SUSTAINABLE INTENSIFICATION RESEARCH PLATFORM

**SIP Project 2: Opportunities and Risks for Farming and the Environment at Landscape Scales (LM0302)**

# Farmer Discussion Groups – Key Findings

# (WP 2.3A Task 4)

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## Background

The Sustainable Intensification Research Platform (SIP) is a multi-partner research programme comprising farmers, industry experts, academia, environmental organisations, policymakers and other stakeholders. The platform has explored the opportunities and risks of Sustainable Intensification (SI) from a range of perspectives and scales across England and Wales, through three linked and transdisciplinary research projects:

SIP Project 1 Integrated Farm Management for improved economic, environmental and social performance

SIP Project 2 Opportunities and risks for farming and the environment at landscape scales

SIP Project 3 A scoping study on the influence of external drivers and actors on the sustainability and productivity of English and Welsh farming

Projects 1 and 2 have investigated ways to increase farm productivity while reducing environmental impacts and enhancing the ecosystem services that agricultural land provides to society.

Project 2 partners are: University of Exeter (lead), ADAS, Bangor University, Biomathematics and Statistics Scotland (BioSS), University of Bristol, University of Cambridge, Centre for Ecology and Hydrology (CEH), Eden Rivers Trust, Fera, Game and Wildlife Conservation Trust (GWCT), James Hutton Institute, University of Kent, Lancaster University, University of Leeds, Linking Environment And Farming (LEAF), Newcastle University, NIAB, University of Nottingham, Rothamsted Research, Westcountry Rivers Trust

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The views expressed in this report are those of the authors and are not necessarily shared by Defra and the Welsh Government



## Data

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## Executive Summary

- The purpose of the SIP2 Farmer Discussion Groups was to augment findings of SIP2 research conducted though literature review and baseline survey and to further contextualise social science priorities for subsequent SIP2 research. Participants were recruited from the baseline survey through written invitation or through wider contacts known to farmer leads in each SIP area. Discussion groups were convened within six of the seven SIP2 case study areas.

## Farmer interpretations of the Sustainable Intensification agenda

- Although the discussion groups revealed little *a priori* awareness of the term Sustainable Intensification (SI), participants spoke back to the idea quickly. Some viewed SI as an effort by policy makers to create a 'buzzword' for activities that were already well established in the aspirations of farming. In particular SI was often interpreted as a broad policy aspiration for further advancing environmentally sustainable farming. Others regarded SI as the latest incarnation of a constantly changing policy scene, where priorities and expectations in farming seemed to contradict themselves over time.
- Aligning the word 'sustainable' with 'intensification' was considered contradictory by some participants. It was suggested that policy makers needed to deploy the word 'intensification' with great care as a rallying point, not least because the term had negative and highly provocative associations, and was perhaps out of step with the values of society at large.
- Many participants registered SI with wider global food security discourse. They often interpreted the SI agenda in terms of the need for greater national self-sufficiency in food supplies. However, many questioned whether the food security dimension of SI would be confounded by market realities and lead to a poor economic deal for farmers.
- Some concern was expressed that SI was being wrongly constructed as an issue to be delivered by farmers alone, when instead what drove change in farming, and thus the success or otherwise of farming towards SI, was dictated elsewhere. SI was externalized as primarily an issue of how markets function and states incentivized

action, and the way in which unpredictable events - such as weather and disease – dictated patterns of land production in dramatic and significant ways.

- Some participants questioned how a vast issue such as global food security mapped on to the realities of small scale farming. It was felt that if SI was to be picked up as idea within the farming community, there was need to ensure SI was framed in terms of the need of local enterprises and circumstances.
- Many participants were keen to view farming and food production as just one element of the challenge of securing sufficient food supplies within the food system. Recourse to issues of food wastage and distribution at a range of spatial scales was a common argument deployed.
- Promoting efficiencies in production was a key way in which participants linked environmental outcomes to economic considerations, suggesting strong commonalities between farmer world views and the idea of Integrated Farm Management (IFM).
- Some participants expressed concern that, if the intention of SI was to amplify environmental benefits from farming, this may translate into farmers being asked to take on additional burdens and ultimately bear new costs. They cautioned that inclination to invest resources in environmental goals had to be set against the economically marginal nature of farming.
- There was some indication that innovation towards realizing the financial value of non-market environmental benefits from farming, for instance, by way of Payments for Ecosystem Services (PES) schemes, is now influencing some farmers' economic mindsets. While many implicitly accepted much of the PES logic in principle, it was also notable that some expressed concern about whether these schemes ultimately translated into real or adequate financial rewards. PES might be a further example of farmers finding themselves at the wrong end of a poor economic deal.
- There was some evidence of farmers linking SI agendas to wider land sparing agendas. Some point to their own practices of land improvement and set aside, others to the general need for focusing production in areas where benefits would be maximised, and still others to the potential connection between the Defra SI agenda and debates about the freeing up of land for the purposes of re-wilding.

- Appeals to science and technology loomed large in a number of discussions of SI. For example, there was some tendency to construct SI as a contrived scientific agenda, driven by environmental interests of only marginal concern to the concerns of farmers. In addition, the need was expressed for scientists to work in partnership with the practicing farmer.
- A small number of participants were keen to stress that audiences for SI varied according to land tenure, citing farmers who rent land for limited time as lacking the economic security to invest in desirable practices.

## Collaborating towards Sustainable Intensification

- Participants viewed the farmer as willing and active collaborators and expressed many advantages and examples of farmers collaborating with each other within and between sectors, and across localities. These advantages were expressed primarily in terms of economic benefit for individual enterprises.
- When offering these examples, it was not uncommon for participants to distinguish between the general willingness of farmers to collaborate, and the need for greater partnership working, as a whole, between farmers and wider agencies, academics and government.
- Participants typically emphasised the need for informal and 'bottom-up' approaches, both as a model of good collaborative practice and a statement of how much collaboration occurs. Ideas of trust were an important dimension of the success of any arrangements. Participants emphasised the virtues of 'give and take' forms of collaboration epitomised, for instance, by arrangements that avoid money changing hands.
- In general, many participants were keen to explain collaboration as a process where farmers routinely looked to each other for insight. Such informal and localised networks of knowledge exchange could be accessed and built quite quickly, but extended increasingly to the sharing of information across social media.
- Collaboration may be limited by the independent mindset of farmers and the view that farmers had of themselves as being in competition with each other.
- Participants almost uniformly saw the value of farmers being involved in discussion groups to share ideas and good practice. The discussion revealed that there now

exist many opportunities to engage in these fora, from discussion of generalised farming topics to ones that opposed farm performance to direct scrutiny. The attributes of a good discussion group were its organised informality, practical setting and involvement of people with similar outlooks and motivations.

- Many farmers described machinery sharing as a helpful collaborative activity, but often hampered by a lack of financial capital to invest, varying duties of care toward equipment, a lack of consensus over what machinery to buy, and uneven machinery use.
- Participation in Agri-Environmental Schemes (AES) and other environmental initiatives, such as the Catchment Sensitive Farming Project (CSF) featured prominently in discussions of collaboration. Farmers emphasised the need for collaboration in these contexts to be dictated by bottom-up processes, with the need for strong independent co-ordination. There was concern about the congested nature of co-ordination in some locations and that opportunities were fragmented over a range of funds that farmers sometimes struggled to make sense of.

## 1. Objectives of the SIP2 Farmer Discussion Groups

The overriding research purpose of the SIP2 Farmer Discussion Groups (FDGs) was to augment findings of SIP2 research conducted though literature review and baseline survey, and to further contextualise social science priorities for subsequent SIP2 research.

In these FDGs we instigated a process that could provide the research Platform with: a deeper qualitative understanding of how well SI is understood as a concept and how it resonates with farming priorities and world views; further appreciation of the challenges and opportunities surrounding farmers collaborating for SI; and finally farmer views on the assumptions driving SIP research at the landscape scale.

We sought in the FDGs to foster interest and curiosity in SIP research as the basis for deepening commitments to engage in SIP activities and to further promote awareness and understanding of SIP research in general, and SIP2 research in particular, among farmers in the SIP case study areas. Our wider aspiration in conducting these events was for farmers to build a better understanding of the aims and objectives of SIP research and its policy and scientific context; learn about the early findings of the SIP research baseline survey; and indicate a willingness to participate further in SIP research.

In terms of the relationship between this work and research deliverables for the Project as a whole, the findings here specifically inform a component of Deliverable 7 of this research to report in Spring 2017 on socio-economic barriers to collaboration between farmers and mechanisms to encourage collaborative approaches. More generally, the timing of FDGs was such that they further enabled engagement to support subsequent core deliverables based on farmer engagement, namely identifying opportunities for collaboration (under Deliverable 5) and implementing and support collaborative measures between farms (under Deliverable 6).

The scope of this report is confined to the research delivery purposes of the FDGs. An overview of the evaluation of the event from a participant perspective is documented separately under the knowledge exchange component of the Platform

## 2. Methodology and recruitment

Unlike quantitative and extensive social research methodologies adopted in the SIP2 baseline survey, where the focus was on gathering, through a standardised schedule of questions, a broad and representative understanding of how individual farmers think about SI, and undertake activities consistent with SI, the purpose of the FDGs was to use a small group process to explore how farmers reasoned about these issues in a peer-group setting. In general the FDG methodology followed qualitative social science in seeking to promote open and above all, critical, farmer dialogue about innovations and work at the heart of SIP. In this, we conceived of the FDG emphasis as being something more than knowledge transfer or an exercise in seeking acceptance for preconceived ways of doing things, but rather, for farmers to explore and debate issues at the heart of the SIP perspective, whilst paying due regard for the current situation of farmers.

Participants were recruited from the baseline survey through written invitation and through wider contacts known to the facilitators and farmer engagement leads in each SIP area. Participation was not financially incentivised. Recruitment was based on existing willingness to participate (from farmer survey) as well as by the emphasising of wider SIP 'offer' as set out by the SIP Cross Project KE Working Group. Discussion groups were convened within six of the seven case study areas, although uptake was variable and in some cases disappointing (See **Table 1**).

