of both personal relevance and self-efficacy. The best approach, therefore, would seem to be developing knowledge alongside farming communities. Farmers could also be provided with opportunities to contribute to research at an early stage, as is the case with the Pontbren group. They can learn along with the scientists, contribute local knowledge to the research and through this engagement socially confirm the legitimacy of research findings. Whilst this participatory approach is beneficial it must be recognised that the complex funding and accountancy structures of co-financed EU agri-environment schemes means that the ultimate decision-making power must rest with the government (Prager & Nagel, 2008). Thus participatory approaches can only supplement, not replace government administrative decision-making processes.

### *Scheme flexibility*

**Recommendation 5:** Ensure enough flexibility in the scheme to permit local management solutions to develop.

**Recommendation 6:** Allow some flexibility in local scheme objectives and mechanisms to enable re-orientation, if necessary.

Locally determined solutions are likely to create more ownership of a scheme and thus a more sustained change. Therefore, any scheme should incorporate enough flexibility to permit local solutions to develop. Some flexibility within the overall objectives and mechanisms is also important as this allows local approaches to re-orientate themselves if necessary. Measures need to be reviewed and adjusted on a regular basis with scheme users being brought into the process. For example, the appropriate stocking levels on Ireland Moor may vary over time and there needs to be a high degree of flexibility and iteration between the project officers and graziers to ensure that the appropriate stocking rates are maintained.

## **5.2. Ways of Developing agri-environment co-operative working – engagement and group capacity building**

### **5.2.1 Farmer engagement**

To effectively engage farmers in co-operative agri-environment schemes project officers/facilitators need to have a clear understanding of the history and culture of existing groups, the nature of the farmers' networks, the range of local issues and how they are experienced, the assets and strengths of farmers' groups that may be built on and the nature of existing dialogue and participation in groups. With this understanding they then need to be prepared to adapt and develop structures and processes to make them accessible and relevant to farmers. This implies that they should avoid a 'one size fits all' approach to engaging farmers. A model of engagement that might work for the Ireland Moor commoners might not succeed on lowland floodplains. Indeed, what might work well in the Pontbren catchment may not succeed in a water catchment on the other side of the watershed. Without some local sensitivity, mechanisms for the new scheme may well fall short of engaging farmers effectively across the variety of likely target areas in Wales.

### **Scheme Incentives**

#### *Economic incentives*

**Recommendation 7:** Offer payments that at least cover the cost of management activities associated with running and belonging to the group.

**Recommendation 8:** Offer capital grants at an early stage and encourage the use of local contractors and suppliers to maximise the socio-economic benefits to the wider local economy.

**Recommendation 9: Offer two funding packages – a startup package and a longer term AES management package, following attainment of group legal status.**

There is little doubt that the use of economic incentives can encourage engagement in agri-environment schemes and induce positive environmental behaviour amongst farmers. However, more questionable is whether there is necessarily any corresponding attitude change. When offering economic payments for group agri-environmental applications scheme agencies will need to ascertain that farmers are fully signed up to the co-operative approach. This is where the local understanding and sensitivity suggested above is useful. These groups also need to have common objectives and interests in relation to the environment. Simply because farmers have worked together co-operatively for commercial or business reasons may not mean they have a common interest in achieving environmental outcomes.

Capital grants are particularly popular with farmers and can also bring wider socio-economic advantages to the rural economy. They also have the benefit of producing tangible outcomes over a short period. The Pontbren group really valued the Enfys capital grant scheme and lamented the demise of the old hedge management/landscape capital grant schemes. They also take great pride in the hedge, tree planting and fencing work undertaken on their farms. They feel there is a distinct visual difference between their catchment and those of their neighbours. Capital grants should be offered at an early stage to encourage farmer involvement in group establishment.

Schemes need to be either cost neutral or actually contribute to the farm business taking all costs (including time) into account. WAG may wish to consider the option of paying individual farmers a premium on top of any annual management payments if they are part of a collective agri-environment scheme. It is hoped that this additional premium will encourage farmers to come together in groups and submit applications.

The group will need to have a clear idea about timescale for action. They could be offered seedcorn support for an initial planning stage (1-2 years) after which they can apply for a full formal agreement using some form of independent legal status in order to release the AES management funding. This implies two specific sorts of group funding – a phase one startup package and then a longer term AES management package after that, which would be based around the level of funding available to individual farmer AES agreements, but offered with more flexibility and autonomy in return for a group scheme contract and including some money to cover ongoing co-ordination, management and group activity. WAG may also wish to consider the requirement of some kind of group milestones to be reached in order to release grant aid. This diminishes the risk of funding social meetings with no outcome and no obvious end point.

