Welsh Government

Estimating potential economic effects of Sustainable Farming Scheme Universal Actions

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ESTIMATING POTENTIAL ECONOMIC EFFECTS OF SUSTAINABLE FARMING SCHEME UNIVERSAL ACTIONS

Introduction

1. The Welsh Government commissioned research by ADAS, Pareto Consulting, SRUC and University College Dublin to estimate the potential economic effects of elements of the proposed Sustainable Farming Scheme (SFS) across Wales in terms of agricultural land and labour use, farm output and farm incomes. Since 2020, the project has collated and analysed physical and financial data to construct a farm business-level model of Welsh agriculture to simulate successive SFS Universal Action (UA) proposals.

2. Phase 6 of the project updated the model to reflect revised SFS proposals, including: changes to UA payment rates; changes to the thresholds and rates for tapering and capping total payments; and the introduction of additional management measures to aid compliance with the 10% area threshold for semi-natural habitat.

3. Unlike Phase 5, only one set of proposed SFS payment rates was modelled. This comprised: a Whole Farm Payment of £70 payable on each ha of the farm business up to 70 ha, but £2 per ha thereafter; a Habitat Maintenance Payment of £69 payable on each ha (excluding common land)[1] of existing or newly created semi-natural habitat; a Woodland Maintenance Payment of £62 payable on each ha of owned woodland (tenanted farms are assumed to have no managerial control over woodland); a Social Value Payment of £107 payable on each ha; and a one-off Stability Payment for the first year of the SFS, of £1,000 for each farm that is 100 ha or smaller.

4. In addition, total payments (excluding the Stability Payment) to a farm business were subject to progressive tapered reductions: 0% up to £25k; then 5% on the next £25k up to £50k; 10% on the next £100k up to £150k; 15% on the next £50k up to £200k; 30% on the next £50k up to £250k; 55% on the next £50k up to £300k; and 100% on anything over £300k.

5. The model estimates changes to farm output and income if all farms enrol in the SFS UA and abide with requirements and restrictions anticipated to be issued as official guidance accompanying the SFS. To simulate the effects of SFS uptake, the model necessarily invokes several assumptions and combines numerous datasets subject to various sources of uncertainty and error. Consequently, modelled results need to be interpreted with care.

6. For example, to maintain consistency and allow comparisons with previous modelling, numbers of modelled livestock remain baselined to 2019. However, given that reported aggregate headcounts of animals have fallen since 2019 the model is likely to over-estimate livestock displacement and associated reductions in output and farm income attributable to the SFS alone i.e. some displacement has already occurred for other reasons. For example, aggregate Welsh Government data show that total sheep and lamb numbers fell by c.8% and total cattle and calf numbers by c.3% between 2019 and 2024.[2]

[1] Support for management of commons is anticipated to now feature in the planned future Collaborative layer of the SFS. Although management of commons is not paid, within the model, the area of commons does contribute towards the 10% semi-natural habitat area of a farm and does attract both the Whole Farm Payment and the Social Value Payment.

[2] Survey of agriculture and horticulture: June 2024 | GOV.WALES

7. Similarly, the policy decision to use guidance recommendations rather than more prescriptive mandatory management requirements also means that the model may over-estimate livestock displacement and associated reductions in output and income. This is because the model assumes 100% adherence to the guidance, yet farms will have flexibility to deliver policy objectives through whatever management practices best fit with their individual circumstances. The higher the proportion of farms choosing to exercise such flexibility rather than adhere to the published guidance, the greater the possible over-estimation of negative effects by the model.

8. It is also possible that best management practices now prescribed as requirements (e.g. data recording and planning) under the Whole Farm Payment are already implemented by a proportion of farms. As such, some of the costs of complying with such best practice may already be being incurred and hence are not attributable to introduction of the SFS. Again, this implies that the model will exaggerate negative impacts.

9. These, and other caveats, are considered further below and highlight that all model estimates should be viewed as indicative rather than definitive. Ideally, they should be interpreted in tandem with insights from other models and ground-truthing exercises. Equally, data gaps and related caveats highlight potential challenges that merit further investigation for practical policy implementation purposes. Nonetheless the results do indicate the likely relative magnitudes and patterns of potential impacts arising from SFS Universal Actions and where pressure for change is likely to be felt.

10. For ease of comparison, the following Tables summarise Phase 6 modelling results in a similar format to previous results, by a) farm type, b) region and c) size.[3] Results presented include aggregate biophysical indicators plus expenditure, output and farm income alongside median and mean values (which differ due to unevenness in underlying distributions, and where medians are zero it highlights that at least half the farms are unaffected). Future 'Optional' and 'Collaborative' SFS elements are not modelled. Unlike previous Phases, the distinction between part-time and full-time farms has been dropped to reduce the number of Tables presented.

11. Tables 1 and 2 present biophysical results whilst Tables 3 to 5 present financial results. Tables 6 and 7 summarise some sensitivity analysis in relation to key assumptions regarding adherence to SFS guidance and the additionality of compliance costs.