**Table 1. SIP2 Farmer Discussion Groups**

| FDG Area | Number contacted | Numbers attending | Success rate | Facilitated by: |
|---|---|---|---|---|
| Avon | 184 | 11 | 6% | ADAS & LEAF |
| Conwy | c.60 | 13 | 22% | Bangor University & CEH |
| Eden | No data | 6 | - | ADAS |
| Taw | 244 | 9 | 4% | ADAS |

| | | | | |
|---|---|---|---|---|
| Upper Welland | No data | 8 | - | ADAS & LEAF |
| Wensum | 330 | 7 | 2% | ADAS & LEAF |

The level of uptake of these events reflected in part the stage they occurred in the Project process. The events were primarily 'information gathering' in focus, and thus to an extent relied on participation by goodwill. Variable uptake was almost certainly related to the differing methods of recruiting farmers. In Conwy, for instance, a small number of farmers – essentially known contacts – were contacted by the research team. The lead researcher knew most personally, based on longstanding research-practice interactions, and was able to explain the longer term benefits of taking part in the research and the purpose. In the remaining areas in England letters were sent out to contact lists with a follow-up phone call from a general administrator, though in some cases (Avon)) there were few telephone numbers accompanying these mailing lists, thus impeding follow up and leading to a lower response rate in comparison. In some recruitment areas (Wensum and Taw) some farmers had already been involved with the study, and there is some indication of survey fatigue. In general the experience of recruitment highlights the need, where possible to use a targeted and personal approach to recruitment with a telephone call from the researchers to a small number of farmers contextualising the purpose of the event and the benefits of taking part.

The conduct of each FDG was guided by a common process designed by the University of Kent, to include directed questioning and accompanying stimuli, and which all area facilitators for the FDGs were briefed (See **Annex A.**). The consistent approach across each of the areas was further encouraged by facilitators leading the same discussion in different areas. Groups within each case study area were convened in the Winter 2015/16 and were fully recorded and later transcribed.

## 3. Process of analysis and presentation of findings

Group discussions were transcribed in full by an independent transcription company. All transcripts were then checked for their veracity against original audio files. Sound recording was generally good, but there were a small number of instances where it was not possible to infer the full meaning of discussion. Summary records from discussion groups were provided by organisations facilitating groups in each area working directly with the raw transcripts. These transcripts and records were then supplied to the University of Kent to inform the overall report. Each group record was initially reviewed to contextualise the analysis then produced by Kent.

**Box 1: Transcript Identifiers and protocols**

***Transcript Identifier***

| | | | | | |
|---|---|---|---|---|---|
| CON | = | Conway | EDN | = | Eden |
| AVN | = | Avon | TAW | = | Taw |
| WEN | = | Wensum | WEL | = | Upper Welland |
| FDG | = | Farmer Discussion Group | | | |
| L | = | Line Number | | | |

Thus: CON/FDG1/L1008 = Conway/Farmer Discussion Group 1/Line 1008

***Within-text protocols***

| | | |
|---|---|---|
| … | = | Pause in speaking/comment trailing off |
| […] | = | Truncated participant text/deleted words |
| [xyz] | = | Author word insertion/ substitution to clarify meaning |
| MDR | = | Moderator |
| FMR | = | Farmer |

All transcripts were systematically analysed by Kent through a qualitative charting process (see **Annex B –** File supplied separately) to build a picture of dominant themes across the overall group process. This analysis was then written up and corroborated with the summary records, of which some text provided by each facilitator organisation is included. Embedded in the written narrative is an illustrative/non-exhaustive selection of salient comments by participants, designed to reinforce messages. Throughout the report we make statements to indicate the extent to which views are commonly held and sustained across the dialogue and use multiple quotes to draw out and differentiate views around salient points.

All points are evidenced by transcripts and in the text an identifier is included to link the points back to comments and reasoning in the discussion groups. This identifier includes a group location identifier, which corresponds to the case study area of discussion, and an accompanying group number to disaggregate different discussion where necessary, as well as a transcript line number. The identifiers and protocols used within text quotations are provided in the Box above.

## 4. What do farmers make of the idea of Sustainable Intensification?

In the discussion groups, farmers were presented with a stimulus narrative on SI, as written from the perspective of the Defra Chief Scientist. Entitled 'Rising to the challenge of Sustainable Intensification,' the narrative positions SI as a broad societal challenge framed around meeting global demand for food whilst minimizing environmental impacts. SI is understood as a process allowing these goals to be met by integrating academic and stakeholder expertise in the environmental, economic and social aspects of farming. (See **Annex A**).

Overall, the discussion groups revealed little *a priori* awareness of the term 'Sustainable Intensification'. On only one occasion did a participant explicitly convey hearing of the term outside of engagement with the work of the SIP platform (TAW/FDG9/L551-553). Yet, participants spoke back to the idea quickly. Some initially saw in the term an effort by policy makers to create a buzzword for activities that were already well established in the aspirations of farming, with one suggesting that famers would meet the goals of SI "in spite of, rather than because of" the term (AVN/FDG3/L678-80). Others registered SI as the latest incarnation of a constantly changing policy scene, where priorities and expectations in farming seemed to contradict themselves over in time, at least in part because decision makers do not listen enough to farmers. Together, they questioned whether the term had longevity, and reacted to it with a mixture of frustration and phlegmatism, often by drawing on analogous experiences:

> *"* Well thirteen years ago I remember sitting in this very room, this scheme is going to come and it is going to be the way of the future, it is going to be 'sustainable agriculture' …[ ]…that was thirteen years ago. …[ ]… So as I said, 'your intentions are

fantastic but I wouldn't beat myself about it because in five years' time, or even less, it will be binned and something else will be on the agenda.'"

(CON/FDG2/L 2372-7)

"If we are looking long term we have the environment schemes, and just as they start to work, we rip them up and throw them out the window and get a whole new set of rules. And there is no pattern, the same thing happens one time after another and another. If we are going to make these things work we cannot rip up all the text books in year five and start completely again."

(WEL/FDG11/L1042-8)

Still others initally viewed the term as open and vague so as to defy utlity for either researchers or farmers themselves. They suggested that the very exercise of making the idea of SI a point of discussion and interpretation revealed its inherent weakness:

"I think the phrase sustainable intensification isn't useful for the reason that what is there, fifteen of us in this room and we could all come up with our definition."

(AVN/FDG3/L658-60)

"It's a worry though if you are 18 months into a three year project and we can't get past the first sentence."

(WEN/FDG10/76-7)

"So you asked what does sustainable intensification mean to me, well the word sustainable intensification, I have always said this, it is nonsense. It is not even English. And it is just a thing and it has been quite clear this morning that we can't agree on a lot of things and I think it is quite misleading and it is just nonsense."

(WEN/FDG10/L832-5)

"It is a lot of mumbo jumbo."

(WEN/FDG10/L869-70)

### 4.1 Sustainable Intensification and environmental sustainability

As discussions unfolded, it was common for participants to specifically hone in on the word 'sustainable' to advance points and interpretations of this nascent agenda. SI was often interpreted as a broad policy aspiration for further advancing environmentally sustainable practices in farming, with farmers generally keen to assert a 'given' link between these goals and enterprise behaviour "part and parcel" of farming' (TAW/FDG9/L49); "Sustainable? We have been doing that for two thousand years." (TAW/FDG9/L555). In general, such an association clarifies why SI was initially claimed by some participants to be a feature of existing practices, and thus implying nothing essentially new. But as these environmental considerations were then elaborated specifically through recourse to the idea of 'intensification', lines of reasoning became varied. On the one hand, some farmers quickly arrived at an interpretation of their practices that appeared consistent with wider policy aspirations for SI:

> "Our product I think in the future is going to be a combination of food and it's also going to be a combination of environmental management isn't it?"
>
> (EDN/FDG12/L130-2)

> "I think there's a lot of constraints because England is quite small. We were talking about not having, you can't have huge great big dairies because of public pressure and things. Also you can't, having an arable farms we can't have huge great big plains. You can't take out...you know there's a lot of constraints. And I think you've got to think, you've also got to look at what we want the landscape to look like and the countryside to look like and the public benefits and things like that. And that in a way means that the general public do need to be prepared to pay a little bit more for food. You know, if they want to go out and walk and not suffer from depression and things like that, maybe they need to take on a bit of responsibility for our farming system the way it is. And I guess *that's what sustainable intensification is all about isn't it?"*
>
> (WEL/FDG7/L301-4, Author's emphasis)

According to one discussion, alongside the farmers' need to "make use of every corner" (CON/FDG1/L307) and "make the most of every square inch of land" (CON/FDG1/L684), SI must also be taken to mean a situation in which:

FMR1 You need to produce more consistently with lower artificial [inputs].

FMR2 Lower environmental impact.

FMR1 Reduce the environmental impact.

In contrast for others, aligning the word 'sustainable' with 'intensification' produced a self-evident tension and "makes a confused message" for farmers. This tension was sometimes expressed by way of practical example, for instance, involvement in a low input AES was cited by one as working against the aspirations to produce more ("If you've chosen a 'low input' option there and they want you …to increase … how can you increase production?" [CON/FDG1/L92-4]). In other contexts, the sentiment was more general and rhetorical:

FMR1 It's a conflict isn't it?

FMR2 It's almost a contradiction

FMR1 Yes that's what I am trying to say, yes

(WEL/FDG7/L385-387)

At least some of the implication here was that policy makers needed to deploy the word 'intensification' with great care as a rallying point, not least because the term had negative and highly provocative associations, and was perhaps out of step with the values of society at large ("Intensification to the public is a dirty word isn't it?" [TAW/FDG9/L568]). There was a need to retreat from the term 'SI' for it was (or could be taken as) a by-word for scaling up environmentally (and to a lesser extent, socially) unsustainable systems of production:

> "But at the moment the idea of sustainability and intensification I don't think are two words you can put together you know because we're certainly not sustainable at the moment and the idea of intensifying more is buying more chemicals.
>
> (AVN/FDG3/L31-5)

> "We are talking about saving the planet or are we talking about growing farms sustainably? Which is the bigger picture of that."
>
> (WEN/FDG10/L110-2)

"We [need to] split that into two words. So let's go with sustainable and leave the intensification so trying to think positive."

(TAW/FDG9/L288-90)

"I would reiterate the point that I made earlier and that is that we do need sustainable production without negative environmental impact. Those words are there but I have dropped the intensification bit."

(TAW/FDG9/L423-5)

"Well you invented 'sustainable intensification'. I am sure that if I thought long enough I can think of two other words to describe it. Do you see what I mean? *You have started it off* (Author's emphasis) by using those two words."