### *Knowledge and information*

**Recommendation 10: Offer farmers learning and training opportunities as an incentive to get involved.**

The case studies have highlighted the value that farmers place on knowledge exchange and information to improve their economic situation. Collective agri-environment schemes could offer opportunities for collective learning and training.

### *Marketing Advantage:*

**Recommendation 11: Provide assistance for groups in developing their own products and brands, either through a grant to employ consultants or through a scheme.**

If farmers wish to differentiate their product in the marketplace, there may be an added incentive to participate in a joint agri-environment scheme in order to develop an environmentally-friendly brand for their product. Schemes should promote public awareness of the value of quality farm products and the link between product quality and the upland environment. Support for direct marketing is also essential as not all groups will be able to secure supermarkets contracts, such as that achieved by Dolaucothi lamb.

### *Access to fund other diversified activities*

**Recommendation 12: Allow facilitators to assist groups in accessing other funding sources at a later stage as an incentive to group formation.**

The Pontbren members on forming a group found they could access funding that would not have been available to them as individuals. As the group matures and develops greater confidence the facilitator assisting the group could be tasked with helping the group to access funding for other activities, whether it is funding offered under Axis 2, 3 or 4, or from non-government organisation sources. This prospect of additional funding at a later stage would offer an additional incentive for farmers to become involved.

### *Common concerns/conflict/interest*

**Recommendation 13: Identify common value situations that can bring farmers together.**

Many collective action projects appear to stem from shared interests and goals amongst members. In attempting to engage farmers in collective action it may be beneficial to identify local features or resources of value that are unique and threatened and which might be protected through their actions. Such examples might include the protection of particular local breeds or water resources within a water catchment area. In particular, common concerns, especially if they are specific

in nature, can motivate farmers to come together to work collectively. In the Pontbren case, the group members recognised that by adopting environmental enhancing measures they were not only benefiting their whole catchment area, but also their livelihoods, which were under threat.

## **5.2.2 Group capacity-building**

### *Work with existing groups or networks*

**Recommendation 14: Work with existing groups where they exist.**

**Recommendation 15: If working with new groups, members should be known to each other through informal social networks.**

**Recommendation 16: Allow 10 years for new groups to develop to full activity.**

The case studies have highlighted the advantages of working with existing groups or networks in the process of developing collective action. Through previous activities, these groups or networks will have developed factors of trust, familiarity, and respect that can only develop through time. They will also have had the opportunity to learn about how the other members work, their technical capability and their values. If working with new groups, then ideally members should be known to either or be part of some existing local informal social network, which will predispose them to work together. In our case studies members were known to each other through local schools, chapels, Young Farmers Clubs, kinship bonds. If members are not known to each other, trust can take time to develop. In fact, any successful group will take time to establish, to develop into maturity and then to deliver real change in land management. Ideally, a period of ten years would be advisable over which to seek a significant impact upon farming practices.

### *Facilitation*

**Recommendation 17: Appoint or formally recognise a facilitator for each group, and as far as possible, identify individuals with the right personality, locally-based and respected by farmers.**

**Recommendation 18: Set up a fund to pay for each facilitator and group establishment.**

**Recommendation 19: Provide facilitators with training in facilitation skills and in participatory and communication methods.**

The case studies highlighted the importance of facilitators in supporting farmers to gain access to information and knowledge. They also have an important role to play in assisting with group development which, as the case studies have highlighted, requires substantial amounts of time and resources. The role of the facilitator is not to prescribe change, but to provide support with the group development processes. New groups will require skills in working together, such as communication, conflict resolution and group decision-making. Importantly, the facilitator avoids “spoon-feeding” the groups, allowing them to gain in strength by resolving their own issues.

Once the group has developed in confidence the facilitators role will diminish. It would be a large cost to bear early on for scheme beneficiaries, if they paid for a facilitator. Thus funds could be made available for this initial capacity building process, even if the outputs are not immediately tangible. This fund could be justified on the grounds of cost savings in terms of government administration, due to significantly fewer individual agreement negotiations.

