Collaboration and Incentives – Achieving environmental benefits at large spatial scales through Environmental Land Management

Summary Report

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Executive Summary and Recommendations

This project aimed to identify 'what works' in farmer collaboration for environmental delivery at larger spatial scales. The first phase of the research took the form of a Rapid Evidence Assessment (REA) of collaborative mechanisms, incentives and alternative approaches used to achieve environmental outcomes at large spatial scales (see Ingram et al. 2020¹). This report presents the results of the empirical phase of the project, which covered 15 case studies of large spatial scale coordinated and collaborative land management initiatives and included in-depth interviews with 69 land managers, facilitators, coordinators and a range of other stakeholders. Throughout the report we distinguish between *collaborative* approaches, where some form of joint-working between land managers occurs, and *coordinated* approaches, where activities are organised and directed by a facilitator but carried out on an individual basis by land managers who may never directly interact with each other.

This research has revealed rich insights into the operation and effectiveness of a range of different approaches to delivering environmental management at scale i.e. beyond the individual farm holding. The key findings from our analysis are:

- There is no single 'blueprint' for delivery at larger spatial scales. Different approaches suit different
 environmental issues and local circumstances, and attract land managers with different dispositions. For
 example, those less keen on collaboration might be happy with a coordinated or auction approach.
 Therefore a key design principle for E.L.M is to offer the flexibility for different approaches to be supported
 according to local requirements.
- It is clear from this research that farmer collaboration is not strictly necessary to deliver environmental outcomes at larger spatial scales. Coordinated and auction-based approaches deliver environmental management at scale with little or no farmer-to-farmer interaction. However, collaborative approaches are associated with a range of benefits and outcomes over and above the delivery of specific environmental management practices. These include social and personal benefits including reducing social isolation, providing supportive spaces for discussing agri-environmental management and lots of mutual learning and gaining of knowledge through groups, speakers/discussions, visits, and advice.
- Both collaborative and coordinated approaches have a role to play in achieving environmental benefits at large spatial scales through E.L.M, with each potentially serving slightly different purposes. For instance, collaborative farmer groups (either led by farmers themselves or third parties) may act to harness interested farmers' enthusiasm and enhance the depth and quality of their environmental management, whereas coordinated approaches (whether led by arms-length bodies, private stakeholders, partnerships or communities) may be effective at securing broad participation from land managers, ensuring that specific actions are taken across a target area.
- Effective facilitation is essential for successful collaboration. The attributes of an effective facilitator were seen to be trust, knowledge, excellent organisational skills and passion. If collaborative approaches are to become more common there will be a need for more effective facilitators and for facilitators to be able to learn from each other.
- Similarly, farmers often learn best from other farmers. They have an inherent understanding of each other and speak the same language. It is important therefore to consider how the experiences of farmers in

¹ Ingram, J., Wilkinson, T., Wheeler, R. and M. Lobley (2020) Collaborative and incentives: what works for achieving social, environmental and economic outcomes at large spatial scales: Rapid Evidence Assessment. Report to Defra

collaborative and coordinated initiatives can be used to encourage farmers to think about taking part in these forms of agri-environmental management.

- Environmental monitoring should not be seen as an expensive add-on but as an essential part of effective delivery. This should include feedback to farmers to create positive feedback loops, reinforcing positive environmental behaviours in addition to identifying where additional steps need to be taken. The emphasis on public money for public goods means that farmers are increasingly aware of the need to be seen to be delivering public goods and this requires evidence. Clearly this raises challenges in the context of limited budget and a desire to maximise spend on environmental delivery.
- Time and timescale pose challenges both to the land managers delivering environmental management on the ground and policymakers, as timescales for achieving environmental gain may be out of sync with usual policy and funding cycles. In this context it is important to recognise the passage of time required for beneficial environmental change. The amount of time will vary according to the specific environmental attribute being addressed and the starting point (i.e. how much degradation has occurred) but a timescale of decades may be more appropriate than five year agreements in certain circumstances. In addition, a true commitment to collaborative group work requires sufficient lead-in time, typically 12 to 18 months. This might be a challenge in terms of public spending, as it may appear that nothing much is happening during the group establishment and building stage. It is also important to build in flexible time schedules to allow for the adaptation of farming systems (which in the livestock sector in particular is not quick) and the delivery of management.
- Evidence from this research suggests that many farmers are increasingly willing to deliver a wide range of public goods and are frequently willing to collaborate to do so. Of course, the participants in this research were already interested in environmental management so further work is required to test out the appetite for collaborative and coordinated approaches in the wider farming population. There is evidence (from our research) that non-environmental farmer groups may be interested in environmental delivery and this is an area that deserves further attention.

Recommendations

A number of recommendations derive from this research. Most relate specifically to the design of E.L.M at larger spatial scales but we also include recommendations on the importance of adopting the principle of flexibility in design and delivery; communications, and monitoring and skills development (which are also relevant to the design of the wider E.L.M programme) because these themes emerged strongly from our research and take on particular pertinence in a collaborative or coordinated group context.

Recommendations for ELM Design

- Support both coordinated and collaborative initiatives within E.L.M, as each are appropriate in different circumstances.
- Prioritise funding an effective facilitator with appropriate skills and experience as this is key to success.
- Expand the use of online auctions for delivering specific management objectives, as these are costeffective, require less farmer commitment and can reach a wide audience, including those who do not normally engage with AES.
- Utilise support (both financial and in-kind) for initiatives from stakeholder organisations by enabling and encouraging the creation of partnerships where appropriate (e.g. in the development and delivery of coordinated initiatives).

- Encourage land manager involvement in the setting of group objectives and delivery plans, regardless of whether collaborative/coordinated delivery models are led by stakeholder organisations or farmers themselves.
- Keep landscape-scale options/initiatives as simple as possible and streamline application processes.
- Provide financial incentives for participating in collaborative/coordinated management wherever
 possible, particularly where the aim is to involve a high proportion of farmers in a specific area and/or land
 managers with little prior experience of environmental schemes and initiatives. It is also important to
 integrate non-financial incentives into the design of initiatives, for example training, one-to-one advice
 and free environmental monitoring/feedback at the farm level.
- Avoid group agreements with shared liability, except possibly in the case of small and well-established groups where trust between members has developed, or common land where commoners are used to working together.

Recommendations for a flexible approach to design and delivery

- Maximise flexibility wherever possible, particularly in terms of how land managers will deliver objectives.
 The development of formal structures and planning frameworks within collaborative/coordinated
 initiatives remain useful for providing focus and keeping work on track, however, and should be
 encouraged.
- Allow flexibility over agreement length (including both short and long term commitments) depending on
 the type of management and environmental objective that is being sought and/or provide opportunities
 for follow-on funding. Long-term agreements should build in contingencies to account for major shifts
 within the farm business (e.g. changes in ownership).

Recommendations for communications

- Ensure communication around opportunities for landscape-scale working uses appropriate language that is clear and concise. In particular, the level of joint-working required from farmers should be clear.
- When communicating with land managers, recognise that they will be motivated to engage in initiatives by a range of different factors including environmental interest, financial incentives, improving farming practices, regulatory changes and social and reputational benefits.
- Provide funding and resources (e.g. ideas, design and information templates, sources of advice/support, case studies) to assist groups with voluntary public engagement activities, as this can result in significant social benefits both for farmers and local communities.
- Use existing farmer groups and networks (both environmentally and non-environmentally focused) as a conduit for communicating opportunities related to ELM and landscape-scale initiatives.