(TAW/FDG9/L537-540)

"We have to accept is that the world today is a hungry world, but it's also a world that has a lot more awareness of the environment in which we live. And partly I think some of the things we are encouraging at the moment is to some extent a result, an effect of intensive farming systems, that have got us into the position we are in now. It is like you were just saying, we can't continue to produce more if there is nobody to buy it. So what we will do is be able to produce something that is, provides us with enough income to remain in business, but it's actually satisfying all the other requirements that DEFRA and the general public are going to want in the future."

(EDN/FDG12/L110-8)

"It is tricky, because if you left things to compete in the market place, you are competing in a world market, you are going to get bigger and bigger farms. At the expense of smaller farms. So does society want that? *There are social implications and environmental implications."*

(EDN/FDG12/L543-57, Author's emphasis)

> "But as soon as we go down the road of any form of intensification the problem that I see is that there is a danger of producing pockets of intensively produced stuff. That immediately brings in regulations and problems and more inputs. All sorts of problems that aren't there at the moment."
>
> (TAW/FDG9/L143-57)

### 4.2 Sustainable Intensification and global food security

In conveying these points many participants registered SI with the wider global food security discourse, and did not see the SI agenda as a surprise: "There's been talk for years about increasing global population and the need for more food." (CON/FDG1/L418). They often interpret this agenda, at times sympathetically, in terms of the need for greater national self-sufficiency in food supplies; of encouraging the UK to "really stand on our own," (CON/FDG1/L422), by specifically meeting needs of growing domestic population:

> "There's more and more coming to the country all the time. How are we going to feed them?"
>
> (CON/FDG1/L434-436)

> "Should we not be looking after ourselves rather than other parts of the world?"
>
> (EDN/FDG12/L39)

> "I think we have got to try and rein in and try and produce as much of our own food as we can in the future"
>
> (WEN/FDG10/796-8)

These claims were sometimes aligned with ideas producing more high quality food:

> "If we want to eat healthily in this country, we should supply ourselves and get it right and stop importing more cheap food which is not raised to the same standards that we are doing it ourselves"
>
> (WEN/FDG10/568-70)

However, just as some participants questioned the environmental credentials of SI, it was common for others to question whether the food security dimension of SI would be confounded by market realities. Producing more food was viewed as going hand in hand with securing a market, but market trends suggested that farmers would not be able to secure a good price. Indeed, the notion of rising prices that framed the challenge of SI in group discussion seemed for some participants a distant historical reality, implying a level of food production that actually depressed prices and made the intensification agenda misplaced. "The first thing that came to me is: 'what happened to the global spike in food prices?'" [Group laughter]' (TAW/FDG9/L27-8).

> "[T]here seems food around and prices are too low, so why do they need the intensification? Why can't you stay the same or even go less."
>
> (TAW/FDG9/L172-4)

> "By trying to enforce intensification we are shooting ourselves in the foot and do away with the environmentally friendly system we have at the moment."
>
> (TAW/FDG9/L148-50)

> "We have seen record wheat feed and barley crops in the UK this year. And what has happened to the wheat feed and barley price? It is way down. I was talking to someone the other day who has five hundred acres of cereals and he says when he does his costing there is nothing in it."
>
> (TAW/FDG9/L392-5)

> "Potentially this is working backwards as you can work hard and produce more and then sell it for half the price. So you are not gaining."
>
> (TAW/FDG9/L438-9)

> "We have a big world to feed. But just at the moment I can't seem to sell what I have got. So I can relate to it, but I am stuck on that first little stumbling block."
>
> (TAW/FDG9/L246-7)

> "The problem is though that if they want everybody to intensify and keep more sheep, then we will see exactly what's happening to the dairy sector now – oversupply and then a crash in price."
>
> (CON/FDG1/L 151-4)

> "[W]e have got too much, why are you going more intensive? ….That is why the price is down."
>
> (EDN/FDG12/L26-28)

> "Why produce more when it's going to knacker it, it is, that is what has knackered it, in this country we produce too much. We give it away to other countries."
>
> (EDN/FDG12/L54-7)

> "Why did the scientists want intensification anyway when there seems to be food around and the prices are so low, so why do you need the intensification? Why can't you stay the same or even go less?"
>
> (TAW/FDG9/172-4, See relatedly, Section 4.6)

When making these claims some concern was expressed that SI was being wrongly constructed as purely an issue to influence the mind-sets and activities of UK farmers, when instead what drove change in farming and thus the success or otherwise of farming towards SI, was dictated elsewhere. SI was externalized as primarily an issue of how markets function and states incentivize action, and the way in which unpredictable events - such as weather and disease – dictated patterns of land production in dramatic and significant ways. Progress towards SI was therefore often mapped on to a discourse of powerlessness at the farm level, of "having no say", and of being essentially reactive to developments, including farmers acting as passive price takers. "[The stimulus] says about spiking food prices but it doesn't say about the local trough in food prices, which drives farmers on most things, market forces" WEL/FDG7/L44-5). Participants often suggested within this that actions taken by UK farmers were essentially inconsequential in the wider global context of sustainable food systems.

> "[SI is] looking at UK agriculture like that and yet everybody is telling us that it's a world market, world market supply and demand, world market pressures, whatever and yet we're looking at UK agriculture. You can guarantee that I mean I'm just looking at one thing here, soil degradation is estimated to cost the UK economy 0.9 to 1.4 billion pound a year. We are a pinprick on the world stage. You can guarantee that American farmers on the Prairies are not even concerned about their soil degradation because they can't afford to let it bother them because they are far more on such a scale that they cannot possibly know every square inch of their farm."
>
> (AVN/FDG3/L200-9)

> "If you take all the farms in North Wales, just take them out of producing, it won't affect the world market. You are talking really small."
>
> (CON/FDG2/L2516-7)

> "It isn't just farmers, it is world trade that we need to influence."
>
> (EDN/FDG12/L200-3)

Some of these discussions translated into the question of how a vast issue such as global food security mapped on to the realities of small scale farming. They honed in to the general claims presented in the stimulus narrative and saw little in this that mapped on to their own circumstances:

> "Also a [projected population] figure like that isn't particularly useful, I think what does that mean to us, we have no benchmark, we have nothing to compare it with, we don't know, we know what goes on on our own farm and locally and as you say, you know in some cases worldwide but a figure like that, a lot of these figures you know we can see figures, we can see percentages, we can see but you know there's nothing to make it meaningful really is there if we even want to pay attention to it but I would say slotting in 0.9 to 1.4 billion a year, okay is that a little on a scale of things or is it a huge amount on a scale of things."
>
> (AVN/FDG3/L220-26)

If SI was to be picked up as idea within farming, there was need to frame SI in terms that made sense to the specificity of enterprises: "If you want farmers to buy into it don't make it all encompassing on a global thing. You need it to be a very small and very focussed thing." (CON/FDG2/L2479-80). Notwithstanding this, it was claimed too that food security agendas should be seen in the wider context of historic capacities to keep abreast of food demand:

> "There was perceived to be a growing work population and a plateauing world agricultural output and I think that where it mentions the 2008 food price spike, the feeling like the guy I saw last week said. We have been told since I started farming in the seventies that population is increasing and the demand for food is increasing and we are never going to be able to keep everybody fed. Where is it all going to come from? And strangely we have been able to keep ahead of demand at every step to the detriment of our income. We have seen record wheat feed and barley crops in the UK this year. And what has happened to the wheat feed and barley price? It is way down. I was talking to someone the other day who has five hundred acres of cereals and he says when he does his costing there is nothing in it"
>
> (TAW/FDG9/L384-95)

Moreover, many participants were keen to see farming and food production as just one element of the challenge of securing sufficient food supplies within the food system. Recourse to issues of food wastage and distribution at a range of spatial scales was a common argument deployed, with many suggesting the priorities for action were in the wrong place:

> "You take the world amount of food that is growing, the amount of food that is growing in the whole world and the amount of people that need it, don't waste any of that food and I am pretty sure everybody would be reasonably happy, yes? …[ ]..
>
> So shouldn't distribution be, you know, why is, why doesn't everybody get his share of it? Why can't that be sorted?"
>
> (CON/FDG1/ L2423-53)

“Intensification is something we don’t need to worry too much about because of the amount of waste at the moment, just [seen a] documentary stuff ...[ ].. they’ve been highlighting waste that’s created by the general public and in stores and a lot of the, that’s driving the food prices down in itself because people don’t you know people don’t respect their food you know, they know if they buy this cheap food and it’s just become a throwaway commodity.”

(AVN/FDG3/L45-53)

“I went to Century Farming conference two years ago and there was a bloke there talking about food waste and that was interesting and he was saying that basically in this country and all other countries similar to ours, America, most of Europe etc, Australia, food waste was four times more than what was produced.”

(WEN/FDG10/L604-8)

“Yeah I mean at the end of the day there’s only so much land available to farming and you don’t want to, with a growing population carry on cutting down forests and you know ploughing up more fields, more land for growing food when it’s just getting chucked away so I think they need to you know it needs to be.”

(AVN/FDG3/L66-9)

“You know getting the food to the public in a much more efficient way is part of the solution”

(AVN/FDG3/L73-74)

“it’s just not being distributed fairly I feel, is it?”

(AVN/FDG3/L 566-7)

“It is distribution though isn’t it? If you take the world population and their nutritional needs, probably even though you have got polarised areas of production and its actual distribution, both logistics and also the infrastructure that creates that imbalance”

(EDN/FDG12/L34-37)

### 4.3 Sustainable Intensification and economic sustainability

This reading and critique of global food security discourse must be viewed as part of a wider concern to connect (and question the connection between) sustainable intensification and the economic sustainability of enterprises: "When you talk about sustainable do you mean economically as well or?" (CON/FDG1/L64), leading to some nice reversal of emphasises in the SI discourse. "I need to be do the most *intensive sustainable* farming …to be frank" [CON/FDG1/L 247-8; Author's emphasis]). These appeals to economic returns were persistent:

> "Sustainability as far as I'm concerned makes for profitability, we're in here to make a profit and that seems to have gone out the window."
>
> (AVN/FDG3/L23-5)

> "We're looking at the economic return, what's left in your sticky little hand at the end of the day and is it economically viable to do it."
>
> (AVN/FDG3/L686-7)

> "The word omitting from this as far as I can see, which is profitability."
>
> (WEN/FDG10/L38)

> "I haven't heard the word profit mentioned once."
>
> (WEN/FDG10/L68)

Importantly, *vis a vis* a common underlying concern about the idea of intensification, participants often use the term, SI, as a jumping off point to speak less about producing more, than a concern to produce food more efficiently, that is:

> "To optimise rather than maximise."
>
> (AVN/FDG3/L64)

> "[To] sustain what I am producing now but with less cost."
>
> (CON/FDG1/L350)

"To contribute more sustainably, not produce more sustainably."