The case studies also suggested that the best facilitators are those people who are local, respected by farmers and be able to enter into dialogue with them. Effective facilitation requires defined skills and these facilitators should also have the necessary personalities and training to undertake their tasks. Local farmers acting as facilitators, such as the Agrisgôp facilitators, could help reduce the distance between farmers and advisory professionals and enable greater farmer-farmer interaction. Also to ensure local sensitivity when developing the groups, the facilitator should have a good understanding of the local history and culture, the nature of the farmers' networks and the range of local issues, as discussed above.

#### *Start small and simple*

**Recommendation 20: Start with a small group of farmers aiming to achieve simple land management changes in order to increase chances of success.**

**Recommendation 21: Start with options that produce tangible outcomes and benefits, such as small-scale capital works or promotional events.**

The case studies have highlighted the importance of starting with small groups of farmers, as it is easier to achieve good communication and effective monitoring with fewer numbers. In the case of common land where large numbers are involved a smaller central committee should be established to enable effective communication. This committee would be responsible for communication to other members. Also the scheme should initially aim to achieve simple land management changes early in the process to motivate farmers to join the scheme. Similarly, the organisation of promotional events or group get-togethers with a social payback might also achieve this outcome. Specific activities and events are a useful motivational incentive for ensuring continued involvement because these actions stimulate interest from surrounding farmers.

#### *Group Structure*

**Recommendation 22: Provide legal support in establishing a constituted group.**

**Recommendation 23: Provide assistance in developing group decision-making processes and sanctions.**

**Recommendation 24: Allow farmers to select membership of the group.**

Two of the case studies have established a formalised structure and the third, Dolaucothi, is in the process of doing so. In fact, any group wishing to take on collective responsibility for public-funded land management must have legal status and is likely to need assistance in establishing an appropriate legal entity, such as

private clubs or limited companies. As in the case with the Pontbren and Ireland Moor groups, they may also need help in the determination of their constitution, including membership criteria, allocation of responsibilities, decision-making procedures and financial management. All groups will also need to determine liability in the event of non-compliance with scheme rules. Group members might follow the Ireland Moor example and deal with any minor breaches of the agreement through pre-arranged sanctions. Working through the facilitator, the Scheme should offer assistance with this aspect of group development.

Since both trust and respect are important components of the collective approach, farmer groups should be allowed to select their own members. The Pontbren group considers one of main reasons for success is the good group rapport and feels this could be jeopardised if new members with different values were imposed on the group.

#### *Scheme payments*

**Recommendation 25: Where appropriate, offer a single payment to properly constituted groups, along with responsibility for dividing it up between members.**

Both the Pontbren group and Ireland Moor commoners instituted their own successful system for distributing funds to members. Payments were distributed equally regardless of farm size or livestock numbers and meant that smaller farmers benefited from group involvement. This suggests the scheme should operate a payment system based around the delivery of a single payment to a locally based accountable structure that is in turn responsible for allocating the funds to individuals. Such an approach has the advantage of reducing the amount of agency time spent on individual negotiations and leaves the responsibility for resolving any disputes between members with the group itself. However, the group may require help from the facilitator in establishing a legal framework for allocating payments and resolving any disputes. In some situations, where changes in individual farm practices are required, for example, in order to reduce soil erosion in water catchments, agreements may need to be made with individuals.

#### *Group monitoring and sanction setting*

**Recommendation 26: Encourage a process of self-policing and sanction setting to ensure compliance with scheme agreements.**

**Recommendations 27: Provide farmers with the opportunity to undertake their own monitoring activities.**

The case studies have demonstrated that less external compliance monitoring may be required with co-operative schemes, as there is usually an element of self-policing reinforced through peer pressure and reputation effects. The Pontbren group developed their own system for mutually monitoring each others' behaviour and imposing sanctions. This has proved particularly effective in ensuring a high standard of work. The Ireland Moor commoners have also developed and administered

predetermined sanctions for those who commit minor breaches of the agreement. Allowing group self-regulation has the advantage of not only increasing commitment to scheme and ownership of the process, but also reduces the considerable transaction costs to the agencies involved in obtaining the necessary information to ensure there are no breaches of an agri-environment agreement. The only situation where this might not work is if a particularly close-knit group decides to overlook breaches, or where the group is working hard to bring less committed members on board in order to improve delivery and there is a greater risk of an abuse of collective responsibility. Conversely, group members may be less likely to drop out of a scheme due to social pressures.