Recommendations for monitoring and skills development

- Support and encourage initiatives to develop clear targets, baseline data and monitoring systems to
 quantify and capture environmental (and other) outcomes, and ensure results are fed back to farmers.
 Interim environmental indicators can also help to motivate farmers where long time-spans prevent clear
 outcome measurements.
- Build environmental monitoring into the framework of a collaborative E.L.M component by providing appropriate funding and resources (e.g. templates, guidelines, ideas), including for monitoring delivered by farmers and local community or conservation groups.

• Enable flexibility by allowing groups to determine the type of monitoring most suited to their specific context.

Recommendations for further research

- Further research should be undertaken to establish the environmental, economic and social additionally associated with collaborative and coordinated approaches.
- Additional research is required to establish the likely willingness and capacity to participate in collaborative and/or coordinated initiatives amongst the wider farming community (i.e. beyond the existing participants who took part in this research).
- The extent to which farmers' involvement in setting objectives and monitoring environmental and social outcomes is not fully understood and requires further research.

1. Introduction

The introduction of Defra's Environmental Land Management programme (E.L.M) is part of the most ambitious and radical reform to domestic agricultural policy for decades. E.L.M aims to include opportunities for groups of farmers and land managers to work together to deliver environmental outcomes at larger spatial scales. Against this background, this project aimed to identify 'what works' in farmer collaboration for environmental delivery at larger spatial scales. The first phase of the research took the form of a Rapid Evidence Assessment (REA) of collaborative mechanisms, incentives and alternative approaches used to achieve environmental outcomes at large spatial scales (see Ingram et al. 2020). This report presents the results of the empirical phase of the project, which was based around structured and semi-structured interviews with land managers participating in collaborative or coordinated environmental initiatives, project facilitators and a range of other stakeholders. Throughout the report we distinguish between *collaborative* approaches, where some form of joint-working between land managers occurs, and *coordinated* approaches, where activities are organised and directed by a facilitator but carried out on an individual basis by land managers who may never directly interact with each other.

A case study approach was adopted in order to explore participants' experience of a range of different initiatives seeking to achieve environmental benefits at large spatial scales. 15 case study initiatives were selected in consultation with Defra. Informed by the REA, the principle selection criteria were i) type of collaborative/coordinated mechanism and ii) type of incentive and/or payment approach. A number of other determinants identified in the REA also informed case study selection to ensure as far as possible inclusion of top-down and bottom-up approaches, as well as spatially-coordinated and collaborative initiatives. The sample of initiatives reflected a range of different group sizes, areas of spatial coverage, length of establishment and governance forms. To aid analysis, we have grouped the case studies into 5 broad categories: Large-scale coordinated initiatives; Auction-based initiatives; Community-led initiatives; Countryside Stewardship Facilitation Funded (CSFF) farmer groups; and non-CSFF farmer groups. All initiatives selected had the fundamental objective of landscape-scale environmental delivery.

In total, 69 people were interviewed as part of this research. This included 16 facilitators, 41 land managers and 12 individuals representing wider stakeholder bodies (e.g. a utilities company, auction platforms and conservation NGOs).

This report summarises the key findings from the research, which are detailed in full in the main report. The findings are broadly organised around key themes that were identified as important to consider through the REA, and subsequently discussed in the interviews. Following a brief description of the case studies that were selected for the research, we discuss some of the determinants affecting the success of collaborative/coordinated approaches to environmental land management and consider the lessons that can be learnt about each of these from our case studies and the experiences of those involved in delivering environmental management at large spatial scales. We then present some of the key outcomes that have emerged from these initiatives, including environmental, personal and social, economic and public engagement related outcomes. Next, we summarise the key strengths and weaknesses associated with each of the 5 types of initiatives represented by our case studies, before exploring some wider considerations for E.L.M collaborative design that emerged from the interview conversations. Finally, we end with some key conclusions and detail a number of recommendations for Defra to consider when designing collaborative/coordinated elements of E.L.M. These recommendations are based on the evidence from both the REA and research interviews.

2. Case study summaries

The 15 case-studies within this research represent a wide variety of approaches to collaborative/coordinated environmental land management. In order to preserve the anonymity of participants we cannot describe each case study in detail but have grouped them into 5 categories representing their broad structure, although it is important to stress that this is not a clearly defined typology. Each category possesses a diversity of characteristics in terms of group size, length of establishment, governance arrangements etc.

2.1 Large-scale coordinated initiatives (2 case studies)

These initiatives are led by partnerships between a number of stakeholder organisations, including environmental NGOs, utility companies, arms-length bodies, and public authorities. They seek to achieve habitat improvement and regeneration, including a focus on flood risk mitigation and water quality improvement, across large upland areas. They operate at large scales, both covering over 40,000 hectares of moorland. One case study is well-established, having been in existence for over 15 years, while the other is much newer (established in 2019) and is still in the process of setting up some of its activities. Both are corefunded by the National Lottery Heritage Fund and environmental land management is coordinated by a partnership Project Officer across multiple holdings, estates, and common areas. Little or no direct collaboration is currently required between land managers in either initiative.

2.2 Auction-based initiatives (3 case studies)

These case studies represent auction initiatives within specific river catchments ranging in size from less than 1000 to over 150,000 hectares. All are relatively recent (less than 5 years old). Each auction targets a clearly-defined environmental objective (e.g. water quality) and requires land managers to bid to deliver specific management practices such as cover crops, grass under-sown in maize, arable reversion, aerating / subsoiling, grassland subsoiling/ slitting, fencing, ponds and wetlands, hedge and woodland planting, check dams, leaky dams, buffer strips or capital works such as slurry stores. They are organisation-led (e.g. NGOs, water utilities, Environment Agency, and Natural England), with funding from the private sector (e.g. food processing and water companies) and national river authorities. Online environmental trading platforms are used for bidding. Farmer engagement is coordinated through partners' local advisers working closely with a project officer from the auction deliverer. Numbers of farmers engaging in all cases ranges from around 20 to 50.

2.3 Community-led initiatives (2 case studies)

These initiatives have both been established by one or more members of the local community to address specific issues of flood risk in the area, although one has since broadened its environmental objectives and also hosts a CSFF. They are both 5 to 6 years old and cover distinct river catchments/sub-catchments. Both case studies have the support (to varying degrees) of various stakeholder organisations (e.g. environmental NGOs, utility companies, and arms-length bodies). Funding for one of these initiatives is drawn from a variety of sources in order to carry out specific projects, mostly in the form of capital works. The other initiative has received funding from the Environment Agency. Neither of these case studies require land managers to collaborate with each other, with most acting independently from each other.

2.4 Countryside Stewardship Facilitation Fund (CSFF) Groups (4 case studies)

This category consists of groups funded by, and organised according to, the requirements of the CSFF. The organisational model of these groups varies, with some identifying as 'farmer-led' while others acknowledge a more 'organisation-led' or 'facilitator-led' approach to the running of the group. Environmental management is primarily supported and enhanced in these groups in two ways. The first is via Countryside Stewardship (CS) agreements group members might choose to apply for. The second is through improved knowledge and advice

received as a group intended to encourage greater environmental engagement. The purpose of the groups is to encourage more 'active' methods of engagement among farmers that demonstrate a collective approach across holdings. Ages of groups studied range from 2 to 8 years old. Numbers of group members range from around 20 to almost 100 with a significantly different area covered by each group (ranging from approximately 4000 to 25,000 hectares). Governance arrangements vary, from formal, tiered governance with boards and steering groups etc. to simpler arrangements with farmers and the group facilitator directing all decision-making processes within the group.