(CON/FDG2/L200)

"You are looking at reducing costs, the only way to make a profit at the moment is to reduce costs."

(WEN/FDG10/L82-3)

FMR1 But are they saying produce more? Or are they just saying it could be produced the same amount but more efficiently?

FMR2 There are discussions here about, that to me is efficiency.

FMR3 Are they saying more ...[ ]… or not? Produce more or not?

(EDN/FDG12/L80-83)

Promoting efficiencies in production represented a key way in which environmental outcomes were linked to economic considerations suggesting strong commonalities between farmer world views and the idea of Integrated Farm Management. In this, we find some participants reflecting on the precarious resources on which modern farming has grown: "It's all done on the cheap oil isn't it? Take that away, it all falls to bits." (WEL/FDG7/L79). They speak too of a changing agenda, one in which farmers are moving away "relying on the bottle to give them the answer" (AVN/FDG3/L522). Many and diverse examples are highlighted where farmers are interpreting their land as a form of critical natural capital to be sustained in the context of food production goals. The impression given was of farmers now routinely engaged in the careful management and monitoring of land assets and inputs:

"I mean I think it's what farmers try to do all the time. I mean [SI's] just a smart different way of saying it. But of course farmers are trying to reduce inputs, trying to increase yields, trying to minimise their impact on soils and water. You know I think that's what we're all trying to do. But whether or not everyone can do the same thing and be successful is another matter. And I don't think they can. I think it's different for different farmers with different soil types. But I think that's the fundamental drive for most farmers."

(WEL/FDG7/L37-43)

"We measure everything, and always have, such as soil sampling to decide what fertiliser we need to apply and how much. So I have a good idea of most things on the farm."

(CON/FDG1/L80-1)

"To get a farm sustainable you have to look after your land in the first place. The soil has to be right. You cannot have a sustainable farm on poor ground."

(TAW/FDG9/L347-8)

"If you want to achieve sustainable farming that has to be part of the picture. There has to be soil management and building soil fertility naturally. There is a lot of good work being done on this."

(TAW/FDG9/L465-7)

"Sustainability, there's a few things as well, sustainability is like ...[ ]... your soil, ... putting your money where your asset is, and that's your soil, is rewarding."

(AVN/FDG3/L243)

"We will be going into a new era of utilising our assets whilst making best use of the products that are available to us if we are conventional farmers"

(AVN/FDG3/L 387-8)

"So if I can produce the same with a hell of a lot less cost, to me that is doing the job. Not necessarily producing more, it is producing the same, maybe less if it has to be ...[ ].. so if I can produce the same with less inputs, well that is a win-win because it shows a positive on my balance sheet and it ticks the box environmentally because I have used less fertiliser, less feed, less water to produce whatever I am producing now. I don't necessarily have to produce any more of it. If I want to produce more of it – fine, if I have got the capacity to do that. If the market wants that but the

difference between profit and loss is, is the cost of producing whatever you are producing."

(CON/FDG2/L202-16)

"There is certainly scope, we have looked at it in relation to, we had a group of pig and sheep farmers where water is a good example and soil management, where you can actually improve the environment, you can reuse, reduce pollution by better soil management as well as increasing the efficiency, reducing fertiliser use and increasing the profitability of production in those environments as well. So you can actually do both. So I think that is the way."

(EDN/FDG12/L250-7)

"[We need] good water quality and we need to build up good soil. There is lots of agendas in there, which if we could find a solution, good farming practice, that also helps the environment, then we are all happy, you know. So we have helped to do it."

(EDN/FDG12/L140-3)

### 4.4 Incentivising the delivery of ecosystem services

Notwithstanding these arguments, some expressed concern that, if the intention of SI was to amplify environmental benefits from farming, this may translate into farmers being asked to take on additional burdens and ultimately bear new costs. They caution that inclination to invest resources in environmental goals has to be set against the economically marginal nature of farming. Thus, the question arises as to whether a farmer could be expected to "spend that extra pound,"(TAW/FDG9/L79):

"Number one [land is] there for the production...Number two it is there for the environment."

(CON/FDG1/L344)

"If a farm is profitable / financially sustainable, then they're more likely to do good work for the environment."

(CON/FDG1/L500)

> "You need to be making enough profit for you to then be able to do things that are better for the environment."

(CON/FDG1/L.574)

> "If we're not making a living we can't do the rest."

(WEL/FDG7/L103)

On one occasion this logic of economic support was extended into the need to produce more food. In an interesting inversion of discussion, one participant suggested that:

> "The problem is if someone wants to force us down this route then they must come up with the readies to enable us to move from doing it ourselves at a low level to a much more increased level to suit them. At the moment it all works the other way. They stop us doing things that would otherwise benefit farming."

(TAW/FDG9/L421-7)

Nonetheless, it is the idea that SI presumes financial support for environmental measures that set the tone of the discussions. Such reasoning gave way to the wider question of whether farmers should bear the costs for activities that are essentially delivering a wider public benefit, in effect raising the question of 'free riding'. Reflecting on the arguments of the Defra Chief Scientist, one stated that "the notion I get from it, it is that somehow or other we are expected to invest in SI for the benefit of the wider community at our own cost." (TAW/FDG9/L36). As one put it:

> "[T]hey want it to be good for the public who whether you believe it or not, or like it or not, a certain number of them have a fondness for the countryside. They like to get out and do things like walk, cycle and canoe and they still want to see hedges and fields and woodlands, streams and rivers and all that sort of business. So sustainability has to have enough are for them to enjoy themselves when they want to as well as producing an income from the land, who are there at the same time. That is my view, with a farmer's hat on, is the issue of sustainability. How many

people are involved in sustainability - is it the Treasury? Is it going to be the Ramblers, Anglers or Canoeists? They are all involved in sustainability."

(TAW/FDG9/L183-92)

In building this argument there was some indication that innovation towards realizing the financial value of non-market environmental benefits from farming, for instance, by way of Payments for Ecosystem Services (PES) schemes, is now influencing some farmers' economic mindsets. For example, participants in the Taw linked the SI narrative of the Chief Scientist (which specifically mentioned the idea of ecosystem services) to local examples of farmers being paid to deliver ecosystem services to local beneficiaries:

"There is something that is in this report where he talks about eco-systems and services. I don't know if anyone has heard of the payment for eco-systems? In a short run of things farmers at the moment get paid for food, maybe some woodland and a bit of tourism and that is all about it. But they actually provide lots of other things, they provide a view, they provide carbon trapping. They provide oxygen regeneration, none of which they are paid for so the idea is to try and find income from outside the definitive agricultural product that they do. So talking about Exmoor and I know that South West Water have been trying to re-wet lots of Exmoor and make it wetter and this is all very well. That is what we want to do as they think that this is cheaper than building a reservoir. But they are not actually paying the farmers who are having to reduce their stock enough to make it worthwhile for them to stay in business."

(TAW/FDG9/L196-206)

Similarly, in Conway, an elaborate form of cross-industry subsidy was envisaged whereby "a Lincolnshire farmer, who is burning all this fossil fuel...[...] pay[s] me for my carbon storage" (CON/FDG2/L1313-15). Another suggested that:

"Now if somebody else wants me also to grow trees or not graze that certain part or block-fill, fine, give me another payment to do that because that is a value-added, that is a socially value-added thing in asking me to do that. The land is the farmer's asset,

isn't it? You know, you have got to make the most ...[ ]... Do you know what I mean? So you might as well either get a bloody good price selling it or get a good deal planting trees on it."

(CON/FDG1/L344-64)

While many implicitly accepted much of the PES logic in principle, it was also notable that some expressed concern about whether these schemes ultimately translated into real or adequate financial rewards. PES might be a further example of farmers finding themselves at the wrong end of a poor deal. Continuing with the same example of tree planting for carbon storage participants in the Conway suggested:

"Does this [beneficiary] recognise that us planting trees on our land, we lose production, so is this business owner prepared to pay for us to put the tree there to save his business? That is the question."

(CON/FDG2/L812-4)

"To me any environmental benefit has a cost to it …[]… And the public who wants it, who drives it, has to pay for it."

(CON/FDG2/L1059-63)

This sceptism also arose elsewhere:

"Somebody [may be] trying to kid us that these things have a value and that we should be supporting that and working for that. All that really matters to us is the bottom line, that's what we're driven by. Even when it comes to environmental schemes, it might be nice to have those on the farm but I'm only going to do it if somebody pays me the cost of doing it or I particularly want to do it."

(AVN/FDG3/L192-6)

Finally, we found some indication of background sceptism about the basis for general economic valuation of ecosystem services present in policy discourse (and expressed in the Stimulus): "Well it is an interesting thing. So some very clever person has put a great deal of

work into this. But how do you say the population services provided by wild insects is four hundred and thirty million?"

(TAW/FDG9/573-5).

### 4.5 Sustainable Intensification and land sparing

There was some indication of farmers linking SI agendas to wider land sparing agendas. This manifests in different ways. Some point to their own practices of land improvement and set aside, others to the general need for focusing production in areas where benefits would be maximised, and still others to the potential connection between the Defra SI agenda and debates about the freeing up of land for the purposes of re-wilding:

> "Can I be really cynical and throw this out now? There are people within DEFRA and so on who are very keen on intensification. And there are people who are very keen on re-wilding and so on. Is there any connection between the two? Would they like to clear the commons and the marginal land and grow the same amount of food on pockets of intensification to free uplands for other things? I know that it has been said, but it is incredibly cynical. They are looking to clear commons for example**."**
>
> (TAW/FDG9/L474-81)

> "Actually now, we're improving land that is suitable to be improved, and leaving land that shouldn't be improved alone."
>
> (CON/FDG1/L122-7)

> "It would be better to focus production in areas that we can intensify and that are less of value in terms of wildlife for instance and then extensify in others that are more valuable areas. Rather than overall level of intensification."
>
> (EDN/FDG12/L322-4)

> "Taking land out of production, fallow land, we're getting more money for taking land out of production. Do you want land in production and sustainably increase the production there or do you want us to get paid for taking land out of production?"
>
> (WEL/FDG7/L210-3)

### 4.6 Sustainable Intensification as a Science and Technology Agenda

Appeals to science and technology loomed large in a number of discussions of SI and these associations were often made positively. Offering his own interpretation of the SI agenda, one participant suggested that:

> "[T]hat is one way that you will guarantee to intensify production sustainably, regardless of the politics behind it, if science can produce something more efficient, less water, less pesticides, less labour, that to me is sustainable intensification."
>
> (CON/FDG1/L 181-84)

It was often the case that participants sought to draw a clear line between farmers and scientific expertise in agriculture and the environment, and in doing so, occasionally suggested that innovation towards SI arose from wider leadership in research ("That's why we need people like you to come out with ideas!" (CON/FDG1/L290) and "I'm not an ecologist. That's why we need people like you." (CON/FDG1/111]). Not surprisingly, the need for investments in general research into sustainable farming systems (TAW/FDG9/474-5) and the utilisation of advancements in the "latest" technologies (such as those related to precision farming) emerged sometimes as important, if not "vital", pathways towards SI (CON/FDG1/L442/L459).