Farmer groups could also be provided with opportunities to undertake their own on-going monitoring of the impacts of their changes in management practices. Some of the Pontbren farmers are involved in on-farm monitoring of the impacts of their activities for the Flood Risk Management Research Consortium. Examples of monitoring might include, the provision of equipment and training to measure water pollution levels, carrying out species counts and recording changes in water infiltration and vegetation structure. Involving farmers in the monitoring process in this way will engage their interests and give ownership of the process. Farmers' own criteria for assessing change could also be used alongside more conventional measures.

*Expose group outcomes to public*

**Recommendation 28: Expose group activity success through local publicity, demonstration events, achievement awards**

The success of the Dolaucothi and Pontbren group activities have been exposed to and acknowledged by the wider public. Dolaucothi lamb has achieved this through winning a number of prestigious awards and Pontbren by attracting a whole range of visitors from other farmer groups to elite actors. This acknowledgement and interest by outsiders has helped to increase group confidence and given them the self-assurance to peruse other activities. The schemes should consider the public face of the group and seek opportunities to ensure that successful group activity leads to enhanced standing in the wider community or with the public or consumers.

*Engaging other farmers*

**Recommendation 29: Adopt a tiered approach to new schemes enabling individuals to move to a higher-tier collective scheme when predisposed to.**

**Recommendation 30: Enable new members to join existing groups, wherever this makes practical sense (without conflicting with Recommendation 24, which should take precedence).**

Through increased public exposure other farmers may also become interested in establishing similar groups. However, it is also important to recognise the reluctance of some farmers to work collectively. There are also some who prefer to wait and



see how a scheme works in practice before making a commitment. This suggests a tiered approach to new agri-environment schemes. Lower tiers would allow individuals to enter the scheme. Once they have engaged with the scheme and developed confidence in the scheme they may move to a higher tier of collective action with neighbours. Thus any scheme should be sufficiently flexible to allow farmers to join a group after the initial agreement has started.

### **5.3 Recommended Further Research**

A partnership approach to the development of collective agri-environment schemes is necessary if these schemes are to succeed. This approach will not only take time, but will also require some flexibility. Further research is required to explore in more detail how participatory approaches to agri-environment scheme development can be integrated into government decision making processes.

The development of social capital appears to play an important role in developing successful agri-environment co-operation and is highly valued by farmers as an outcome of collective working. Further research is required to fully understand the importance of social capital to the farming community and ways that it can be created and maintained in the current, challenging context.

The issue of whether environmental payments lead to permanent attitudinal change among farmers has received little research attention, yet is critical to understanding whether there are likely to be any long-term positive behavioural changes resulting from collective agri-environment schemes. In particular, once farmers have engaged in a collective project, does this then impact positively upon their likelihood of engaging in other environmental projects?

The current assumption is that agri-environmental schemes provide minimal advantage in marketing products, but research on whether this is actually the case is limited. The research could consider the attitudes of actors in the food chain, from buyers for retailers or processors through to consumers. It may also be that consumers in the broadest sense also want measures that are not yet part of the schemes. These issues could be explored through consumer research, such as questionnaires, focus groups and also discussions between farmers and consumers.

Further research exploring group adaptive responses to climate change is required. Unlike AES's usual focus, climate change is a longer term and more uncertain process. There is scope to use groups, with specialist scientific input from technical bodies (Universities, research institutes, private sector scientists), to develop and implement mitigation and adaptation strategies, including renewable energy, carbon neutral strategies, new crops and new ecosystem services approaches. These would be less likely to need medium-term AES funding but could benefit from startup packages and there might be scope for medium term private sector funding from energy policy sources.

Finally, specifically in relation to common land in Wales, the following three areas for research are recommended:

The Ireland Moor experience suggests that there is merit in further examination to compare their experience of agri-environment entry with a number of cases where those involved failed to secure an agreement. By looking at examples where an agreement was not secured it may help in the development of a more strategic approach to commons management and their entry into sensitive management. This will be useful to project officers, commons registration officers, land owners and rights holders. The development of the management guide 'A Common Purpose' showed that communication is the key to integrated management.

The recent Commons Act 2006 requires consultation for some management decisions and introduces the option of creating commons councils. The importance of the commons legislation partly lies in the opportunity for the establishment of Commons Councils where at the very least the graziers and commoners come together to agree management practices with input from other key stakeholders. Commons are rare spaces with high levels of multi-functional land use covering agriculture, ecology, heritage, landscape, recreation and community. This project has shown that self-regulation is possible for agricultural management. Further testing of this framework might offer a model for integrated land management. We suggest that a project could look at the level of understanding among agri-environment officers of the new legislation and its use in the management of commons.