2.5 Non-CSFF farmer groups (4 case studies)

Like the CSFF groups, the four initiatives in this category are characterised by a high degree of farmer involvement in the establishment, planning and governance of the group's activities. Some (but not all) of the groups in this category are sometimes referred to as 'farm clusters'. All groups in this category are relatively small, with fewer than 30 farming members in each, and have been operating for between 4 and 10 years. The area of land covered by the groups varies from around 800ha to over 15,000ha. The establishment and governance of these groups can vary. Farmers were very involved in the establishment of all four case studies, though each group has received facilitation support from environmental NGOs and/or other external organisations at some point in its history. Funding arrangements also vary, from public bodies, agrienvironment scheme (AES) agreements, and/or use of ad hoc grants. In one case, farmers themselves fund the group by paying a set amount per hectare (according to the size of their holdings) on an annual basis. There is significant interaction, and at least some degree of collaboration, between farmers in each group.

3. Determinants of success

The research identified a number of cross-cutting themes relevant to all or most types of initiative, although their specificity varied. We have summarised these below: full details can be found in the main report.

3.1 Governance

In terms of governance, participants did not generally distinguish between coordinated and collaborative approaches and top-down/bottom-up distinctions were not always straightforward, with some groups falling somewhere in between and/or fluctuating between the two over time.

In general, however, collaborative approaches with an emphasis on building from the 'bottom up' were seen to encourage land manager engagement, participation and a sense of ownership and control of the group. Collaborative groups were also associated with high levels of social learning (see also Section 3.3 below) and this was felt to enhance both the quality and quantity of environmental land management implemented by farmers. A potential weakness of farmer-led collaborative approaches identified by some respondents was that they could sometimes lack focus (particularly in the absence of a facilitator), which could lead to difficulties in taking ideas forward and translating them into plans and actions.

More top-down, coordinated approaches were also viewed by most respondents as an effective way of delivering environmental benefits at scale, if delivered with farmers' interests in mind and facilitated by trusted individuals. Participation in coordinated initiatives was generally seen as straightforward for land managers and can be more attractive than collaborative approaches for those who are reluctant to work directly with other farmers. In comparison to collaborative groups, however, there are usually fewer opportunities for social learning and the enhanced knowledge and understanding that this can bring.

Ease of engagement, simple application processes and minimising bureaucracy were all, unsurprisingly, seen as important aspects of a successful process regardless of governance approach or leadership style. Facilitation was seen as particularly vital in bringing together and organising group members/stakeholders (see below for further details). Developing good relationships and trust between members and stakeholders involved in initiatives is also important and, although the additional skills, support and resources brought by external partners can be very beneficial, land managers should still feel that their voices are heard above those of 'expert' stakeholders.

Additional keys to success discussed by respondents included continuity of personnel and having some built-in flexibility and adaptability to the governance and operation of groups and initiatives. Flexibility was seen to have a number of advantages, including allowing land managers to learn from mistakes and empowering them to come up with solutions to achieve delivery. In contrast, too much rigidity could act as a disincentive to participation. In their farming operations farmers have considerable flexibility to react, make changes and fine-tune their approach over a season or the longer term. If farmers are to be encouraged to take the same professionalised approach to environmental land management, they need a similar degree of flexibility.

3.2 Objective-setting

A long standing criticism of legacy agri-environmental schemes is that they were not sufficiently attuned to local circumstances, leading to the suggestion that land managers and farmers at the local level should have greater involvement in setting objectives, management guidelines etc. We found mixed responses among land managers in farmer groups as to the ability or desire to personally contribute to group objectives. Some land managers do not feel sufficiently engaged to want to contribute, but most did feel that there was space for them to do so should they so wish. Group size and governance model appear to play a role here, as for larger

groups or those operating with steering groups, committees or boards, land managers were more likely to be represented by a small group of farmers rather than directly representing themselves.

All bottom-up initiative facilitators agreed that land managers usually require guidance in objective-setting. Land managers were also quick to admit needing that guidance from a facilitator and/or other advisors to help fully understand environmental objectives in their area.

3.3 Engagement

Levels of farmer engagement varied significantly, both between types of initiatives but also between different groups within each category. This was true both in terms of quantity (i.e. numbers of participating land managers) and quality (i.e. depth of interest in, and enthusiasm for, the values and activities of the initiative), although there was some indication that collaborative groups were associated with deeper levels of engagement than coordinated initiatives in terms of generating increased farmer interest and enthusiasm, and thus potentially prompting additional environmental activities.

The causal effect here is difficult to determine, as collaborative groups may attract more farmers with a pre-existing interest in the environment. Nevertheless, levels of environmental interest and depth of engagement in the initiative can clearly be influenced by how the particular group or scheme is run. For example, facilitators for farmer groups were emphatic about the idea of members having ownership over the aims and activities of the group, and this was equated with land managers feeling a sense of pride, having a voice, being identified as a unique group, and feeling recognised or valued for their efforts. As discussed below, effective facilitation, farm advice and training, appropriate financial incentives/compensation and environmental monitoring programmes can also all help to strengthen farmer engagement in collaborative or coordinated land management initiatives.

Other factors influencing good levels of engagement (both quantity and quality) include:

- 1. Avoiding busy times of year when organising meetings and events.
- 2. Not relying on internet-based means of communication but also reaching out using text messages, phone calls, WhatsApp etc.
- 3. Establishing a workable 'size' of group (in terms of member/holding numbers) and ensuring that the needs and objectives of the group are common and understandable to all.
- 4. Good, clear communication at all stages and involving land managers in decision-making processes from as early on in the initiative as possible.

Interviewees identified a wide range of barriers to engagement in landscape-scale initiatives (many of which are also applicable to agri-environment schemes in general but which are arguably amplified in a collaborative context). These can be usefully summarised as:

- Cultural and relational barriers e.g. independence, social nervousness, inertia, mistrust, productivist attitudes;
- Concerns about obligations e.g. time constraints, paperwork, being tied in, financial position of farm business, pressure;
- Issues with initiatives e.g. lack of alignment between schemes, lack of financial motive, absence of key individuals, initiative terminology and complexity;
- Personal or business factors e.g. financial position of the farm business

3.4 Facilitation and other support

A recurring theme around successful support of initiatives was the importance of effective facilitation. Successful facilitation was seen as an important factor in effective planning, objective setting, securing resources and delivering environmentally beneficial management, particularly to give support and direction to farmer-led groups. There was widespread consensus amongst respondents that the facilitator was critical and without them the initiative would not have been successful. Successful facilitation was associated with consistency of personnel, knowledge, experience and passion, and trust.

External support from various stakeholder organisations was also identified as being important for success and manifested in a variety of ways, including technical advice and information on agri-environmental land management practices, understanding of agri-environment policy and its associated rules and regulations, and through financial and administrative support.

3.5 Motivation and incentives

Farmers' motivations for engaging with landscape-scale initiatives varied. Whilst some land managers were primarily interested in direct financial benefits (which in our case studies either took the form of auction payments or agri-environment payments for work delivered within the remit of the initiative) or the delivery of capital works with a dual business and environmental benefit, others were driven more by a personal interest in the environment. Indeed, many of the case studies did not offer any form of financial payment for work undertaken within the initiative (with one CSFF farmer group even requiring members to pay an annual fee to participate). Land managers also reported a wide range of other motivations for engaging with the initiatives, including reputational benefits and free environmental monitoring and advice for their farm. Nevertheless, financial incentives - or at least financial compensation for costs incurred - appear important for engaging some land managers in landscape-scale initiatives.