At the same time, a further strand of reasoning was to interpret SI as a concept being "foisted" upon farmers by scientists (TAW/FDG9/L103), and this association presented some grounds for some suspicion. Here, there was a tendency to construct SI as a contrived agenda, reflecting the scientist's interest in "looking for more money to research" and "chasing the buck" (CON/FDG1/2389-91). Within this, scientists were sometimes interpreted as experts wedded to environmental interests of only marginal concern to the concerns farmers, to the effect that:

> "The people who are trying to tell us what to do are far more interested in the bees and the bugs and the rabbits, etc., than they are in farmers, that is my opinion now. I am sorry, but that is it."
>
> (EDN/FDG12/L98. See also L133-38)

It was also a perception among some that scientists were responsible for promoting programmes of land management that seemed to constantly change (TAW/FDG9/L103-110) and that they tended to look for generalisations across analogous land use systems without understanding local specificity (TAW/FDG9/L121-6). These claims underpinned a mixture of suspicion: "[I'm a] bit wary about believing scientists" and defensiveness: "You don't need people telling you, or research," (WEN/FDG10/L278) among participants, though the general direction of this strand of discussion was nonetheless to argue, sympathetically, for the scientist to work in greater partnership with the practicing farmer. "We can see there is some logic there…[in the science]… but there are other gaps." (TAW/FDG9/L128). Specifically, there was a need to work with those farmers who had accrued salient knowledge about their land over generational time, e.g. "Nobody takes any notice of the farmer and his family who has lived on Exmoor for three generations." (TAW/FDG9/L113). On other occasions, this interpretation of the science-farmer interface amounted to the perception that there was lots of useful scientific knowledge for farmers, but this information was either inaccessible or contained within impenetrable papers and PhDs. "Put on the shelf and collect[ing] dust. [The research] needs to be translated into a format that is easily digestible." (WEN/FDG10/L270).

### 4.7 Responding to SI: owner occupiers versus tenant farmers

A small number of participants, all owner occupiers, were keen to stress that audiences for SI varied according to land tenure, citing farmers who rent land for limited time as lacking the security to invest in desirable practices:

> "They're not going to invest as heavily in someone else's land as they would their own…[ ]…It's a completely different mindset…[ ]…You're not going to make the investments."
>
> (WEL/FDG7/L51-7. See also L350-2/88-389)

> "So one of the other issues is tenure of land. So okay we own the land and it's ours for evermore and it will be part of the organisation forever…. But if you are a tenant farmer on a short term three year tenancy, or you are contract farming and you are only as good as your last payday."
>
> (WEN/FDG10/310-13)

> In a related vein, one tenant farmer speaking in the context of participating in an AES suggested that willingness to engage in relevant practices, were "governed by what the landowner wants to do", and that "our business is very much built around the fact that we're fitting into a hole". Thus "from the tenant point of view it's alright saying oh there's this grant or that grant or the other, I can't access them, if my landlord can't access them I can't do anything about it."
>
> (AVN/FDG3/712-32)

## 5. Talking about collaboration

The discussion groups were an opportunity to deepen understanding of how farmers viewed the idea of 'collaboration'. Participants were presented with a stimulus of the range of contexts in which farmer collaboration might occur in terms relevant to the goals of SIP. This included: (i) forms of collaboration directly linked to realising environmental goals (such as participation in an environmental stewardship scheme, involvement in the Catchment Sensitive Farming Project or participation in a local project/initiative promoting wildlife); (ii) collaboration specifically tied to the sharing of resources between farms (such as machinery sharing, lending breeding sires, straw for manure swaps and labour sharing; and (iii) collaboration that reflected wider involvement in farmer interest groups and associations (such as membership of buying groups and marketing cooperatives or a quality assurance scheme/initiative).

Against this backdrop we asked participants to offer insights about the types of collaboration they are involved with and sought to draw out commonalities and differences in terms of the factors that dictate farmer inclinations to involve themselves in collaborative activities, including impressions and claims about good practice. More generally, we sought to encourage participants to explain and account for the issues that may hinder working together and how collaborative working might be further promoted.

### 5.1 Rationales and evidence of collaboration

Participants in the FDGs often construed farmers as willing and active collaborators. In one notable exchange it was suggested, for instance, that:

> FMR1 Farmers are probably the most biggest group of people that do things with each other anyway, aren't they, you know?
>
> FMR2 It is probably the biggest social collaborating group. You can't think of a hundred mechanics meeting every Tuesday as a group and talking.
>
> FMR1 I am not quite sure where, I don't know why they think that we are not co-operating. Maybe we are not co-operating in the parallels that they are thinking of.
>
> FMR2 Are we not just co-operating?
>
> FMR4 Yes. We are probably collaborating against them, aren't we?
>
> (CON/FDG1/L1870-97)

The groups expressed many advantages in farmers collaborating with each other. They expressed these advantages primarily in terms of economic benefit for individual enterprises and highlighted many and diverse examples of how farmers engaged in intra- and inter-sectoral forms of co-operation. Intra-sectoral forms of co-operation included: significant evidence of participation in buying groups within local vicinities (from machinery to bulk purchasing of fuel and feed) to reduce input cost, e.g. (WEN/FDG11/76) and (WEL/FDG8/L221/227/218); some evidence of involvement in selling groups, such as selling lamb direct with neighbours to a farmer's market, e.g. (CON/FDG1/ L932/961); participation in benchmarking schemes e.g. (WEL/FDG8/L136-7); as well as many other examples of hands-on collaboration, such as sheep gathering, e.g. (CON/FDG1/L919/L928) or farmers arranging access over land in terms for country sports (TAW/FDG6/10).

Similarly, there was also evidence of significant inter-sectoral collaboration in the management of land resources. Examples of co-operation between arable, sheep and dairy farmers in the management of land and enterprise assets was a particularly common assertion. For example, one arable famer spoke of land he held under Higher Level Stewardship (HLS) prescriptions being used by sheep farmers during winter from which he then took a crop of meadow hay, exhorting "[t]hat's the co-operation, that's utilising [the

grazers assets] for my advantage, it's not new, nothing new." (AVN/FG3/L400-1). Others built on this idea of promoting synergies in enterprises goals, drawing out similar examples, so that "bringing grazers in on..[ ]… winter stubbles, it's a given opportunity, it's dual opportunity, they're getting muck, they're getting extra grazing, you get better soil…[ ]…That is co-operation," (AVN/FG3/L442-7). See also (EDN/FDG13/L345-50/258-61).

When offering these examples, it was not uncommon for participants to distinguish the general willingness of farmers to collaborate within the need for greater partnership working between farmers and wider agencies, academics and government as a whole. It was felt there was a particular need for much stronger collaboration between farmers and the state:

FMR 1 Doesn't collaboration [also] mean collaboration between this Government and farmers?...[]…That would be a better way to go.

FMR2 That would be a better way forward.

(CON/FDG1/L1787-96)

FMR1 I think it [collaboration] is happening already in various ways.

FMR4 Amongst farmers anyway, farmers.

FMR5 Definitely need more collaboration between Government and farmers.

FMR4 Yes. I think that is a very good point.

(CON/FDG2/L2527-33)

### 5.2 Informality and trust in collaboration

Nonetheless, when offering examples of collaboration, participants typically emphasised the need for informal and 'bottom-up' approaches, both as a model of good collaborative practice and a statement of how much collaboration occurs. They emphasised the virtues of "give and take" (AVN/FG4/L100), forms of collaboration epitomised, for instance, by arrangements that avoided money changing hands:

> "So I'm swapping straw with three neighbours, four neighbours and that works well. No money changes hands. And yes, it works well. And also neighbour up the road he for various reasons but we've swapped the field as well. So he's growing turnips

> on one of my fields. Well I'm growing … turnips for him and then he's given me one of his fields to grow wheat on …[ ]… we're good at machinery. So we use our skills to grow turnips for him. We're using his skills to graze and it's all part of the rotation. So actually it works for both of us. And so far no money's changed hands. So we haven't fallen out."
>
> (WEN/FDG11/99-115)

Ideas of trust were an important undercurrent in such arrangements. For the arable farmer allowing the sheep farmer to use the arable land for grazing,

> "I'm trusting [him] implicitly that if that starts to get too wet their sheep come off. But I know that he'll do it."
>
> (AVN/FG4/L562-3)

> "That doesn't happen unless you build that trust. And I think that again goes back to the shearing thing, you build trust. There is an element of trust in everything that do. If you trust the person that you're going in with that's a big [factor]."