The Ireland Moor case study showed that owners, graziers and commoners have a strong attachment to the land through differing sense of tradition. This project suggests that it might be worth undertaking a deeper exploration of people's association with common land. Such a project may yield a greater understanding regarding the breadth and depth of the various relationships people have with common land. There is plenty of evidence across Wales where common land has evoked powerful and clearly passionate reactions, most often when a change of management is proposed.

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## Appendix 1 Interview Schedule

### *Evaluation of key factors that lead to successful agri-environmental co-operative schemes*

## 1. Basic contextual information

*[Interviewer] First I will ask a few general questions about the structure of your farm.*

1. Please could you tell me the name of your 'group' – how you like to refer to it (eg, co-op, grazing association, farmers group).

2. How much land do you farm that is:

now? before joining the co-op initiative?

Owned .....

Tenanted (long term) .....

Tenanted (short term > 1 year) .....

Annual lease (1 year) .....

3. How long has your family been involved in farming?

4. When did you become a farmer? How many years of experience managing a farm do you have (on existing and previous holdings)?

5. Which age bracket do you fall into?

20-30      31-40      41-50      51-60      60+

6. Did you attend agricultural college? What agricultural qualifications do you have?

7. How many family members do you have working on the farm?

Part-time..... Casual ..... Full-time .....

8. How many people (excluding family members) do you have working on the farm?

Part-time..... Casual ..... Full-time .....

9. Do you have any non-farm income from the following sources?  
     Farm diversification  
     Self off farm job  
     Spouse job off farm?  
     Family job off farm?  
     Other?
10. Approximately what % of the farm *household's income* comes from non-agricultural sources, now and before joining the co-op?
11. Approximately what % of the farm's *income* comes from environmental payments (not SPS) now and before joining the co-op?
12. What livestock do you have on the farm? [describe types, systems, numbers]
13. What crops do you produce on the farm? [describe crops, proportion of cropped area, rotation]
14. How have CAP reform, SPS, changes in commons legislation and other aspects of agricultural change impacted upon your farm business?
15. What are the plans for your farm business when you decide to retire from farming? (successor)
16. Had you undertaken any work to benefit the environment before joining the co-operative (or environmental project/scheme)? Eg managing hedges and ponds, restoring walls and buildings, leaving margins in cultivated fields. Why – explain rationale for undertaking this work?

## 2. Experience of Co-operative Working

*[Interviewer] Now I would like to ask some questions about your experiences of working in a co-operative initiative*

### **Initial start –up**

1. When did you join the co-operative initiative?
2. How and when did you first hear about the co-operative initiative?
3. Did you know the people concerned beforehand? Friends, neighbours?
4. Please outline your reasons for joining the co-operative initiative
5. How long did it take you to decide to join?

6. Did you discuss joining with other family members? If so who?
7. What do you see as the vision of the co-operative initiative?

### **Management of co-operative**

8. Do you have a specific role within the co-operative? Do you bring any specific skills to the group? Is there a clear leader?
9. Who does day-to-day management of the group – meetings/discussions, sets agenda/decides priorities?
10. Do you feel that there is an optimum group size? How do you consider new members? Do they approach you or the other way round?
11. What is the process when someone wants to leave the co-op, either through choice or by moving away?
12. How do you communicate most? Meetings, internet, telephone?
13. Who does the cooperative interact with the most? Government agencies? NGOs? Does the cooperative have good links with these people?
14. How has the 'group' itself changed over time?

### **Resources, Accountability and Financing**

14. How often do you work together?
15. How often do you have meetings? Are these informal or formal, structured meetings?
16. Approximately what proportion of your time each year is spent on co-operative activities (work, meetings etc)?
17. How do you ensure good accountability and financial management? How are the funds distributed amongst the members?
18. How have you obtained funding for initiatives? Does being part of a group help or hinder you in getting funding for projects? What are their views on the funding they have received (sufficient, flexible)? Have they identified other funding streams?
19. Is there a legal document covering the activities of the group?
20. How is it set up constitutionally? Does this arrangement itself work well?