Opportunities for increasing knowledge and understanding through both training events and peer-to-peer learning emerged as an important non-financial incentive for securing farmer engagement in landscape-scale initiatives, particularly collaborative groups. For instance, facilitators and land managers saw training as a valuable means of imparting many aspects of agri-environmental knowledge required for the successful execution of projects and initiatives. Training events could be formal, as exemplified by some of the training events undertaken by CSFF farmer groups, or less formalised, such as the informal exchange of knowledge occurring through structured farm visits and field events. The value and beneficial contribution of training and/or mutual learning was a common theme among respondents' comments on the subject. Whilst environmental learning processes (both through formal training and peer-to-peer learning) can of course be implemented outside of landscape-scale initiatives and need not necessarily depend on them, collaborative groups provide the impetus and focus for such events, help to facilitate informal knowledge exchange, and can generate 'friendly competition' between members around the environmental outcomes they are achieving on their farm. Opportunities for on-farm environmental monitoring also acted as an incentive for some farmers, as discussed below.

3.6 Monitoring

Environmental monitoring, evaluation and feedback to farmers was viewed by most respondents as extremely important. There was strong consensus that establishing baselines, monitoring environmental progress and outcomes, and feeding the results back to farmers is crucial in order to sustain and strengthen their engagement with the goals of the scheme/initiative. There was, however, a general sense among respondents that monitoring and evaluation has been insufficient in many cases, often due to a lack of sufficient funding. Where monitoring had taken place - often on an informal or ad hoc basis driven by the facilitator or enthusiastic individuals - it was associated with a number of benefits, including:

- Celebrating success and boosting motivation;
- Improving understanding and informing management;
- Demonstrating value to both those within the initiative and to others (a number of farming respondents commented on the need to demonstrate that they are providing public goods).

Benefits (particularly in terms of improving understanding and informing management) appear to be particularly high where farmers themselves have been involved in the monitoring process and there are some good examples of where this has been achieved. Such involvement will not be appropriate in all cases, however, and many farmers were understandably reluctant to commit time to such activities.

Our findings around monitoring and evaluation are clearly pertinent to the wider E.L.M scheme in general and we would expect land managers' calls for clearer monitoring and feedback to also apply to individual agreements (and indeed this has been confirmed in other research we have conducted). The research has, however, highlighted that those involved in landscape-scale initiatives believe environmental monitoring to be especially key to demonstrating success and motivating land managers to build their interest and sustain their participation in the initiative. It has also revealed how collaborative and coordinated initiatives can be effective forums for delivering monitoring and feedback, either through engaging the support and resources of external stakeholders and/or through prompting and facilitating local assessments by community groups, environmental NGOs and local enthusiasts.

Monitoring is an issue that requires further consideration in the design of E.L.M. Clearly, the majority of the budget should be directed at supporting delivery but monitoring and evaluation and, importantly, feeding back to farmers should be viewed as part of delivery.

3.7 Timescales

There are a number of issues around timescales to consider. In particular, the research revealed the importance of allowing sufficient lead-in time to secure farmer engagement in landscape- scale initiatives. This includes time to form groups, sign agreements and agree on an approach. One facilitator suggested that this phase of work typically requires 12-18 months. It was also suggested that longer term agreements help capitalise on the enthusiasm and experience that build up as a group develops. Shorter 'stop-start' funding cycles can be detrimental to this and also risk losing skilled, experienced and trusted facilitators.

Another issue around timescales is around the long-term nature of environmental change and thus the timeframes involved in agri-environment schemes and collaborative or coordinated initiatives. It was generally recognised by respondents that habitats take a long time to change and that different habitats and environmental issues will be associated with different response times. There is evidence from the interviews that some farmers would therefore be willing to enter into longer term agreements, and participate in longer-term landscape-scale initiatives, where circumstances require it (e.g. woodland establishment and management, moorland restoration, habitat creation) but that farmers would also appreciate flexibility. The issue of appropriate and acceptable agreement length requires further investigation but there is an appetite for longer term agreements. Alternatively, or additionally, providing assurance that there will be opportunity for agreements (both group and individual) to be renewed might help provide farmers with a sense of longevity, facilitating continuity in management and avoiding a loss of momentum.

3.8 Cost-effectiveness

Cost-effectiveness, for both funder and farmer, can depend on the initiative type and processes involved for application etc. The importance of reducing time spent on the application process was noted, with some respondents criticising CSFF as time-consuming and requiring too much paperwork. That said, one view from

a facilitator in a non-CSFF farmer group was that the burden of work largely falls to the facilitator, not to the farmer, especially where farmers delegate to agents or use contractors. A number of respondents argued that delivery at scale was cost effective (particularly in the context of limited budgets) as one-to-many advice is cheaper than one-to-one approaches. Farmers may also be able to achieve cost-savings from working in a group through, for example, machinery sharing or group purchases.

Landscape-scale initiatives also have the potential to realise cost-efficiencies through economies of scale, particularly in the case of large-scale coordinated initiatives that facilitate management (particularly capital works) across a large area and multiple farm boundaries. Similarly, initiatives involving partnerships between various stakeholder organisations can help to both leverage private sector funds and create cost-efficiencies through aligning and integrating different stakeholder objectives and activities.

Stakeholders involved with auctions tended to agree that, both as a mechanism and in the way the management is monitored, they are cost effective, particularly when compared to other AES. One gave the example of cover crops being paid for at 50% of the rate that is paid under Countryside Stewardship (CS). Another auction-based stakeholder pointed to cost savings beyond the actual auction system, as there is only one farm advisor doing the work so the staff advisory budget was relatively small compared to some schemes. Furthermore, because the auction invite goes out to all people in the catchment it is effective at raising awareness and reaching a large number of people.

4. Outcomes associated with environmental management at large spatial scales

As well as exploring the key determinants affecting the success of coordinated/collaborative, the research also sought to identify the extent and nature of i) environmental; ii) personal and social; and iii) economic outcomes associated with the case study initiatives, and these are discussed below. We also discuss opportunities for public engagement arising from landscape-scale initiatives, as this was something which emerged as a valuable benefit arising from some of the case studies, and which was strongly supported by many respondents across the initiatives.

4.1 Environmental outcomes

Environmental gains were recognised but respondents found them hard to quantify when there were no clear targets or baseline data. Most respondents agreed that progress was being made but felt that often there is no one big achievement or project outcome. Rather, there is a sense of gradual improvement, both in terms of environmental benefits and understanding. Specific environmental outcomes mentioned by interviewees included: improved habitat connectivity; water quality improvements and flood risk reduction; and soil quality improvements.

A key issue is the extent to which such outcomes are above and beyond what would have occurred in the absence of collaborative or coordinated initiatives. Identifying additionality is always challenging, not least because of the difficulties in establishing the counterfactual. Although respondents often found it difficult to pinpoint or quantify the extent of additionality, in general most believed that their initiative had been effective at realising benefits for the environment that would not have occurred through uncoordinated, individual farm-level efforts, and this was true both for those who had clear environmental interests (and thus who might be expected to believe this by virtue of their continued involvement in the initiative) and those who were perhaps more financially motivated. The principle of collaboration was thus broadly supported, although some respondents argued that joint working (i.e. collaboration) is not always necessary and that coordinated approaches can be just as effective in some instances, including where farmers are reluctant to work together. Our analysis of coordinated initiatives would support this argument.