In general, many participants were keen to explain collaboration as a process where farmers routinely looked to each other for insight. Indeed, exchange about issues and problems facing farming was often seen to naturally occur, "happens anyway" (TAW/FDG9/L329) and thus did not need to be forced, such that:

> "[y]ou can't have someone say come on you need to share this. You can't do it. It's got to work if it's natural. So even if there was some government sort of initiative to try and, well we'll give you some money if you share. No, it's got to be completely driven by the individuals wanting to do it."
>
> (WEN/FDG11/L136-139)

The impression given on occasions was one of farmers working within a neighbourly -'said by the wall' farming culture (CON/FDG1/L1896); that is, from a position of solidarity. According to one new entrant into a case study area, such informal and localised networks of knowledge exchange could be accessed and built quite quickly (WEN/FDG11/L163) and

provided the context in which more tangible forms of collaboration could then occur. For another participant this extended to the idea of encouraging co-operative activities to help new entrants in farming during the fragile stages of early enterprise growth:

> "I think where co-operation comes in too many farmers will shut the door on the next generation and I've had that first hand and by opening that door and allowing the next generation to come in and work together to push that business forward, that then becomes a sustainable business because both parties will benefit from the arable farmer with soil structure and everything else. I know you're probably going to disagree.
>
> (AVN/FG3/L408-13)

On occasions the idea of sharing information insight was extended to the emergence of networks across social media "Facebook, Twitter, whatever, call it what you want" (CON/FDG1/L1870-97) in which likeminded, particularly younger, farmers could more generally share and procure knowledge about farming practices from each other. This was claimed to be a discernible trend within farming culture more generally and one that might serve to effectively reclaim farmer co-operation from wider vested interests:

> "Because of twitter, because of email, because you can email photographs around the world, people can communicate a lot quicker, they can talk about what they do on their own farms, share photographs and so on. And I think this whole movement has been driven by farmers thinking that is a good idea, I believe in it, I am going to have a go. And sharing it on social media and other things. And it is not being driven by academics trying to get some research money or do some research and nor is it being driven by people trying to sell something, like seed manufacturers, or machine manufacturers, it is being driven by the farmer, which is exactly the right way."
>
> (WEN/FDG10/L196-204)

However, many cited significant challenges, not least in viewing collaboration as a process that requires changing the independent mindsets of farmers and mitigating the farmers view of themselves as being in competition with each other: "There is a saying in Welsh, the farmer's biggest enemy is the farmer next door, but it is the farmer next door that keeps

you on your toes" (CON/FDG2/L1632). Or again: "It is funny; I might not talk about a certain thing to my neighbour" (CON/FDG1/L1893). For some, this competitive (secretive) element might be seen to drive innovation in a positive direction, but so too did it raise issues when farmers have to organise themselves more formally to strengthen their collective hands within markets. Speaking of an instance where arable farmers might have usefully invested in advanced storage facilities for corn, one participant lamented:

> FMR: We have to try and get to a stage where we are working more together as farmers …[ ]… we have got too much of an individualistic…[outlook].
>
> FMR2 Are we saying we're fragmented?
>
> FMR1 That doesn't go half way to describing what we are.
>
> (WEL/FDG7/L139-150)

An analogous example was further cited where a participant had tried to instigate the collective ownership of a local farm shop. Participation worked to the point at which "we asked them all to put some money in the pot to fund it and then they all ran out the door. They all just ran out the door. … 'we're not going to do this until we know it's going to work.'" (AVN/FG4/L732-34).

However, the more general point was that, to their detriment, farmers in the UK are not as good as other countries in organising themselves. The example of co-operative style arrangements was given in another instance, albeit with the caveat that these types of arrangements would generally suit small scale farmers:

> "It's something we don't do as well in this country as what they do across the rest of Europe. But certainly a place where it's done best it's done by farmers who have an acre and a half each and it's done on a small, a lot more members, smaller scale farmers."
>
> (WEN/FDG11/L242-6) (see also EDN/FDG13/L84-5)

### 5.3 Farmer participation in discussion groups

Participants almost uniformly saw the value of farmers being involved in discussion groups to share ideas and good practice. One spoke of the "scope for groups" to "achieve the

changes that need to take place" in an era where there is "less public money around" (EDN/FDG13/L74-8). Some of the discussion explicitly framed the potential of groups to help reconcile economic sustainability with the farmed environment, with one suggesting the issue was all about the "Education of farmers. ...[ ]… It's about being able to get the farmers in a forum isn't it, to openly discuss it. You've got to motivate farmers." (WEL/FDG7/L414-416). It is notable that this view of discussion groups contrasts sharply with farmer views on efforts to influence farmers by way of regulation and mandate: "I think there are an awful lot of people going around telling everyone what to do there are not a lot of people going around helping the farmers to find the best way of looking at these things."

(WEN/FDG10/L152-154)

In general, the discussion revealed that there now exist many opportunities to engage in these fora, from discussion of generalised farming topics to ones that opposed farm performance to direct scrutiny:

> "Yes, there's all sorts isn't there? There's groups you can join. There's local groups. Loads of people organising things, don't they? And even like the NFU. ...[ ]… But that can [range] from ...[ ]… just generally talking about generally what you're doing to very specific groups that talk very openly about confidential information. There's all kinds doing that."
>
> (WEN/FDG11/L278-297)

### 5.3.1 The qualities of an effective farmer discussion group

In conveying the depth and range of opportunities, many implicitly associated the idea of a good discussion group with a form of organised informality - "just getting together" (CON/FDG1/L1160-1). Many also specifically cited the benefits of learning and knowledge exchange when it occurs through hosted visits to farms. "We had three or four sessions just together discussing seeing each other's properties. Sharing ideas. Very good indeed." (CON/FDG1/L1161-2). In all of this, a willingness to be open to scrutiny was highly regarded, whereby:

> "One ...[ ]… stands up and talks about his farming system. ...[ ]… And he's putting himself open for criticism or constructive criticism. Why don't you do this? Why

don't you do this? And then it's all linked back. If one of them speaks in December for example it's all linked back and they've then got to have a farm walk in June"

(AVN/FG4/1002-1117)

Furthermore, well-functioning groups were seen as processes that typically involve people with similar outlooks and motivations. "What you need and what you have got in discussion groups are like-minded people …[ ]… Now they could be fifty miles apart but they are like minded." (CON/FDG2/L1728-55). Relatedly, one participant spoke of his experience of a selling group to argue that group innovation and development arose in contexts where there were self-evident strong group feelings or beliefs:

"In the selling group, you want to be in the selling group with passionate people. If you go in with passionate people they're moving that group forward. And a lot of people just hanging on behind reaping the benefits, it's not going to work. It's all or nothing."

(CON/FDG1/L1039-1042)

In some discussion there was evidence of a degree of 'sector envy' at work. Among some beef and sheep farmers the dairy sector was, for instance, held in high regard in the way it organised itself in terms of inter-farmer exchanges and a willingness to expose individual enterprise performance to group scrutiny:

"Those [Dairy] discussion groups are forces to be reckoned with. And that networking ability I found when I was in the dairy sector you could build trust within that group of people and that's where things … start from".

(AVN/FG4/1009-11)

"To me this is where the dairy sector shines. They've got discussion groups and they're willing to put their figures on the table … maybe not their direct neighbours but other people in their industry. They'll discuss with … look at each other's business and think oh you could do this here. But as beef and sheep farmers there's very little opportunity to put everything on the table and get other people to comment on it."

(CON/FDG1/L647-52; see also (CON/FDG2/L2539)

### 5.3.2 Barriers to farmer participation in discussion groups

General enthusiasm for discussion group fora was tempered by a number of apparent barriers to participation. First, vis, the dairy farmers, some participants claimed that certain sectors of farming were simply harder to reach, with the figure of the "isolated livestock farmer" offered as an individual who struggle to naturally collaborate and procure information in these settings: "they don't by nature visit anybody else's farm" (WEN/FDG10/L291-3). Second, the FDG tempered their enthusiasm with self-reported reticence: a stated reluctance by some to share personalised information and experiences. "The idea of individuals working from a position of trust is clearly important here." (WEN/FDG11/L297).

> "So it might be good to be in the discussion group to share ideas but sometimes we don't want to share too much or some things you don't want to share."
>
> (CON/FDG1/L1036)

> "It depends how much you've got to declare to be willing to reveal that information."
>
> (WEL/FDG8/L136-7)

> "A lot of farmers down here don't want to open that door. We have a discussion group called the [name of group] that my boss was part of and we weren't allowed into those meetings. We went to one meeting and they just tore strips off each other because they're honest. They do their budget, they slap it on the table. They all look at each other and go you tell me what I'm doing wrong because I haven't got an inkling. And they tear each other apart. But they're all there. At the end of the day they all farm. They've all got that thing in common and farming changes so much so frequently that just in my lifetime where it's shifted from you know it's scary. If you're not encouraging that communication then you ain't going to get anywhere."
>
> (AVN/FG4/1118-26)

Third, while some might convey the ideas that farmers have to work in solidarity with each other in order to build to competitive national sectors, they also tempered this with the practical challenges of committing time to these activities:

> "Not enough skilled labour to cover you whilst you're at the meeting."
>
> (AVN/FG4/1144)

> "[P]eople are so busy and even if they want to do it, it may not happen. But we could learn much from one another"
>
> (CON/FDG1/L781-4)

### 5.4 Challenges of farmer participation in machinery rings

Although many farmers described machinery sharing as a helpful collaborative activity, one they have readily engaged in, and, in principle, something fairly straightforward to organise, it is also noticeable how many FDG participants also characterised this activity as problematic. There were many dimensions to this concerning, for instance, lack of the available financial capital to invest, the way that burdens of repairs were negotiated between farmers, a lack of consensus over what machinery to buy, and varying degrees of machinery use.

> "I think that requires a significant level of investment. [..farmers are] perhaps mortgaged up to their ears, significant levels of borrowing. How are they going to …[ ]… collaborate with other farmers, invest in facilities? It's just not an option for a large number of farmers."
>
> (WEL/FDG7/155-161)

> "It should be encouraged, and it'd be of benefit to everyone, but it's just not practical always. Sharing machinery definitely not an option – they're too expensive when they break!"
>
> (CON/FDG1/L1177-9)

> "Yes, and it only works to a point. Different farmers naturally want to buy different things and at different times, so therefore it starts to fall to pieces."
>
> (CON/FDG1/L897-8)

> “The problem with machinery, you can have ten farmers wanting to buy a bailer and one only does two hundred bales, the other one does two thousand bales”
>
> (CON/FDG2/L1669)

> “Unfortunately in Cumbria we get such short windows where we can [share the machinery], everybody wants it at the same time, so although it’s a really good idea, in practice it doesn’t actually work that well.”
>
> (EDN/FDG13/L26-28)

> “One of the downsides of machinery sharing in this particular area and it’s a fact, you know, we do machines and everybody wants them at the same time, you know, it is due to the weather and the climate really.”
>
> (EDN/FDG13/L35-38)

> “Informal machinery sharing is going on. But the actual formal machinery rings are more complex due to repairs and timing.”
>
> (TAW/FDG6/L24)

Perhaps most significantly, an undercurrent n this form of collaboration, were sensitivities around duties of care in machinery sharing. One cautioned that “You’ve got to have it written down on a piece of paper very firmly and clearly what the parameters are,” (AVN/FG4/L66) noting that philosophies of some farmers varied here. They conveyed a picture of machinery rings involving some farmers who researched a new machine “religiously” whereas others who are “’yes let’s just drive it like we stole it. It’s not ours, who gives a hoot as long as it’s big and shiny? And then you get that ‘you broke that,’ ‘No I bloody didn’t you broke it’ (AVN/FG4/L290-2). Or again, “stuff ends up getting wrecked doesn’t it?” (WEN/FDG11/87). For one, the success of a ring was “all about the individuals, the relationships and the trust and people’s aversion to risk and that sort of thing.” (WEN/FDG11/L130-132).