### **3. Impact of co-operative initiative on farm business**

*[Interviewer] I would like to ask some questions about the affect of the co-operative on your farm business*

1. In what ways do the members work together? What new activities have members begun as a result of being in the 'group'?
2. How much of this work undertaken specifically benefits the environment?
3. How does the group decide on the agri-environment options? Is it a group decision? Does everyone have to take them up? How does it affect the dynamics of the group if some are not participating?
4. Have there been any changes to your farming practices since joining the group (eg. de-stocking)? Why did you decide to do it? What was the driver? Why didn't you do it?
5. How have these activities been developed through the co-operative and on a farm-by-farm basis?
6. Have there been changes in productivity, profits, farm enterprises, stocking levels, use of inputs – machinery/pesticides/fertilisers, diversification, farm employment since joining the co-operative or co-operative initiative?
7. How has the co-operative contributed to new skills and training within the group? Have you undertaken any new skills and training independently since joining the group?
8. What role, if any, has the Pontbren group had in training others?
9. Has the co-operative helped improve access to information?
10. Have there been new arrangements regarding transport (both of stock to market and the bringing in of new materials, since the development of the co-operative?
11. Has being involved with the 'group' changed other areas of your farm business?



#### **4. Impact of co-operative initiative upon members lives**

*[Interviewer] I would now like to ask some questions about the affect of the co-operative on your life and your family's life?*

1. Has membership of the co-operative initiative affected your business confidence?
2. Has membership affected the way in which you make decisions?
3. Has your membership of the co-operative affected any of your family members?
4. Are there any social benefits from membership of the co-operative?
5. Has membership of the co-operative affected your use of leisure time?

#### **5. Long term outlook for your farm and the co-operative**

*[Interviewer] I would be interested in hearing your thoughts on the long term outlook for your farm and the co-operative*

1. What are the long term (2020) future plans for the farm? (e.g. winding down, build up certain enterprises, more emphasis on environmental payments, etc.)
2. What approach has the group taken to future planning eg. business plans, succession, group expansion?
3. Does the co-operative have any long-term visions/activities (eg, own branding, eco-tourism, machinery sharing, website development, education). If yes, what assistance, if any, is required to achieve this vision?
4. Do you thinking you have the available labour and skills to deliver environmental services in the future?
5. Do you see the cooperative initiative as sustainable? Would it be sustained if key players left?

#### **6. Impact of co-operative on the wider rural economy**

*[Interviewer] We are interested in finding out whether the co-operative has had any impact on the local rural economy, either financially or socially*

1. Do you think there has been any financial knock-on effect of the co-operative on local contactors and suppliers of agricultural and environmental goods. If yes, please give details (eg. names of particular people or companies, contact details)
2. Do you think there has been any financial knock-on effect upon the local community? If yes, please give details (eg names, contact details)
3. Do you think there have been any social benefits of the co-operative for local residents, schools etc? If yes, please give details (eg. names, contact details)
4. Have the activities of the co-op initiative had an effect on the interests of neighbours in doing something similar? Please elaborate if this has happened.

<b>7. Evaluation</b>
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1. What key factors have made the co-operative a success/interesting features (eg NGO presence, particular personalities of those involved, special skills, geographical location)?
2. Are there any people in particular who have helped to make the co-operative a success? How have they contributed to the success? What do you see as their role in the future
3. What do you think has been the most successful initiative you have undertaken with the co-operative to date?
4. Is there anything that you value most about working as a group? What advantages do you have as part of the group that are not available to non-members.
5. What obstacles or difficulties have been faced in initiating and carrying out co-operative tasks?
6. Do you think the way the co-operative works could be improved in any way?
7. Are there any factors that mean the initiative/group may not continue?

## 8. Social Network Questions

People that are important to you (or your business or your farm)

### Please name people that are important to your business or co-operative membership

These may be family, friends, business associates, professional advisors, farm advisors, etc

The can be in any order and all names will be kept confidential.

Name	What is your relationship with this person?	Is this person a member of the co-op?	Did you know this person before you joined the co-op?	If applicable, what does this person do for business?	How long have you known them?	How often do you talk to them?	Where are you most likely to meet or talk to them?
<i>Doris Grant</i>	<i>My accountant</i>	<i>No</i>	<i>Yes</i>	<i>Does farm books</i>	<i>5 years</i>	<i>Twice a year</i>	<i>On farm</i>
<i>John Smith</i>	<i>A farming friend</i>	<i>Yes</i>	<i>No</i>	<i>Talk about co-operative issues</i>	<i>6 months</i>	<i>Every week</i>	<i>Email</i>

Name	What is your relationship with this person?	Is this person a member of the co-op?	Did you know this person before you joined the co-op?	If applicable, what does this person do for business?	How long have you known them?	How often do you talk to them?	Where are you most likely to meet or talk to them?