[3] Size is expressed in terms of European Size Units (ESUs) related to output rather than area, meaning that a farm with a smaller physical area but a bigger turnover will be classed as a bigger business than a farm with a larger physical footprint but lower turnover. The size classes used are: Very Small <8 ESU; Small => 8 and <40 ESU; Medium => 40 and <100 ESU; Large => 100 and <200 ESU; 8 ESU is equivalent to €25k of Standard Output, the approximate threshold for a full-time farm.

Headline results

12. Relative to Phase 5, changes to the SFS UA design are estimated to result in smaller reductions to aggregate farm output and income (compared to the pre-SFS 2019 baseline). This partly reflects changes to the various payment rates but also the retention of more livestock (c.5k fewer livestock units displaced). However, underlying heterogeneity of farming systems and circumstances means that the distribution of effects remains uneven.

13. Less livestock displacement reflects the introduction of various additional management measures as alternative ways of creating semi-natural habitat to meet the 10% habitat area requirement. Essentially, the additional measures reduce the intensity of grassland management by restricting grazing/cutting access only for a period of the year rather than requiring full conversion to the equivalent of rough grazing. The reduction in fodder Dry Matter (DM) production/utilisation from reduced grassland management intensity is modelled as an increased demand for bought-in feed, thereby allowing livestock retention whilst meeting habitat creation requirements. Although avoiding more costly livestock displacement, additional feed represents an additional expense and raises compliance costs relative to Phase 5 by c.£1.8m.[4]

14. Uptake of these additional management measures and the subsequent avoidance of livestock displacement is predominantly concentrated across dairy farms. Reduced livestock displacement also means reduced displacement of farm labour (c.0.1k avoided), again predominantly on dairy farms. However, aggregate livestock displacement still totals c.60k livestock units (c.5% of 2019 baseline). This reflects assumed stocking density restrictions consistent with the recommended (but not mandatory) management guidance for Section 7 habitats, with such restrictions applying widely across all farm types, both upland and lowland. Yet, as already noted, adherence to guidance may not be universal.

15. Moreover, the reductions in livestock numbers experienced since 2019 but not included in the model amount to c.62k livestock units. Hence, whilst the precise distribution of reductions may differ, much of the modelled livestock displacement estimated to occur under the SFS may already have occurred for other reasons. Consequently, the model will exaggerate additional downward pressure on output and farm income that is attributable to introduction of the SFS.

16. Acknowledging that caveat, the estimated Aggregate Output, Gross Margin (GM) and Farm Business Income (FBI) reductions relative to the pre-SFS 2019 baseline are lower than in Phase 5 (by c.£10.5m, c.6.4m and c.£9.7m – c.£14.0m respectively). This partly reflects reduced livestock displacement, particularly for dairy farms with their typically higher values per livestock unit but also changes to the various payment rates.

17. In particular, the Stability Payment, the Whole Farm Payment and Social Value Payment are collectively more generous than overall payment levels in previous policy iterations. Capping and tapering also shifts the distribution of funding more towards average size and smaller farms, which can face higher unit costs of compliance with some requirements. The Social Value Payment (SVP) is the single largest element, approaching two-thirds of total support, followed by the Whole Farm Payment accounting for over one-fifth. Capping and tapering modestly reduces estimated overall policy expenditure by c.£6.7m relative to uncapped

[4] If additional feed is purchased from other Welsh farms, the effect on aggregate output and income could be positive. However, this possibility has not been modelled, nor have possible constraints' effects on the aggregate availability and unit cost of additional bought-in feed at the national level.

payments, with only Very Small farms being unaffected and some larger businesses experiencing significant effects.

18. Relative to Phase 5, overall policy support is very slightly higher (by c. £ 2.7m) than under the previous most generous funding scenario (although, as with all results presented here, budget figures should be viewed as indicative). However, this includes c.£10.9m for the one-off Stability Payment, removal of which in subsequent years would lower overall policy expenditure and FBI. The Stability Payment predominantly goes to Very Small and Small farms (as measured by output rather than area).

19. However, as with the results of all previous modelling Phases, aggregate FBI is still reduced (albeit by less than in Phase 5) because the SFS imposes additional compliance costs[5] and incurs GM losses through livestock displacement. Hence, relative to the pre-SFS 2019 baseline (updated to 2023 real values), aggregate FBI is estimated to be c.16% to c.18% lower, with the majority of farms losing FBI (noting that, due to heterogeneity across the population, it is still possible for some farms to gain whilst others lose FBI). Restoring aggregate FBI with flat-rate payments would require additional support expenditure and/or improved market returns through better farmgate prices and improved productivity. Both of the latter have already occurred to some extent in recent years, albeit not equally across all sectors.

20. Whereas Table 4 compares estimated FBI under the SFS to baseline FBI with 100% of historical support, Table 5 compares it to FBI under progressively lower levels of BPS support. This illustrates the shifting relativities between FBI under declining legacy CAP support compared to future SFS support, with FBI under the former declining and hence aggregate changes in FBI under the SFS ultimately shifting from relative losses to relative gains. Such tapering of BPS support is proposed to ease a gradual transition from legacy CAP schemes to the SFS, and the changing relative levels of FBI offer an indication of the possible relative attractiveness of enrolling in the SFS rather than continuing with declining BPS support (although the absence of Optional and Collaborative layers means that modelled funding support is less than the total that may be available in future).