### 5.5 Co-ordinated collaboration

Although less significant than economic motivations, the benefits of collaboration were also expressed as a matter of realising wider environmental goals, with participation in Agri-Environmental Schemes (AES) and other initiatives, such as the Catchment Sensitive Farming Project (CSF) figuring prominently in discussion. So, for example, one suggested with respect to the latter, "[W]e've got potential as a group [of farmers] to really reduce our impact on the environment. If we did this alone, the impact wouldn't be so significant." (CON/FDG1/L1008). Moreover, like the process of gaining market advantage, there was some perception that if farmers worked together on environmental measures they had more chance of doing things in ways consistent with individual aspirations: "if you get a group of farmers together, neighbours together … you stand more chance of getting it approved rather than being an individual. So I perceive that as being benefit" (WEN/FDG11/L317-319). Some also suggested that, when delivered alongside strong investments in monitoring, participating in AES were a helpful way of cultivating public support for famers rather than the perception that "farmers are getting money but not achieving a lot." (CON/FDG1/L1835).

In an AES and CSF context, it is again the case that farmers emphasised the need for collaboration to be dictated by bottom-up (i.e. farmer led) processes:

> "It is a group of people sitting down together to learn from each other and drawing on specialist help where they need it, in order to actually benefit the wider community rather than just themselves as individuals. And it stimulates growth activity of all sorts, you know, [the commoner] try to stop things happening before it does and other commons do exactly the same thing, it is not, I don't suggest that ours is in any way different, it is a culture that exists amongst them. There is no reason why other farmers couldn't get together to actually do something similar."
>
> (EDN/FDG13/L187-93)

Speaking of measures relating to water quality and catchment scale working, the reasoning of one group was such that:

> FMR1 It could work – most people would be after the same things. Ideas for agri-environment work should sometimes come from the bottom-up,

not always top-down – locals will know what's needed and what will work.

MOD Yes.

FMR1 The group needs to be democratic … majority say …

MOD Yes. But you would feel a little bit more comfortable maybe in doing it as a group rather than individually.

FMR2 Everybody gains, not just you.

FMR3 And it's a shared problem.

(CON/FDG1/L1069-1082)

Nonetheless, some expressed concern about the congested nature of co-ordination in some locations: "There's too many organisations in the same area." [TAW/FDG6/L23] and that opportunities were fragmented over a range of funds that farmers struggled to make sense of:

> "There's also just a huge number of tiny little projects involved...estuary bit. There's the Carbon Capture Action Fund. There's a little bit of catchment sensitive farming. There's various other things. There's loads of lots of little different ones. And nobody seems to actually coordinate those either to actually get information out to farmers that this is going on."
>
> (TAW/FDG9/L61-2)

These arguments tend to run alongside the need for a strong overall co-ordinator role, ideally a "third party facilitator to take that strategic approach" (EDN/FDG13/L116-8). It was suggested the co-ordinator needed to be a good communicator to "encourage [schemes] to work" and "pull it together" (WEL/FDG8/78-81). CSF was seen as a good example getting farmers working together because of its co-ordination strengths. The detailed exchange in **Box 2** about CSF gives a strong sense of how farmers see these processes working.

**BOX 2: Co-ordinated Collaboration and the Case of CSF**

FMR1 It's better for someone from outside to 'buy in' the community to coordinate that ...[ ]…

FMR2 That person could co-ordinate with the knowledge he would be able to suggest how the collaboration could work ..[ ]…

FMR1 And also how best to get an agreement as farms don't always know the benefits of it short term or long term.

FMR3 Need something you can take to the whole area or the whole scheme or whatever don't you, you know to sort of see it from everybody's point of view.

FMR4 Yeah, it needs quite a technical eye as well because there's a lot of implications obviously agreeing and things like that and any changes, it's not a simple hurdle to overcome and I do think it needs someone to co-ordinate it. …[ ]… But I think it's got to be, people have got to be invited to do it, it can't be 'you've got to do this' because I think people will be concerned that's the danger of it, is it designated as something if we get it wrong I think it's got to be for people to opt into doing it, you've got to encourage it, you can't just leave it like it is, you've got to do this, we've chosen this area because of the environmental significance because I think people would just back off from that.

FMR5 I suppose catchment sensitive farming comes together because they'll organise their individual co-ordinator on the ground is organising different meetings and suggesting to the different farmers to attend the meetings that these are the areas that they want to target and it's sort of opens it up to people to sort of think along the lines of yes, we could do that, we could do that and also because you're there, it's a competitive tender for the agreement, walk in, get together and walk along the stretches of the tributary that you can see covered.

FMR1 To get everybody in…[ ]….And it's getting the right level as well, you might put some people off if you go too high, it's probably best to go lower level and then gradually work. [Significant Pause] But you'll frighten some people.

FMR4 Expectations as well, you know just making sure everyone understands what's involved with keeping the communication going and things like that and I think probably that's not something that farmers are very good at doing independently, we do need that co-ordination.

(WEL/FDG8/241-303)

# 6. Conclusions

The FDGs have provided an important body of empircial evidence complementing and contextualising further the findings of the baseline survey regarding how SI as an 'idea' is interpreted and assigned importance by the farming community and how collobarative activities are viewed as part of working towards SI in a landscape context.

The findings highlight varied responses to the SI agenda as a way to rally farmers around its ambitions to simultaneously increase farming output and competitiveness whilst protecting the countryside and enhancing the environment. Although the discussion groups revealed little *a priori* awareness of the term 'sustainable Intensification', participants speak back to the idea quickly. The term is initially interpreted as both a challenge to established practices and a benign re-branding of existing priorities. As farmers reason further around the idea of SI they typically seek to align it to wider questions of food security and the challenge of securing sufficient food supplies. Alongside this, and pertinent to the landscape context of the project, there is some evidence of farmers linking SI agendas to wider land sparing agendas and seeing a potential connection between the Defra SI agenda and debates about the freeing up of landscapes for the purposes of re-wilding.

Importantly, as participants speak directly about their enterprise priorities, they often explain their goals and behaviors in ways that are consistent with those of SI. The discussions, for instance, highlighted strong commonalities between farmer world views and the idea of Integrated Farm Management, often emphasising the underlying (and to an extent growing) importance of maintaining the critical natural capital of land as part of food production goals and therein enterprise viability. Whether there are opportunities to realise (via Payments for Ecosystem Services schemes) the financial value of non-market environmental benefits from farming remains an open question, and this is notable given these benefits and mechanisms are often landscape and catchment scale in expression.

In considering the collaborative dimension of SI, the FDGs show the way farmers often identify themselves as willing and active collaborators and point to many and diverse advantages and examples of collaborative activity. It is again notable specifically in the context of SIP 2 that locality provides an important context in which interaction occurs. Participants almost uniformly saw the value of farmers being involved in local discussion

groups to share ideas and good practice. The discussion revealed that there now exist many opportunities to engage in these fora, from discussion of generalised farming topics to ones that opposed farm performance to direct scrutiny. The attributes of a good discussion group were an atmosphere of organised informality, a practical farm setting for interaction, and the involvement of people with similar outlooks and motivations. In terms of collaboration toward strategic priorities for landscape, the ideal model of collaborative practice was one in which approaches would be dictated by 'bottom-up' processes, but also having strong independent co-ordination. There was some concern about the congested nature of co-ordination in some locations and that opportunities were fragmented over a range of funds that farmers sometimes struggled to make sense of.

### 6.1 Next steps

In terms of delivering on the wider objectives of SIP, convening these FDGs were an opportunity to consolidate and generate contacts with farmers in Tier 1 and 2 areas that will enable the delivery of other empirical components of project II. The messages and supporting data require further analysis in the content of the deliverable 7 to support its review of socio-economic barriers to collaboration between farmers and mechanisms to encourage collaborative approaches

# Annex A . Farmer Discussion Groups - Process Design

| Section Length | Running Length | Activity | Process Summary | Resources |
|---|---|---|---|---|
| 30 min | 30 min | **Arrival** | Refreshments served | Outsourced/In-house Catering<br>Sticky labels for name badges<br>SIP Scene 1 and 2 avail + Pop Ups<br>Re-issue STIMULUS 1 |
| • 2 x tables to accommodate up to 10 people (incl. moderator) will be set up in the main room.<br>• Tables to include water, flip chart paper and pens.<br>• A wall or screen on which to project.<br>• Materials to mount flip chart paper | | | | |
| 15 | 45 | **Introduction to the FDGs** | Facilitator 1 welcomes & introduces her/ himself and co-facilitator<br>Short (verbal) presentation on aims and objectives of FDG | None - verbal |

Note any housekeeping (Fire exits/Lavatories)

**Facilitator 1** Welcomes and introduces people in the room [i.e. facilitator 2 and any other observers]

Outline in general aims and objectives of this discussion. [Verbal – Non Powerpoint] E.G.

*"We are here to exchange ideas about a major programme of research being conducted by Defra. This programme is called the Sustainable Intensification Research Platform and its goal is to help farmers to quote 'manage farmland to increase farm output and competitiveness, whilst protecting the countryside and enhancing environment and social benefits'. Our purpose today is to take your views on some of the issues researchers are facing to deliver useful knowledge in this area – knowledge that will help farmers like yourselves - and is one of a number of discussions taking place nationally"*

Facilitator restates who is sponsoring this activity – Defra - and emphasises why these discussions are important. E.G.

"*This is a large, multi-organisation research programme with some of our leading scientists involved. But, it is very important to test some of the ideas behind our work as we go forward. We work on the basis that the farming community has a lot of expertise on some of the issues we are working within, and that means speaking to people about their ideas and concerns. So thank you for giving up your time"*

Facilitator introduces the general structure of the discussion i.e.– i) open discussion on the chief issue that has led to this Defra investment – S.I. ii) Introduction some of SIP's work in this area and then iii) a

discussion about one important facet of our work concerned with encouraging collaboration between farmers to help deliver SI. Facilitator reassures E.G: "you will be guided through this discussion and that everything you say is worthwhile"

Facilitator asks for participants to introduce themselves verbally to the room. Facilitator highlights:

- Conduct…. we are here to exchange ideas; respecting other people's views;
- How results will be used Consent to record & why recording is import. Emphasise anonymity.