Respondents believed that landscape-scale approaches to environmental management can have a valuable impact on environmental outcomes in a variety of ways. Primarily, environmental land management was believed to have a greater effect if carried out at scale, providing connectivity between farms and helping reassure farmers that their actions will have impact and not be jeopardised by the actions of their neighbour. Some facilitators contended that some of the value also arises from creating opportunities to take an integrated and holistic approach to the landscape that delivers multiple objectives, beyond what may have otherwise been an isolated intervention.

Our findings suggest that landscape-scale approaches also have the potential to be effective at increasing engagement in AES and galvanising action. In the case of initiatives involving extensive collaboration between farmers (i.e. CSFF and Non-CSFF farmer groups), some of this impact is associated with the social aspects of groups wherein farmers can improve the quality of their management through social learning and work to draw in non-participating peers. However, the initiatives that relied on facilitated coordination rather than collaboration *per se* (i.e. the auctions, large-scale coordinated and community-led case studies) were also able to identify environmental additionality from their work and, importantly, these case studies involved some farmers who were more cautious about working with other farmers than some of the other respondents. Coordinated approaches also appeared to be particularly effective at engaging land managers who were not necessarily already involved in an agri-environment scheme (or who perhaps were only carrying out entry-level options), and thus at initiating environmental action that was unlikely to otherwise take place. Collaborative groups can also serve this function (primarily through the influence of peers, as noted above), but arguably to a lesser extent in most cases. This might usefully be summarised as collaborative initiatives

providing additionality in the form of depth or quality of engagement, and coordinated initiatives in the form of breadth of engagement (i.e. numbers of participants, or coverage of a particular target area). This is, however, a generalisation that will not always apply, as engagement will depend on a number of determinants, as discussed in the previous section.

The general lack of monitoring data and the different environmental objectives of different case study initiatives means that we are unable to say anything more definitive about the level of environmental additionality provided by the delivery of land management at large spatial scales.

4.2 Personal and Social outcomes

Whether intended or not at the outset, a number of case study initiatives were associated with a range of beneficial personal and social outcomes. Initiatives which facilitate frequent meetings, gatherings, and networking among the same group of farmers reveal rich social outcomes perceived to be of substantial benefit to participants. For example, such groups were seen as likely to assist with issues related to social isolation, and respondents stated feeling respected, having a sense of belonging, and of being supported as a result of participating in a landscape-scale farmer group. Developing new social relationships through collaborative groups can also help build social cohesion and peer support networks within local farming communities. Crucially, the social learning fostered within collaborative initiatives also enhances farmers' environmental knowledge and understanding, ultimately improving the quality of the environmental land management they carry out. These are important outcomes which begin to address some of the wider challenges facing contemporary British agriculture.

A sustained criticism of the dominant agri-environmental model is that it encourages participants to focus on compliance in order to receive payment without necessarily addressing fundamental underlying attitudes to agriculture and environmental management. Evidence from the more cohesive farmer groups points to the potential for collaborative approaches to deliver mutual, peer-to-peer learning; improved knowledge and understanding of agri-environmental management; and the development of safe and supportive spaces to share experiences. An increase in knowledge and awareness can also cause shifts in social norms, towards farmers placing greater value on environmentally-oriented practices. For example, there was evidence in some of the farmer groups of positive competitive behaviour occurring between members regarding environmental achievements on their farms. Some group members use social media such as WhatsApp, Facebook or Twitter not only to communicate but also to demonstrate their environmental credentials, 'boasting' about biodiversity gains instead of, or as well as, good livestock or crop management.

Personal benefits of participation (in collaborative groups in particular) include enjoyment, a sense of pride and achievement (particularly where actions directly benefit the local community such as in the case of flood prevention measures), and a sense of autonomy.

4.3 Economic outcomes

Although evidence from the case studies is mixed, environmental initiatives can produce a range of economic benefits operating at both the farm and local economy scale. For instance, the economic benefits attained through land managers and initiatives purchasing materials and using local services and contractors can be significant in large-scale coordinated initiatives. In one example this was substantial, with the facilitator reporting that the project had directly spent £40 million on commissioning conservation work from local contractors. In some cases farmers can also financially benefit from doing contracting and agricultural construction work associated with landscape-scale management themselves.

Wider benefits to society (which can have economic benefits/savings at the societal level) were also mentioned with respect to improved resource management. Benefits from reducing the water flow (and

therefore flood-risk) for the local community, and from improving water quality were highlighted by respondents, with positive implications for water utilities companies flagged. Carbon-savings from the reduction of fires on peatlands (both from reducing managed burning and mitigating fire risks) were also noted.

Impacts of initiatives and their activities at the farm level include positive productivity benefits and improved management practices, demonstrating win-wins for both the business and environment. For example, some land managers in auction initiatives identified improvements (albeit minor) in yield with the use of cover crops, as well as reductions in external inputs (fertilisers) due to nutrients being captured by crops and in the soil. In a large-scale coordinated initiative, land restoration through topping, liming, and heavy cattle grazing were noted as enabling farmers to graze more livestock than before. In another auction initiative where capital works were available, a new slurry lagoon had positive benefits as land managers reported utilising the slurry better, spreading at the right time, using less artificial fertiliser and growing better crops and more grass.

4.4 Public benefits from community engagement activities

The final set of outcomes discussed here are associated with public engagement. Although six initiatives (including at least one of each initiative type) appeared to have done little, if anything, in this regard, there was strong consensus among respondents that public engagement was important. Public engagement events and activities included:

- Presentations to parish councils and other local groups;
- Articles in parish newsletters, social media posts (Facebook, Twitter) and websites;
- Farm walks, school visits and stands at Open Farm Sundays;
- Involving community volunteers in land management activities (e.g. tree planting)

Respondents with experience of public engagement were unanimously positive about the benefits and outcomes arising from it. Community engagement activities were commonly seen as a means to address the disconnect between the public and farmers and to improve public understanding about farming's positive role in managing the environment. Engaging with members of the community was found to help instil a sense of pride among participating farmers, which can boost motivation around environmental land management. Collaborative and coordinated initiatives working at a landscape scale are in a strong position to facilitate greater public engagement with farming and demonstrate environmental successes, as members are able to pool resources and assist each other with communications (often with the support of partner organisations), drawing on the different skills, strengths and interests of individuals and widening potential opportunities for farmer participation. There is, however, a delicate balance to be struck in terms of building relationships between farmers and communities and respecting the farmer's position as land occupier/manager, particularly in the context of some farmers feeling criticised and misunderstood by the public.

5. Summary of analysis by case study type

Here we summarise the analysis from a case study perspective, collating the thematic findings and drawing out the strengths and weaknesses of the different approaches taken within the five categories of initiatives. It is clear from the analysis that there is overlap between the coordinated/collaborative/top-down/bottom-up 'types' and that these can change over time, for example, shifting from being coordinated by an organisation to being farmer-led (or vice versa). They may also utilise different forms of funding and governance structures as they develop over time.