21. Unsurprisingly, FBI under the SFS is relatively better at higher rates of BPS tapering. Again, however, the pattern of effects is uneven across different farm types, with dairy farms still suffering greater relative losses whilst other types see relative gains. This highlights that although the model's assumption of 100% enrolment in the SFS may be extreme, the even more significant downward pressure on incomes for farms choosing to not enrol may well encourage high uptake rates. However, it should also be noted that calculating relative changes in FBI against a shifting BPS baseline does not alter the absolute level of FBI under the SFS, nor the relevance of seeking to enhance business resilience through (e.g.) improved market returns and productivity.

22. Tables 6 and 7 illustrate two possibilities for headline FBI losses to be exaggerated. First, if a proportion of farms choose to not adhere to guidance on stocking densities but rather to deliver habitat outcomes in some other way, thereby avoiding some of the projected livestock displacement. Second, if a proportion of farms already follow best practice and hence will not incur additional compliance costs because of the SFS. In both cases, FBI reductions would be less than estimated by the model, even without reference to the falling baseline headcount of livestock.

[5] Farmer time elements of compliance costs should perhaps be excluded from FBI calculations (i.e., as managerial effort to be rewarded by FBI) but would still need to be accounted for and hence are included here for convenience (see also sensitivity analysis and discussion of key caveats below).

23. Finally, the Tables highlight the heterogeneity of Welsh agriculture with variation in results between but also within farm type, region and size categories. Notably, the median level of livestock displacement (and hence output and GM loss) in all cases is zero, meaning that for at least half of all farms the impacts on FBI are due solely to other compliance costs but also that the more severe displacement costs are concentrated amongst a minority of farms. For example, livestock displacement is estimated to affect 2,871 farms, of which only 10% account for c.52% of total displacement and c.63% of total GM reduction.[6]

24. This concentration of impacts upon a minority of farms reflects the underlying distribution of agricultural production in Wales. Specifically, that more populous smaller producers account for a smaller share of land, livestock and agricultural output than less populous larger producers do, and that within this a few very large producers dominate further. For example, there are a few very large dairy and sheep producers. It is possible that data imperfections (e.g. with respect to seasonal grass lets) lead to exaggerated modelled impacts across these farms by under-estimating their actual utilised areas. Nonetheless, the underlying skewed distribution is a structural feature of Welsh agriculture, not merely a modelling artefact. This highlights the challenge of designing policy levers that are sensitive to scale, ensuring that disproportionate burdens on different groups of producers are justified by outcomes and/or mitigated through transitional support.

25. The results summarised above and in the Tables below are based on the best data available data at the time of modelling. Accompanying caveats mean that results should be interpreted with care and treated as indicative rather than definitive, ideally alongside insights from other models and ground-truthing exercises. Nevertheless, the estimated effects reveal the likely relative magnitudes and patterns of potential impacts arising from SFS Universal Actions and where pressure for change is likely to be felt. Moreover, the findings also provide some guidance on where further data gathering and analytical effort could usefully be undertaken.

[6] Although care should be taken not to place undue emphasis upon statistical outliers (which may reflect data inaccuracies), the skewed nature of underlying distributions is readily apparent.

Table 4.a: Estimated managed areas under SFS Universal Actions, by farm type (including part-time businesses, n=15,555)

	Arable (301)	LFA Dairy (924)	Lowland Dairy (621)	Lowland grazing (2,124)	Lowland Mixed/ other (1,680)	LFA Mixed grazing (4,752)	Specialist beef SDA (978)	Specialist sheep SDA (4,175)	All farms (15,555)
SN habitat created (ha)	1.3k	4.7k	4.5k	5.1k	2.4k	7.0k	0.7k	1.9k	**27.6k**
Median; Mean per farm (ha)	1.9; 4.2	4.2; 5.1	6.1; 7.3	1.4; 2.4	0.0; 1.4	0.0; 1.5	0.0; 0.8	0.0; 0.4	**0.0; 1.8**
Retained SN habitat paid (ha)	0.5k	4.8k	0.1k	2.9k	8.0k	55.1k	25.9k	167.3k	**264.6k**
Median; Mean per farm (ha)	0.0; 1.6	0.0; 5.2	0.0; 0.1	0.0; 1.3	0.0; 4.8	0.4; 11.6	2.9; 26.5	4.6; 40.1	**0.2; 17.0**
Woodland maintained (ha)	1.7k	4.6k	2.3k	5.2k	7.0k	16.5k	4.2k	24.2k	**65.9k**
Median; Mean per farm (ha)	0.8; 5.8	2.0; 5.0	0.8; 3.8	0.1; 2.4	0.7; 4.2	1.0; 3.5	1.2; 4.3	1.8; 5.8	**1.0; 4.2**
Total SFS area (ha)	37.2k	114.0k	83.4k	130.2k	94.0k	390.8k	105.7k	533.7k	**1,488.9k**
Median; Mean per farm (ha)	85.3; 123.5	90.8; 123.3	108.2; 134.2	41.6; 61.3	29.1; 55.9	52.8; 82.2	60.2; 108.1	75.2; 127.8	**58.3; 95.7**

Table 1.b: Estimated managed areas under SFS Universal Actions, by region (including part-time businesses, n=15,555)[8]