Facilitator invites any points of clarification

| | | | | | |
|---|---|---|---|---|---|
| 15 | 1hr | ***Part 1 - The challenge of sustainable Intensification*** | | Facilitator 1 introduces the concept of Sustainable Intensification as the basis for group discussion. | Lead facilitator presents:<br><br>POWERPOINT SLIDE 2 (Supplied)<br><br>Sustainable Intensification: what's the issue?<br><br>Lead facilitator then verbally introduces:<br><br>STIMULUS 1 (Attached)<br><br>"Rising to the challenge of sustainable intensification – The view of Defra Chief Scientist |

**OVERVIEW**

Facilitator 1 displays earlier verbal quote on POWERPOINT SLIDE 2 and reiterates the concern of the programme is thus:

*The challenge:*

*"How to manage farmland to increase farm output and competitiveness, whilst protecting the countryside and enhancing environment and social benefits".*

Facilitator:

- explains that we will go into more detail in a while about some of things we are doing and what we are already learning.
- highlights where the research is taking place for context (but does not show map yet). Choices made to reflect a diversity of farming types and landscapes
- emphasises that participants are therefore in one of only 7 case study areas.
- speculates "What is driving this work?" and asks everyone to consider STIMULUS 1 as providing an answer [Participants will have received this in advance].
- asks floor if participants had the opportunity to read stimulus.
- Presents the perspective – highlights not verbatim.
- Explains that we already have a sense of what farmers think about this challenge – we have surveyed over 250 farmers.

- Explains that what we would like to do in the first discussion is gain some of your reactions to this statement to deepen our understanding of what the farming community may think

| | | | | | |
|---|---|---|---|---|---|
| 30 | 1 hr 30 | | | Group discussion | Audio On<br><br>Groups discuss **Stimulus 1**<br><br>Facilitators provided with probing **discussion sheet**<br><br>Key views recorded on **flip chart** |

**OVERVIEW**

Facilitator 1 and 2 ask what people made of anything said in this statement and build from there

*Stimulate and probe: e.g.*

- What do people think are key messages of the Chief Scientist advisor?
- Are any sentiments or arguments made that people particularly agree with?
- Are any sentiments or arguments made that people particularly disagree with?
  Is this anything in the statement says that encourages or concerns you?
- How credible or realistic do you think the Chief Scientists ambitions are?
- Does the statement surprise you in anyway, or say new things about the way farming seems to be going for you?

Use statements with the text to provoke discussion.

Draw out depth of agreement with the group and consolidate on points on flip chart.

*"Given what you've read if you had to explain Sustainable Intensification to another farmer in a sentence or two [a text message' (!)] What would you say?*

| | | | | | |
|---|---|---|---|---|---|
| 15 | 1 hr 45 | | | Group feedback | Facilitator 1 feeds back & invites feedback from group 2 facilitator<br><br>Facilitator 1 Presents **POWERPOINT SLIDE 3-5** |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | Baseline Survey (supplied) and invites discussion<br><br>**Audio Off** |
| **POWERPOINT SLIDES 2-3** will provide a few glimpses of information around farmer views on SI.<br>Facilitator 1 uses Powerpoint slides to close discussion | | | | | |
| 15 | 2 hrs | *Refreshments - Gather and return to table* | | | Outsourced/In-house Catering |
| 15 | 2 hr 15 | ***PART 2 - Introducing***<br><br>***DEFRA SIP*** | | Facilitator 2 introduces SIP objectives and programme | Lead facilitator presents:<br><br>**POWERPOINT SLIDES 6-9** (Supplied)<br><br>**STIMULUS 2** (supplied) |
| Facilitator 2 refreshes by replaying **POWERPOINT SLIDE 1** then goes into **POWERPOINT 6-9** "How are we delivering on this challenge?"<br><br>Facilitator asks for an initial points of clarification then<br><br>• Explains that "what we would like articular feedback and reactions to today is the strand of work all about encouraging farmers working together.<br>• Issues **STIMULUS 2** to all: a visual graphic of collaborative activities (tailored to areas) that Defra considered might important to delivering SI.<br>• explains the next stage of discussion. "What I would like you all to do is reflect for a moment on these different examples of collaboration. The questions I want you to initially ask you yourselves are: "*what issues arise in your mind from getting farmers working together*" and "*to what extent can we expect to encourage farmers to undertake in these kinds of actions.* Show these on PPT **(SLIDE 10)** | | | | | |
| 30 | 2 hr 45 | | | Group discussion _ perspectives on SIP and collaboration. | **Audio On**<br><br>Groups discuss **STIMULUS 2**<br><br>Collaboration Handout<br><br>Key views recorded on **flip chart** |
| **OVERVIEW**<br><br>Facilitator 1 and 2 show **STIMULUS 2** and describe each area of collaboration<br><br>Facilitator: | | | | | |

- asks participants to say a few words about areas of collaboration they are involved with, offering examples
- draws out commonality and differences in responses as the basis for:
    - probing on what makes farmers collaborate in these particular ways; what are the motivations/ factors/circumstances that might lead a farmer to collaborate in these ways
    - probing on specific examples of good practice (in a local context) and why that is.
    - probing on what issues may work against/limit/constrain working together
    - probing particular contexts where collaborating is less likely to occur and accounting for this.
- Asks participants to think how working together locally might be usefully promoted or made to work differently; thus are there contexts in which farmers could usefully work together more ; probe on why in and in what ways
- Consolidate on points on flip chart

| | | | | |
|---|---|---|---|---|
| 20 | 3 hr 05 | | Group feedback | **Group 2** facilitator feeds back & invites feedback from Group 1 facilitator<br><br>**Audio Off** |

**Refreshments (Grab a tea)**

**OVERVIEW**

*In feedback facilitator 2 returns to* POWERPOINT SLIDE 1 *"How to manage farmland to increase farm output and competitiveness, whilst protecting the countryside and enhancing environment and social benefits".*

Facilitator provokes: is it important for farmers to work together to achieve this goals.

Facilitator shows **POWERPOINT 11.** This will provide a few glimpses of information around participation. Facilitator uses Powerpoint slides to close discussion

| | | | | |
|---|---|---|---|---|
| 15 | 3hr 20 | Wrap up | Keeping in touch | Facilitators conveys how to keep involved and how outcomes will be communicated |

Facilitator shows **POWERPOINT 11 –** This outlines next steps in SIP 2 and invites comment

| | | | | |
|---|---|---|---|---|
| 10 | 3hr 30 | Evaluation & Questionnaire | Evaluation event plus questionnaire capturing SIP attitudes in brief. | Facilitators issue:<br><br>1. Evaluation form (Supplied)<br>2. Short questionnaire (Supplied)<br><br>Completed *in situ* |

## Stimulus 1

# Viewpoint: Rising to the challenge of sustainable intensification

*Defra's Chief Scientific Adviser Professor Ian Boyd offers a perspective on sustainable intensification and his aspirations for the Research Platform*

## The challenge

**The global spike in food prices in 2007-08 highlighted the fact that demand for food was starting to increase quicker than supply. Perhaps one of the greatest challenges facing society today is how to feed a growing global population while minimizing the environmental impact**.

Sustainable intensification is a process by which all of these can be achieved simultaneously. Food and agriculture are vital to the UK economy.

- *Our food and farming sector accounted for nearly £100bn of GDP in 2012, and is responsible for 13% of national employment (3.6 million people). This productivity is underpinned by services provided by the natural environment. For example, pollination services provided by wild insects are valued at £430m pa. However, of the range of services delivered by the UK's aquatic and terrestrial habitats, 30% have been assessed as declining. Soil degradation is estimated to cost the UK economy £0.9 - 1.4 bn per year.*

Meeting the sustainable intensification challenge necessitates integration of the vast wealth of expertise on the environmental, economic and social aspects of farming held by academia, industry and NGOs across England & Wales.

- *Currently however, much of this knowledge is derived from fragmented research on specific aspects of agricultural land management, such as livestock & plant breeding, air pollution, farmland ecology and cultivation techniques. Synthesis of a potentially overwhelming amount of disperse information is too often left to farmers themselves.*

**What is sustainable intensification?**

Although a term that is now common parlance among researchers and policymakers alike, the definition of 'sustainable intensification' remains a topic of lively debate. Sustainable I ntensification will mean different things to different people and at different scales.

- *For an individual farmer, sustainable intensification could mean increasing profitability by optimising resource use efficiency.*
- *For a national policymaker, sustainable intensification might mean an increase in national yield, or an increase in competitiveness, without negative environmental impacts.*

Perhaps rather than trying to establish a universally acceptable definition of sustainable intensification, we should ask 'what might sustainable intensification look like?' Hopefully the SIP will soon begin to demonstrate some of the potential answers to this question. This will be achieved through a practice-based approach, implementing new approaches to food production and observing and measuring the environmental, social and economic impacts.

**Sustainable intensification trade-offs and measures**

Measures of environmental sustainability are numerous - biodiversity impacts, GHG emissions, water quality, land use - and these often represent trade-offs.

- *For example, low-carbon farming might produce lower yields and therefore necessitate use of a larger land area, resulting in a greater impact on biodiversity*.

Obviously, sustainability cannot be defined merely in environmental terms - if agricultural intensification is to be sustained, it must also deliver sufficient economic and social benefits. All these are interlinked.

- *For example, for better or worse, agricultural activity has a great influence on ecosystem services such as landscape and biodiversity. These are crucial to the 3,000 million outdoor recreational visits UK residents make each year, which create social value in excess of £10,000 million annually.*

This complexity necessitates the development of more sophisticated, integrated measures of farm performance.

*Professor Ian Boyd is Chief Scientific Adviser at the Department of Environment, Food and Rural Affairs. He is currently Professor in Biology at the University of St Andrews.*

**STIMULUS 2**

## Working together for the environment

For example:

*Participation in an environmental stewardship scheme*

*Involvement in the Catchment Sensitive Farming project*

*Participation in a local project/initiative promoting wildlife*

## Sharing resources between farms

For example:

*Machinery sharing*

*Lending breeding sires*

*Straw for manure swaps*

*Labour sharing*


## Involvement in farmer interest groups and associations

For example:

- *Membership of buying groups and marketing cooperatives*
- *Membership of a quality assurance scheme/initiative*