5.1 Large-scale coordinated initiatives

Large-scale coordinated approaches were perceived to be mostly orientated towards an organisation-led leadership style. Little or no direct collaboration is currently required between land managers within the initiatives we studied, although there are plans within one of the case studies to form a farmer-led project within the initiative (currently on hold due to Covid-19). In another case study the work is carried out on individual holdings on a contract basis by the partnership, and the land manager receives payment through their individual HLS agreement (which the work is written into).

Coordination was reported to be important in bringing together and organising the activities of group members and other stakeholders. It was seen as an important factor in effective planning, objective setting, securing resources, and providing expertise, skills and a wider perspective, particularly to give support and direction to farmer-led groups. However, 'too much' coordination and being too 'top down' can bring tensions within the group and potentially weaken some of the other processes identified as being important, such as developing member engagement, commitment and a sense of ownership.

Key strengths	Key weaknesses
Effective at delivering a single type of management across a large area.	Lack of social/group benefits in cases where farmers act independently from each other.
Cost-effective for stakeholders, as partnerships can achieve funding synergies to meet multiple and overlapping objectives.	Farmer engagement potentially 'shallower', and therefore less likely to shift attitudes, if (as in one of our case studies) there is no farmer involvement in objective setting and planning.
Potentially more opportunities for resourcing monitoring and evaluation through stakeholder partners.	Being too 'top down' can bring tensions within the group and potentially weaken engagement, commitment and a sense of ownership.
Important in effective planning, objective setting, securing resources, and providing expertise, skills and wider perspective particularly to give support and direction to farmer-led groups.	
Reduces paperwork for farmers as staff can do the office work.	

5.2 Auction-based initiatives

Auctions are organisation-led and do not require any collaboration between land managers, so social interaction between members was minimal (beyond what was occurring in the area anyway), although one case study did organise some social events (e.g. pub nights). In all cases the auction was complemented by dissemination events such as workshops and training. Although the premise of reverse auctions is competition, stakeholders argue that they can be adapted and evolve to reduce the competitive element (for example in one case uniform pricing was used after farmer feedback) and even nurture a sense of a shared objectives amongst farmers. Feedback from farmers in one case study led an effective uniform price auction being delivered. One platform is developing a collaborative approach in another initiative by working with cooperatives rather than individuals.

The role of the project officer who manages the auction process is important, particularly where the auction mechanism is evolving and requires user feedback. The local adviser plays a vital role in liaising with the project officer and supporting farmer bidding and engagement. Their local knowledge and networks with farmers in the catchment are an essential part of the process.

When accompanied by monitoring and feedback, auctions can provide farmers with evidence of effectiveness and potentially can shift mind-sets and allow learning. Farmers and project officers (stakeholders) are keen advocates for them; they are effective at regional scales but may not scale up, although equally need critical mass to work.

These auctions were described as very cost effective compared to Countryside Stewardship. The bidder learning behaviour associated with multiple auction rounds (described in the literature) was not observed, and rarely did farmers discuss or share their bids. They also have a wide reach due to the platform accessibility for all, and attract those land managers who would not apply for AES due to bureaucracy and time commitment. Having a clear metric (e.g. nitrate) makes measurement and feedback to farmers easier.

Key strengths	Key weaknesses
Cost-efficient way of delivering improved management and capital works.	Lack of social/group benefits as farmers act independently from each other.
Attracts participants who do not join CS (e.g. larger, commercial) because of short term commitment and ease of application.	May not be suitable for more complex or ongoing management.
App-based systems of verifying management changes on farm are popular with farmers.	Penalises younger, less well established or struggling farmers who are unable to place competitive bids for capital works.
Can reach all farmers in a catchment.	Some participants disliked the time spent on the computer checking bids etc.
Process can be modified with feedback from users.	May be more suited to catchment scale. Difficulties envisaged if it was scaled up.

When accompanied by monitoring and feedback, auctions can provide farmers with evidence of effectiveness and potentially shift mind-sets.

5.3 Community-led initiatives

Neither of these case studies requires land managers to collaborate with each other, with most acting independently from each other. Rather, activities are coordinated by the initiative and often carried out by a contractor. While land managers sometimes supply labour and machinery, they are generally not involved in the technical aspects of the work.

The community-led approach is able to draw upon relevant skills and experience within the community, but there may be gaps in the collective skill-set required to manage and deliver the project or initiative. Community groups can bring a fresh approach and a new perspective to problem solving which can help to cut through administrative 'red-tape'. Leadership by known, local individuals can help gain the trust of farmers, and the involvement of community members who have been affected by issues such as flooding can also bring an emotive element to discussions and boost motivation. However, community groups may have less well-developed networks with governmental bodies that control funding and administer budgets.

Key strengths	Key weaknesses
Community element helps gain trust of farmers and can increase motivation.	Lack of social/group benefits, as farmers act independently from each other.
Led by committed local individuals who are effective at driving activity for little or no cost.	Relies on commitment of local individuals so may be less likely to occur where there is not a clear objective/threat (e.g. flood risk).
Can bring a new perspective to problem solving and cut through administrative 'red tape'.	Existing networks with Government/official bodies can be limited, so less likely to be aware of opportunities for funding and administrative support
Potential to draw upon skills and expertise from the community.	May have gaps in the skill set required to manage and deliver projects and initiatives.

5.4 CSFF farmer groups

The organisational model of these groups varies, with some identifying as 'farmer-led' while others acknowledge a more 'organisation-led' or 'facilitator-led' approach to the running of the group. There is a varying level of interaction between farmers in each group, and at least some degree of collaboration among some groups. Overall, facilitators reported engagement to be on a scale of somewhat engaged to very engaged. In one group a small non-CSFF farmer cluster had emerged with some of the same farmers, partly in response to the large size of the CSFF, and this allowed these farmers to compare experiences.

CSFF groups range in terms of the level of environmental delivery on the ground. Of those who participate in an AES, advice is frequently sought from facilitators but due to the differing scheme timetables of member farmers, not all have been able to choose options in alignment with their neighbours. And because AES

participation is not obligatory, option uptake cannot be relied upon for environmental delivery at a group level. Opinions range regarding whether fulfilling AES commitments is sufficient in trying to meet objectives, or whether there exists a need for a group to achieve more, and this is likely to tie in with aspects of engagement and motivation discussed earlier. Some CSFF respondents perceive themselves as 'more of a training group' than a delivery group, where uptake of suggestions such as sowing herbal leys or improving slurry management is at the discretion of participating land managers. Very few members could describe the specific objectives of their group, although the majority would refer to several priority species amid discussions.

Currently no data exists comparing environmental outcomes of CSFF groups compared to AES and non-AES-related interventions. However, respondents appear to value their groups highly for multiple reasons and are keen to see their continuation, with many believing that it allows them to be 'well placed' for any future schemes.

Key strengths	Key weaknesses
High level of social/group benefits, particularly in terms of social learning, knowledge exchange and assisting with potential issues of social isolation.	Capping of group size is quite high, and larger groups might result in a significant number of land managers who are not particularly engaged. Risks facilitator prioritising numbers of recruits over actual delivery.
Facilitation highly valued by farmers.	Sense in one group that CSFF is over-prescribed.
By operating closely with other farmers, attitudinal and behavioural changes towards wildlife are encouraged through friendly competition.	General lack of clarity appears to exist over groups' objectives and priorities.
Networks and connections of facilitators frequently offer opportunities for groups to seek funding externally.	Lack of ability to provide one-to-one advice might prevent effective management of AES option uptake at a landscape-scale.
Potential to act as a portal through which farmers can access information, and farmers can be accessed easily by the facilitator or other relevant organisations.	Lack of flexibility in AES agreements has meant many land managers have had to wait to potentially 'join up' agreements while existing agreements have run their course.