	Carmarthenshire (2,428)	Ceredigion (1,605)	NE Wales (2,160)	NW Wales (2,340)	Pembrokeshire (1,337)	Powys (3,526)	South Wales (2,159)	All farms (15,555)
SN habitat created (ha)	3.9k	3.1k	5.5k	3.4k	3.4k	4.2k	4.0k	**27.6k**
Median; Mean per farm (ha)	0.0; 1.6	0.0; 1.9	0.8; 2.6	0.0; 1.5	0.6; 2.5	0.0; 1.2	0.0; 1.9	**0.0; 1.8**
Retained SN habitat paid (ha)	11.6k	29.7k	36.5k	85.9k	4.2k	77.2k	19.4k	**264.6k**
Median; Mean per farm (ha)	0.0; 4.8	0.3; 18.5	0.0; 16.9	2.1; 36.7	0.0; 3.2	0.8; 21.9	0.0; 9.0	**0.2; 17.0**
Woodland maintained (ha)	10.3k	5.0k	7.1k	9.6k	5.2k	20.2k	8.5k	**65.9k**
Median; Mean per farm (ha)	1.6; 4.2	1.1; 3.1	0.5; 3.3	0.1; 4.1	0.9; 3.9	2.2; 5.7	0.9; 4.0	**1.0; 4.2**
Total SFS area (ha)	170.6k	132.6k	213.0k	251.1k	120.6k	417.6k	183.4k	**1,488.9k**
Median; Mean per farm (ha)	49.5; 70.3	51.3; 82.7	58.9; 98.7	54.5; 107.3	57.9; 90.3	76.1; 118.5	55.4; 85.0	**58.3; 95.7**

Table 1.c: Estimated managed areas under SFS Universal Actions, by farm size (including part-time businesses, n=15,555)[7]

	Very Small (3,489)	Small (5,949)	Medium (3,324)	Large (1,324)	Very Large (1,469)	All farms (15,555)
SN habitat created (ha)	1.7k	6.6k	5.6k	3.9k	9.7k	**27.6k**
Median; Mean per farm (ha)	0.0; 0.5	0.0; 1.1	0.0; 1.7	0.0; 3.0	5.3; 6.6	**0.0; 1.8**
Retained SN habitat paid (ha)	9.5k	68.0k	95.0k	58.6k	33.4k	**264.6k**
Median; Mean per farm (ha)	0.0; 2.7	0.3; 11.4	2.3; 28.6	2.1; 44.3	0.0; 22.8	**0.2; 17.0**
Woodland maintained (ha)	5.6k	18.7k	18.7k	11.6k	11.2k	**65.9k**
Median; Mean per farm (ha)	0.2; 1.6	0.8; 3.2	2.2; 5.6	3.4; 8.7	2.2; 7.6	**1.0; 4.2**
Total SFS area (ha)	75.1k	373.2k	449.7k	284.4k	306.4k	**1,488.9k**
Median; Mean per farm (ha)	15.4; 21.5	47.2; 62.7	104.9; 135.3	165.7; 214.8	136.3; 208.6	**58.3; 95.7**

[7] 'SN habitat created' is new semi-natural habitat created on land previously under arable, temporary grass or permanent pasture, and receives the £69/ha habitat management payment. 'Retained SN habitat paid' is existing semi-natural habitat retained (excluding commons and woodland) and in receipt of the £69/ha payment. 'Woodland maintained' receives £62/ha. The total area of semi-natural habitat used to meet the minimum 10% threshold requirement includes commons and broadleaf woodlands, but these are not included in the retained area paid the £69/ha habitat management payment. The total SFS area receives both the Whole Farm Payment of £70/ha or £2/ha plus the Social Value Payment of £107/ha.

Table 1.d: Estimated output and cost effects of compliance with SFS UA requirements, by farm type (including part-time farms, n=15,555)