## Appendix 2 Workshop Notes

**Pontbren Workshop, Cann Office Hotel, Langadfan, Powys.  
15<sup>th</sup> May 2008**

### **1. Discussion of Pontbren SWOT analysis**

#### Strengths:

- Proven environmental benefits
  - but not an environmental scheme
  - happened because of changing farming system
  - hydrological benefits
- Agri-environment or habitat management? Consider the name as label affects perceptions, what is the real driver for change?
- Teamwork is important.

#### Opportunities:

- Lack of trust of big operators. High risk.  
Self marketing? – need new expertise
- Complex element in food chain in handling product.
- “Better land management” principles.
- Group management of landscapes?
  - Wildlife Trust / E.A.
- Downstream benefits are quantifiable

#### Weaknesses:

- Visitors can be useful, but need to vet and charge some.
- Environmental work, needs longer term support after initial investment – maintenance essential.
- Finance: costs were very high. Contributions from farmers were up to 75% (from 50%). Cost of land was not included.]  
Main financial benefits have been external. Can now value benefits locally.  
Needs to be done.

#### Threats:

- Next generation ( male and female)
  - set up costs very high
  - housing
- New ideas need time and funding
- Need simplified funding access
- Too much of funding is being spent on policing.

## **2. Brainstorming session on the design and delivery of future agri-environmental schemes:**

- Shoot politicians!
- Open to all
- Listen to grassroots – design with users and learning
- Structure and mechanisms to get message across
- Capital grant scheme at standard cost
- Alternative funding sources? CO<sup>2</sup> offset?  
Facilitator – coordinator BUT unsustainable in long term.
- Self-regulation
- Better (simplify) Woodland for Wales – differentiate between forestry and farm woodland.
- Shelterbelt integral to farmland flexibility – not too prescriptive menu of options
- Landscape and nature conservation, Hedgerow conservation.
- Catchment scheme – part of tier, benefits additive process.

## **Ireland Moor Workshop, Rhosgoch Golf Course, Powys 30<sup>th</sup> June 2008**

### **1. Discussion of Ireland Moor SWOT analysis**

#### Strengths:

- Strong leadership
- Signing agreement was key to success
- Pony trekkers benefit

#### Weaknesses:

- Excessive time in setting-up group, but this will now decrease
- Economic co-operation is not a tradition amongst members

#### Opportunities:

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- Increase in tourism, including pony trekkers
- New owners may be an opportunity

#### Threats:

- Lack of Government leadership – need long term view and a long term scheme.

## **2. Brainstorming session on the design and delivery of future agri-environmental schemes:**

- Financial incentives are important.
- Way group is structured works well – desire to maintain it as it is.
- Group can negotiate change which could not be achieved by government agencies.
- Flexibility of management and rules are important
- Listen to local knowledge when designing solutions
- Need project officers with an understanding of hill farmers
- Need long term scheme
- Communication is important as this develops trust

## **Dolaucothi Lamb Meeting, Llandre, Pumpsaint, Carmarthenshire. 28<sup>th</sup> July 2008**

### **1. Discussion of Dolaucothi Lamb SWOT analysis**

#### Strengths

- As they have no initial outlay they are under very little financial pressure and in a strong negotiating position.
- They are now comfortable negotiating at a higher level.
- A key strength of the group is the discipline shown by all members. This is important for a group to survive.

#### Weaknesses

- Although they are currently supplying one supermarket contract this is not seen as a weakness as they are keeping in touch with other supermarkets and food service industry should this contract end.
- Their main weakness is a lack of supply which is constrained by the size of the estate and group. There is plenty of demand for their product

#### Opportunities

- The group has now formed a Company.
- Application for funding to help restore the village pub is currently with WAG.

#### Threats

- In the medium term there appears to be enough successors to keep the group going.

- A gradual withdrawal of subsidies would strengthen the agricultural industry.

**2. Brainstorming session on the design and delivery of future agri-environmental schemes:**

- Farmer groups need to consider all aspects of developing a brand – not just the environmental side. The customers and therefore supermarkets are interested in the environment, but also welfare and quality issues.
- Groups need to be good at conveying the product to the customer.
- Groups do not necessarily need a consultant to help with marketing, but can develop their own marketing skills with the assistance of a facilitator.