5.5 Non-CSFF farmer groups

There is significant interaction, and at least some degree of collaboration, between farmers in each of these groups. Like the CSFF groups, the four initiatives in this category have had a high degree of farmer involvement in the establishment, planning and governance of the group's activities.

These groups have all experienced strong engagement from farmers. The small group size with fewer than 30 farming members in each initiative may account for the strong commitment and 'buy-in' reported. However, two groups reported a loss of momentum in recent years. In one case the facilitator moved on (as was always intended once the group was up and running) but the land managers have struggled to maintain momentum without someone coordinating and driving the group. In another group, now 10 years old, respondents reported having had difficulties in maintaining momentum due to changes in Natural England personnel (who

were key to supporting delivery within the initiative) and waning commitment from other stakeholder organisations (again partly due to changes in personnel within these organisations).

Where there was strong engagement, there were significant social outcomes, including social learning and improved levels of environmental knowledge and understanding among members. The groups generally enhanced members' environmental management through a mixture of training opportunities, peer-to-peer learning (including visiting each other's farms), discussion groups/expert speakers and facilitating access to grant funding for specific environmental schemes (e.g. woodland grants).

Key strengths	Key weaknesses
Strong levels of engagement and commitment from farming members due to 'bottom-up' approach and involvement in objective-setting and planning.	Securing ongoing funding and commitment of stakeholder organisations over time can be a challenge.
In the case of clusters, very high engagement (one group reports 90-95% turnout at most events) may be stimulated by the fact that members pay to participate.	Reliance on key individuals who can commit time to the group, with related difficulties in transferring management responsibilities and legacy planning.
High level of social/group benefits, particularly in terms of social learning, knowledge exchange and assisting with potential issues of social isolation.	A lower level of coordination by a facilitator risks lower levels of delivery or longer lead times.
Greater flexibility than other types of initiatives	Potential for erosion of momentum with time.
Interest and willingness among members to get involved with environmental monitoring, with benefits for increased farmer skills and understanding, as well as recognition of farmer knowledge.	Close group working may deter some farmers who are either wary of collaboration or who do not get on with other members in the group.
There is often enthusiasm for undertaking public engagement activities, with benefits for community relationships and farmer pride and satisfaction.	Changes in supporting personnel (either facilitators or advisors working with the group) can disrupt relationships and momentum.

6. Wider considerations for E.L.M collaborative scheme design

In this section, we explore some of the wider considerations for E.L.M that arose from discussions with respondents, based on their past and current experiences of AES and landscape-scale initiatives. In particular, we explore: potential opportunities for using existing groups and networks as a basis for environmental collaboration; respondent opinions about three draft collaborative scenarios that were developed by Defra for this research and presented to respondents for their consideration in advance of their interview; and respondents views on whether they are likely to participate in E.L.M.

6.1 Using existing groups and networks as a basis for environmental collaboration

Stakeholder respondents in particular were asked for their views on whether or not they felt that existing groups and networks – both with an environmental or other focus – could be used as a basis from which to build farmer collaboration around environmental land management (especially in E.L.M). Although there were some caveats about needing to take care in how this would be approached, there was general consensus among the stakeholders that it would be a positive thing to do. Some of the types of groups/networks mentioned by respondents as potentially providing a basis for building engagement in environmental activities included dairy groups, commons associations, procurement hubs and buying groups.

Existing groups and networks were seen as potentially useful for efficiently communicating with a large number of farmers and, indeed, some facilitators reported having done this in the past when establishing new groups or projects in a particular area. Some groups may also be in a position to directly apply for collaborative opportunities offered under E.L.M, whether or not they currently have an environmental focus. There was some suggestion that non-environmental farmer groups are already starting to consider environmental issues due to demands being placed on them by supply chains. Spatially-dispersed networks may present similar opportunities for communicating to farmers and generating collective action, particularly among those farmers who do not share the same aims or values as their neighbours.

Our findings suggest that it makes sense to use existing farmer groups and networks as a medium for communicating E.L.M related messages to farmers, particularly around environmental management at large spatial scales. The framing of these messages will, however, need to be tailored according to the particular network that is being contacted: Groups without an environmental focus such as buying groups, for example, may need to be engaged using very different language to existing environmental clusters (for instance). Maximising and emphasising flexibility in schemes wherever possible is also likely to be important in order to enable farmers with different types of focus to participate in a way that suits and benefits their particular farming system and approach.

6.2 Opinions on hypothetical collaborative group scenarios

Hypothetical policy scenarios were designed by Defra colleagues specifically for the purposes of this research in order to stimulate feedback on different ways of supporting collaborative working. The scenarios did not represent Defra policy and this was made clear to participants. The scenarios are listed in Appendix A.

Of the three collaborative group scenarios that were presented to respondents for their opinions, none were identified as a perfect approach. Scenario B (E.L.M Collaboration Fund – bespoke funding) was generally viewed more favourably than scenario A (E.L.M Facilitation Fund – simple funding (similar to current CSFF)) and C (Bonus payments to individual land managers), but even this scenario was considered to have some weaknesses. Often interviewees preferred elements of a particular scenario, rather the overall scenario. Some respondents were unable to offer a preference, either because they were unable to choose, or did not like any of the scenarios presented. Respondents' opinions on the strengths and weaknesses of each scenario are summarised below, but please refer to the main report for full details.

Scenario A (E.L.M Facilitation Fund – simple funding (similar to current CSFF))

This scenario was favoured mostly by those respondents who were not currently in a CSFF or farmer cluster.

Key strengths:

• Provision of funding for a facilitator.

Key weaknesses:

- Lack of funding to support E.L.M applications (which was considered important for achieving timely outcomes).
- Requires longer timescale. Several respondents noted it can take two years sometimes to just get groups established.

Scenario B (E.L.M Collaboration Fund – bespoke funding)

Scenario B was particularly favoured by those respondents that were already part of a CSFF or farm cluster.

Key strengths:

- Seen as the next step in obtaining bespoke funding for outcomes that respondents wished to achieve as a group.
- Projects can be tailored to the local area.

Key weaknesses:

- Potential unwillingness of some farmers to work together to reach consensus on a plan.
- Shared group liability raised significant concerns (though it may work in some specific instances).
 Respondents feared sharing the risk of penalty if one member did not fulfil their obligations. Shared liability can also be problematic due to the legal complexities of some farm holdings.

Scenario C (Bonus payments to individual land managers)

This scenario was considered by some respondents as suitable for those groups that were already established, especially if the payment was generous and the level of bureaucracy involved in evidencing collaboration was minimal.

Key strengths:

Offers an opportunity to act on an individual basis, giving the land managers some agency over their
actions and an ability to tailor actions to the individual farm.

Key weaknesses:

- Lack of funded facilitation. Funded facilitation was seen as particularly for new groups in order to bring land managers together and achieve outcomes.
- The requirement for the land manager to pay the upfront costs for preparing the collaborative project was disliked, as it was seen to be too risky, and some farmers would be sceptical about being reimbursed in a timely manner.

Mixing scenarios

Ultimately, a number of respondents suggested combining elements of the different scenarios. A popular suggestion was to combine either scenarios A or B with scenario C. For example, using the facilitation fund model to offer training and specialist advice, and then offering a bonus payment to incentivise working together. Alternatively, provide funding for a facilitator to help plan a bespoke collaborative project but with a bonus payment for collaborative working.