	Arable (301)	LFA Dairy (924)	Lowland Dairy (621)	Lowland grazing (2,124)	Lowland Mixed/ other (1,680)	LFA Mixed grazing (4,752)	Specialist beef SDA (978)	Specialist sheep SDA (4,175)	All farms (15,555)
Livestock reduction (GLU)	0.3k	6.8k	10.3k	6.0k	1.3k	10.0k	2.2k	23.4k	**60.3k**
%change	-4.7%	-3.2%	-5.7%	-4.5%	-3.7%	-3.2%	-3.9%	-8.4%	**-5.0%**
Median, Mean per farm (GLU)	0.0; 0.9	0.0; 7.4	0.0; 16.6	0.0; 2.8	0.0; 0.8	0.0; 2.1	0.0; 2.3	0.0; 5.6	**0.0; 3.9**
Output reduction (£)	£0.4m	£17.2m	£27.6m	£4.1m	£0.8m	£6.3m	£1.8m	£11.4m	**£69.7m**
%change	-0.7%	-3.1%	-5.9%	-3.2%	-1.1%	-2.4%	-3.0%	-6.2%	**-3.9%**
Median; Mean per farm (£)	£0.0k; £1.3k	£0.0k; £18.6k	£0.0k; £44.4k	£0.0k; £1.9k	£0.0k; £0.5k	£0.0k; £1.3k	£0.0k; £1.9k	£0.0k; £2.7k	**£0.0k; £4.5k**
GM reduction (£)	£0.3m	£10.1m	£16.9m	£2.6m	£0.4m	£3.7m	£1.0m	£6.4m	**£41.3m**
%change	-0.9%	-3.8%	-7.4%	-3.9%	-0.9%	-2.9%	-2.9%	-7.6%	**-4.7%**
Median; Mean per farm (£)	£0.0k; £0.9k	£0.0k; £10.9k	£0.0k; £27.1k	£0.0k; £1.2k	£0.0k; £0.2k	£0.0k; £0.8k	£0.0k; £1.0k	£0.0k; £1.5k	**£0.0k; £2.7k**
Other compliance costs (£)	£0.8m	£2.7m	£2.0m	£4.7m	£3.4m	£10.6m	£2.1m	£9.0m	**£35.3m**
Median; Mean per farm (£)	£2.4k; £2.8k	£2.6k; £2.9k	£2.9k; £3.2k	£2.0k; £2.2k	£1.7k; £2.0k	£2.0k; £2.2k	£2.0k; £2.2k	£1.9k; £2.2k	**£2.0k; £2.3k**
CAP PI & PII reduction (£)	-£5.6m	-£17.7m	-£12.9m	-£22.9m	-£15.5m	-£66.0m	-£16.9m	-£84.3m	**-£241.8m**
%change	97.2%	95.9%	96.1%	95.9%	93.3%	93.3%	89.7%	89.0%	**92.2%**
Median; Mean per farm (£)	-£15.6k; -£18.5k	-£16.4k; -£19.1k	-£18.2k; -£20.8k	-£8.7k; -£10.8k	-£5.7k; -£9.2k	-£11.2k; -£13.9k	-£12.7k; -£17.3k	-£14.6k; -£20.2k	**-£12.4k; -£15.5k**
Change in SLR	5	136	207	107	29	186	39	453	**1,163**
%change	-1.3%	-3.0%	-5.4%	-3.8%	-1.8%	-2.4%	-3.4%	-4.8%	**-3.7%**
Median; Mean per farm (SLR)	0.0; 0.0	0.0; 0.1	0.0; 0.3	0.0; 0.1	0.0; 0.0	0.0; 0.0	0.0; 0.0	0.0; 0.1	**0.0; 0.1**

Table 1.e: Estimated output and cost effects of compliance with SFS UA requirements, by farm region (including part-time farms, n=15,555)

	Carmarthenshire (2,428)	Ceredigion (1,605)	NE Wales (2,160)	NW Wales (2,340)	Pembrokeshire (1,337)	Powys (3,526)	South Wales (2,159)	All farms (15,555)
Livestock reduction (GLU)	6.0k	2.6k	11.6k	9.5k	2.2k	20.1k	8.2k	**60.3k**
%change	-3.5%	-2.3%	-6.0%	-5.7%	-1.5%	-6.8%	-6.6%	**-5.0%**
Median, Mean per farm (GLU)	0.0; 2.5	0.0; 1.6	0.0; 5.4	0.0; 4.1	0.0; 1.7	0.0; 5.7	0.0; 3.8	**0.0; 3.9**
Output reduction (£)	£10.3m	£3.0m	£15.8m	£8.2m	£2.9m	£19.9m	£9.6m	**£69.7m**
%change	-3.3%	-1.7%	-5.3%	-3.9%	-0.9%	-6.7%	-5.3%	**-3.9%**
Median; Mean per farm (£)	£0.0k; £4.3k	£0.0k; £1.9k	£0.0k; £7.3k	£0.0k; £3.5k	£0.0k; £2.1k	£0.0k; £5.6k	£0.0k; £4.5k	**£0.0k; £4.5k**
GM reduction (£)	£6.3m	£1.8m	£9.3m	£4.8m	£1.7m	£11.5m	£5.7m	**£41.3m**
%change	-4.2%	-2.0%	-6.5%	-4.7%	-1.1%	-8.1%	-6.3%	**-4.7%**
Median; Mean per farm (£)	£0.0k; £2.6k	£0.0k; £1.1k	£0.0k; £4.3k	£0.0k; £2.1k	£0.0k; £1.3k	£0.0k; £3.3k	£0.0k; £2.7k	**£0.0k; £2.7k**
Other compliance costs (£)	£5.3m	£3.5m	£4.8m	£5.4m	£3.4m	£8.2m	£4.6m	**£35.3m**
Median; Mean per farm (£)	£2.0k; £2.2k	£2.0k; £2.2k	£2.0k; £2.2k	£2.0k; £2.3k	£2.2k; £2.5k	£2.1k; £2.3k	£1.9k; £2.1k	**£2.0k; £2.3k**
CAP PI & PII reduction (£)	-£28.9m	-£22.8m	-£35.0m	-£40.3m	-£19.0m	-£66.0m	-£29.9m	**-£241.8m**
%change	96.4%	89.2%	92.8%	87.5%	95.7%	92.2%	94.3%	**92.2%**
Median; Mean per farm (£)	-£10.1k; -£11.9k	-£11.1k; -£14.2k	-£12.6k; -£16.2k	-£11.9k; -£17.2k	-£12.0k; -£14.3k	-£14.8k; -£18.7k	-£11.6k; -£13.8k	**-£12.4k; -£15.5k**
Change in SLR	117	50	221	182	41	389	161	**1,163**
%change	-2.9%	-1.7%	-4.6%	-4.3%	-1.2%	-4.5%	-4.6%	**-3.7%**
Median; Mean per farm (SLR)	0.0; 0.0	0.0; 0.0	0.0; 0.1	0.0; 0.1	0.0; 0.0	0.0; 0.1	0.0; 0.1	**0.0; 0.1**

Table 1.f: Estimated output and cost effects of compliance with SFS UA requirements, by farm size (including part-time farms, n=15,555)

	Very Small (3,489)	Small (5,949)	Medium (3,324)	Large (1,324)	Very Large (1,469)	All farms (15,555)
Livestock reduction (GLU)	0.4k	4.7k	12.7k	14.0k	28.6k	**60.3k**
%change	-2.5%	-2.8%	-4.1%	-6.0%	-5.9%	**-5.0%**
Median, Mean per farm (GLU)	0.0; 0.1	0.0; 0.8	0.0; 3.8	0.0; 10.6	0.0; 19.4	**0.0; 3.9**
Output reduction (£)	£0.2m	£2.7m	£6.3m	£8.2m	£52.2m	**£69.7m**
%change	-0.8%	-1.5%	-2.4%	-3.6%	-4.8%	**-3.9%**
Median; Mean per farm (£)	£0.0k; £0.1k	£0.0k; £0.5k	£0.0k; £1.9k	£0.0k; £6.2k	£0.0k; £35.6k	**£0.0k; £4.5k**
GM reduction (£)	£0.1m	£1.6m	£3.8m	£4.6m	£31.1m	**£41.3m**
%change	-0.8%	-1.8%	-2.9%	-4.1%	-5.9%	**-4.7%**
Median; Mean per farm (£)	£0.0k; £0.0k	£0.0k; £0.3k	£0.0k; £1.1k	£0.0k; £3.5k	£0.0k; £21.2k	**£0.0k; £2.7k**
Other compliance costs (£)	£5.5m	£11.8m	£8.5m	£4.2m	£5.3m	**£35.3m**
Median; Mean per farm (£)	£1.5k; £1.6k	£1.9k; £2.0k	£2.4k; £2.6k	£3.0k; £3.2k	£3.1k; £3.6k	**£2.0k; £2.3k**
CAP PI & PII reduction (£)	-£14.7m	-£68.5m	-£73.0m	-£41.2m	-£44.4m	**-£241.8m**
%change	96.1%	93.8%	91.1%	89.7%	92.6%	**92.2%**
Median; Mean per farm (£)	-£3.1k; -£4.2k	-£9.9k; -£11.5k	-£18.0k; -£22.0k	-£24.9k; -£31.1k	-£21.5k; -£30.2k	**-£12.4k; -£15.5k**
Change in SLR	8	93	242	262	558	**1,163**
%change	-1.2%	-1.8%	-2.8%	-4.3%	-5.1%	**-3.7%**
Median; Mean per farm (SLR)	0.0; 0.0	0.0; 0.0	0.0; 0.1	0.0; 0.2	0.0; 0.4	**0.0; 0.1**

Table 1.g: Estimated payment for SFS UA requirements, by farm type (including part-time farms, n=15,555)