6.3 Participation in E.L.M

When asked, the majority of land managers interviewed stated that they were likely to participate in E.L.M in the future. The financial payments received from the E.L.M programme was a strong motivation for participating and it was generally recognised that it was likely to become an important source of income as the BPS is phased out. Farmers were not solely motivated by financial considerations and a number planned to enter E.L.MS to continue the environmental work they were undertaking in current AES. Environmental management was considered an important part of their farming system which they wished to continue. There were, however, concerns about the bureaucracy of the scheme and some are adopting a 'wait and see' approach to determine if the scheme is too burdensome and complicated. Those who said they were unlikely or unsure that they would participate in E.L.M felt that they did not have enough information about the scheme to make a judgement.

Although the research interviews focused collaborative or coordinated approaches to environmental land management, inevitably respondents also raised points relating specifically to individual AES agreements (past, present and future) throughout the interviews. Individual agreements were also highly relevant to delivery within some case studies, as these were used as a mechanism for financially incentivising work contributing to the landscape-scale objectives of the initiative. The full report thus includes a section discussing some of the wider lessons for E.L.M that can be learnt from past and current experiences of AES.

7. Conclusions

Based on in-depth interviews with land managers, facilitators, coordinators and a range of other stakeholders, this research has revealed rich insights into the operation and effectiveness of a range of different approaches to delivering environmental management at scale i.e. beyond the individual holding approach that characterised legacy AES.

From our analysis it is clear that there is no single 'blueprint' for delivery at larger spatial scales. Different approaches suit different environmental issues and local circumstances and attract land managers with different dispositions. For example, those less keen on collaboration might be happy with a coordinated or auction approach. Therefore E.L.M needs to offer the flexibility for different approaches to be supported according to local requirements.

It is clear from this research that farmer collaboration is not strictly necessary to deliver environmental outcomes at larger spatial scales. Coordinated and auction-based approaches deliver environmental management at scale with little or no farmer-to-farmer interaction, and can therefore be more appealing than collaborative approaches for some land managers. Collaborative approaches however, are associated with a range of benefits and outcomes over and above the delivery of specific environmental management practices. These include social and personal benefits including reducing social isolation, providing safe and supportive spaces for discussing agri-environmental management and lots of mutual learning, gaining of knowledge and capacity building through groups, speakers/discussions, visits, and advice. Both collaborative and coordinated approaches could, therefore, have a role to play in achieving environmental benefits at large spatial scales, with each potentially serving slightly different purposes. For instance, collaborative farmer groups (either led by farmers themselves or third parties) may act to harness interested farmers' enthusiasm and enhance the depth and quality of their environmental management, whereas coordinated approaches (whether led by arms-length bodies, private stakeholders, partnerships or communities) may be effective at securing broad participation from land managers, ensuring that specific actions are taken across a target area.

There is a lot of evidence from our research that effective facilitation is essential for successful collaboration. The attributes of an effective facilitator were seen to be trust, knowledge, excellent organisational skills and passion. If collaborative approaches are to become more common, there will be a need for more effective facilitators, employed at the appropriate time (i.e. pre-application), and for facilitators to be able to learn from each other.

It is also clear that environmental monitoring should not just be seen as an expensive add-on but as an essential part of effective delivery. This should include feedback to farmers to create positive feedback loops, reinforcing positive environmental behaviours and learning in addition to identifying where additional steps need to be taken. The emphasis on public money for public goods means that farmers are increasingly aware of the need to be seen to be delivering public goods and this requires evidence. Clearly this raises challenges in the context of limited budget and a desire to maximise spend on delivery.

Time and timescale were frequent topics of discussion in our interviews and pose challenges both to the land managers delivering environmental management on the ground and those charged with designing, funding and delivering policy, as timescales for achieving environmental gain may be out of sync with usual policy and funding cycles. In this context it is important to recognise the passage of time required for beneficial environmental change. The amount of time will vary according to the specific environmental attribute being addressed and the starting point (i.e. how much degradation has occurred) but a timescale of decades may be more appropriate than five year agreements. In addition, a true commitment to collaborative group work requires sufficient lead-in time. This might be a challenge in terms of public spending, as it may appear that nothing much is happening during the group establishment and building stage. It is also important to build in flexible time schedules to allow for the adaptation of farming systems (which in the livestock sector in

particular is not quick) and the delivery of management. Our final reflection on the theme of time is the importance of timely payments to farmers and land managers for the vital environmental services they are providing. Past issues in this area have eroded trust in the system and it is important that this trust is rebuilt in order to secure land managers' future participation in agri-environment schemes and related initiatives.

Agri-environmental policy has come a long way since its inception in the 1980s. This is perhaps most noticeable in terms of the changing attitudes of many farmers who, based on the evidence from this research, are increasingly willing to deliver a wide range of public goods and are frequently willing to collaborate to do so. Of course, we have been speaking to those who are already interested in environmental management so further work is required to test out the appetite for collaborative and coordinated approaches in the wider farming population. There is evidence (from our research) that non-environmental farmer groups may be interested in environmental delivery and this is an area that deserves further attention.

Finally, farmers often learn best from other farmers. They have an inherent understanding of each other and speak the same language. It is important therefore to consider how the experiences of farmers in collaborative and coordinated initiatives can be used to encourage farmers to think about taking part in these forms of agrienvironmental management.

Appendix A: Draft collaborative group scenarios

NB: Respondents were presented with these draft scenarios and asked to reflect on them. These scenarios were emphasised as 'not government policy' and only possible approaches, none of which may be included in any future scheme.

ENVIRONMENTAL LAND MANAGEMENT SCHEME

Possible approaches to encouraging landscape scale management under ELM

Assumptions common to scenarios A & B (using groups):

- All land managers and key parties are eligible to join collaborative groups, regardless of whether in agri-env agreement or not (= existing CSFF)
- Groups will be funded for a minimum of 3 years (= existing CSFF)
- Basic funding rates will be dependent on group size (= existing CSFF)
- Facilitators can be from ALB, commercial or third sector, as agreed by each group

Scenario A: ELM Facilitation Fund – simple funding (similar to current CSFF)

Self-organising groups or groups led by a commercial or third sector party can apply for a 3-5 year agreement to deliver ELM spatial priorities. Funding to support facilitation and training costs, as well as specialist advice on implementation plans. Will not include support for advice to apply to ELM. Facilitation funding is not dependent on delivering outcomes.

Scenario B: ELM Collaboration Fund – bespoke funding

As above but with two funding steps. The first payment would fund initial 12 months of facilitation and planning costs to set group objectives. The group would then develop costings for delivering their objectives and apply for funds to support advice and training (collaboration funding not dependent on outcomes). The group could also apply for funds for delivery of actions across multiple ownership boundaries *instead* of applying through individual agreements to deliver these actions, but this would require groups to enter a group agreement with shared liability for delivery.

Scenario C: Bonus payments to individual land managers

No direct funding for facilitation/collaboration; land managers organise themselves as appropriate for their area and bear upfront costs. Individuals could submit a claim for a financial bonus (in addition to their normal ELM payments) if they demonstrate that they have worked in a group to deliver ELM priorities in their area. Qualifying collaborative activities might include training events, one-to-many advice, the creation of a landscape scale management plan or coordinated delivery of actions.