	Arable (301)	LFA Dairy (924)	Lowland Dairy (621)	Lowland grazing (2,124)	Lowland Mixed/ other (1,680)	LFA Mixed grazing (4,752)	Specialist beef SDA (978)	Specialist sheep SDA (4,175)	All farms (15,555)
Habitat payment (£)	£0.1m	£0.7m	£0.3m	£0.5m	£0.7m	£4.3m	£1.8m	£11.7m	**£20.2m**
Median; Mean per farm (£)	£0.2k; £0.4k	£0.3k; £0.7k	£0.4k; £0.5k	£0.2k; £0.3k	£0.1k; £0.4k	£0.2k; £0.9k	£0.3k; £1.9k	£0.4k; £2.8k	**£0.2k; £1.3k**
Woodland Payment (£)	£0.1m	£0.3m	£0.1m	£0.3m	£0.4m	£1.0m	£0.3m	£1.5m	**£4.1m**
Median; Mean per farm (£)	£0.0k; £0.4k	£0.1k; £0.3k	£0.1k; £0.2k	£0.0k; £0.2k	£0.0k; £0.3k	£0.1k; £0.2k	£0.1k; £0.3k	£0.1k; £0.4k	**£0.1k; £0.3k**
Whole Farm Payment	£1.2m	£4.2m	£2.9m	£6.4m	£4.3m	£16.1m	£3.5m	£15.7m	**£54.3m**
Median; Mean per farm (£)	£4.9k; £4.0k	£4.9k; £4.5k	£5.0k; £4.7k	£2.9k; £3.0k	£2.0k; £2.6k	£3.7k; £3.4k	£4.2k; £3.6k	£4.9k; £3.8k	**£4.1k; £3.5k**
Social Value Payment	£4.0m	£12.2m	£8.9m	£13.9m	£10.1m	£41.8m	£11.3m	£57.1m	**£159.3m**
Median; Mean per farm (£)	£9.1k; £13.2k	£9.7k; £13.2k	£11.6k; £14.4k	£4.5k; £6.6k	£3.1k; £6.0k	£5.7k; £8.8k	£6.4k; £11.6k	£8.0k; £13.7k	**£6.2k; £10.2k**
Stability Payment	£0.2m	£0.5m	£0.3m	£1.8m	£1.5m	£3.6m	£0.7m	£2.5m	**£10.9m**
Median; Mean per farm (£)	£1.0k; £0.5k	£1.0k; £0.6k	£0.0k; £0.4k	£1.0k; £0.8k	£1.0k; £0.9k	£1.0k; £0.7k	£1.0k; £0.7k	£1.0k; £0.6k	**£1.0k; £0.7k**
Total SFS payment (£)	£5.6m	£17.8m	£12.6m	£23.0m	£17.0m	£66.8m	£17.6m	£88.5m	**£248.8m**
Median; Mean per farm (£)	£15.7k; £18.6k	£16.2k; £19.3k	£17.3k; £20.3k	£8.6k; £10.8k	£6.5k; £10.1k	£10.8k; £14.0k	£12.4k; £18.0k	£14.8k; £21.2k	**£11.8k; £16.0k**
Capped Total SFS payment (£)	£5.5m	£16.8m	£12.5m	£22.9m	£16.8m	£66.1m	£17.1m	£84.5m	**£242.1m**
Median; Mean per farm (£)	£15.7k; £18.3k	£16.2k; £18.2k	£17.3k; £20.1k	£8.6k; £10.8k	£6.5k; £10.0k	£10.8k; £13.9k	£12.4k; £17.5k	£14.8k; £20.2k	**£11.8k; £15.6k**

Table 1.h: Estimated expenditure and income effects of compliance with SFS UA requirements, by farm region (including part-time farms, n=15,555)

	Carmarthenshire (2,428)	Ceredigion (1,605)	NE Wales (2,160)	NW Wales (2,340)	Pembrokeshire (1,337)	Powys (3,526)	South Wales (2,159)	All farms (15,555)
Habitat payment (£)	£1.1m	£2.3m	£2.9m	£6.2m	£0.5m	£5.6m	£1.6m	**£20.2m**
Median; Mean per farm (£)	£0.2k; £0.4k	£0.3k; £1.4k	£0.2k; £1.3k	£0.4k; £2.6k	£0.2k; £0.4k	£0.2k; £1.6k	£0.2k; £0.7k	**£0.2k; £1.3k**
Woodland Payment (£)	£0.6m	£0.3m	£0.4m	£0.6m	£0.3m	£1.2m	£0.5m	**£4.1m**
Median; Mean per farm (£)	£0.1k; £0.3k	£0.1k; £0.2k	£0.0k; £0.2k	£0.0k; £0.3k	£0.1k; £0.2k	£0.1k; £0.4k	£0.1k; £0.2k	**£0.1k; £0.3k**
Whole Farm Payment	£7.9m	£5.3m	£7.6m	£8.0m	£4.7m	£13.5m	£7.4m	**£54.3m**
Median; Mean per farm (£)	£3.5k; £3.3k	£3.6k; £3.3k	£4.1k; £3.5k	£3.8k; £3.4k	£4.1k; £3.5k	£4.9k; £3.8k	£3.9k; £3.4k	**£4.1k; £3.5k**
Social Value Payment	£18.3m	£14.2m	£22.8m	£26.9m	£12.9m	£44.7m	£19.6m	**£159.3m**
Median; Mean per farm (£)	£5.3k; £7.5k	£5.5k; £8.8k	£6.3k; £10.6k	£5.8k; £11.5k	£6.2k; £9.7k	£8.1k; £12.7k	£5.9k; £9.1k	**£6.2k; £10.2k**
Stability Payment	£1.9m	£1.2m	£1.5m	£1.6m	£1.0m	£2.1m	£1.6m	**£10.9m**
Median; Mean per farm (£)	£1.0k; £0.8k	£1.0k; £0.8k	£1.0k; £0.7k	£1.0k; £0.7k	£1.0k; £0.7k	£1.0k; £0.6k	£1.0k; £0.7k	**£1.0k; £0.7k**
Total SFS payment (£)	£29.8m	£23.3m	£35.3m	£43.2m	£19.4m	£67.1m	£30.7m	**£248.8m**
Median; Mean per farm (£)	£10.2k; £12.3k	£10.5k; £14.5k	£11.8k; £16.3k	£11.4k; £18.5k	£11.7k; £14.5k	£14.7k; £19.0k	£11.3k; £14.2k	**£11.8k; £16.0k**
Capped Total SFS payment (£)	£29.6m	£22.8m	£34.5m	£41.4m	£19.2m	£64.2m	£30.4m	**£242.1m**
Median; Mean per farm (£)	£10.2k; £12.2k	£10.5k; £14.2k	£11.8k; £16.0k	£11.4k; £17.7k	£11.7k; £14.4k	£14.7k; £18.2k	£11.3k; £14.1k	**£11.8k; £15.6k**

Table 1.i: Estimated payment for SFS UA requirements, by farm size (including part-time farms, n=15,555)

	Very Small (3,489)	Small (5,949)	Medium (3,324)	Large (1,324)	Very Large (1,469)	All farms (15,555)
Habitat payment (£)	£0.8m	£5.1m	£6.9m	£4.3m	£3.0m	**£20.2m**
Median; Mean per farm (£)	£0.1k; £0.2k	£0.2k; £0.9k	£0.4k; £2.1k	£0.6k; £3.3k	£0.5k; £2.0k	**£0.2k; £1.3k**
Woodland Payment (£)	£0.3m	£1.2m	£1.2m	£0.7m	£0.7m	**£4.1m**
Median; Mean per farm (£)	£0.0k; £0.1k	£0.1k; £0.2k	£0.1k; £0.3k	£0.2k; £0.5k	£0.1k; £0.5k	**£0.1k; £0.3k**
Whole Farm Payment	£5.0m	£19.6m	£15.7m	£6.6m	£7.4m	**£54.3m**
Median; Mean per farm (£)	£1.1k; £1.4k	£3.3k; £3.3k	£5.0k; £4.7k	£5.1k; £5.0k	£5.0k; £5.1k	**£4.1k; £3.5k**
Social Value Payment	£8.0m	£39.9m	£48.1m	£30.4m	£32.8m	**£159.3m**
Median; Mean per farm (£)	£1.6k; £2.3k	£5.1k; £6.7k	£11.2k; £14.5k	£17.7k; £23.0k	£14.6k; £22.3k	**£6.2k; £10.2k**
Stability Payment	£3.5m	£5.1m	£1.6m	£0.3m	£0.5m	**£10.9m**
Median; Mean per farm (£)	£1.0k; £1.0k	£1.0k; £0.9k	£0.0k; £0.5k	£0.0k; £0.2k	£0.0k; £0.3k	**£1.0k; £0.7k**
Total SFS payment (£)	£17.6m	£71.0m	£73.4m	£42.4m	£44.4m	**£248.8m**
Median; Mean per farm (£)	£3.9k; £5.0k	£9.8k; £11.9k	£17.4k; £22.1k	£24.2k; £32.0k	£20.4k; £30.2k	**£11.8k; £16.0k**
Capped Total SFS payment (£)	£17.6m	£70.5m	£72.1m	£40.5m	£41.5m	**£242.1m**
Median; Mean per farm (£)	£3.9k; £5.0k	£9.8k; £11.8k	£17.4k; £21.7k	£24.2k; £30.6k	£20.4k; £28.3k	**£11.8k; £15.6k**

Table 1.a: Estimated change in FBI under SFS UA requirements, by farm type (including part-time farms, n=15,555)

	Arable (301)	LFA Dairy (924)	Lowland Dairy (621)	Lowland grazing (2,124)	Lowland Mixed/ other (1,680)	LFA Mixed grazing (4,752)	Specialist beef SDA (978)	Specialist sheep SDA (4,175)	All farms (15,555)
FBI change, uncapped (£; %)	-£1.1m; -7.5%	-£12.6m; -9.8%	-£19.2m; -16.6%	-£7.3m; -35.0%	-£2.3m; -8.5%	-£13.5m; -27.5%	-£2.4m; -29.7%	-£11.3m; -16.6%	**-£69.6m; -16.1%**
Median; Mean per farm (£)	-£2.9k; -£3.6k	-£3.7k; -£13.7k	-£4.3k; -£30.9k	-£2.3k; -£3.4k	-£1.1k; -£1.4k	-£2.1k; -£2.8k	-£1.8k; -£2.5k	-£1.8k; -£2.7k	**-£2.1k; -£4.5k**
%losing FBI	92.0%	97.4%	97.3%	95.5%	85.2%	91.3%	85.7%	84.2%	**89.6%**
Loss Median; Mean per farm (£)	-£3.0k; -£4.2k	-£3.8k; -£15.0k	-£4.5k; -£31.9k	-£2.4k; -£3.8k	-£1.4k; -£2.2k	-£2.3k; -£3.4k	-£2.1k; -£3.6k	-£2.3k; -£4.3k	**-£2.4k; -£5.6k**
Gain Median; Mean per farm (£)	£1.5k; £3.5k	£1.1k; £36.1k	£2.5k; £4.0k	£1.2k; £4.2k	£1.3k; £3.4k	£1.0k; £2.6k	£1.9k; £4.5k	£1.7k; £5.7k	**£1.4k; £4.8k**
FBI change, capped (£; %)	-£1.1m; -8.0%	-£13.6m; -10.6%	-£19.3m; -16.7%	-£7.4m; -35.5%	-£2.5m; -9.1%	-£14.2m; -28.9%	-£2.9m; -35.9%	-£15.3m; -22.5%	**-£76.3m; -17.7%**
Median; Mean per farm (£)	-£2.9k; -£3.8k	-£3.8k; -£14.8k	-£4.4k; -£31.0k	-£2.3k; -£3.5k	-£1.1k; -£1.5k	-£2.1k; -£3.0k	-£1.9k; -£3.0k	-£1.9k; -£3.7k	**-£2.2k; -£4.9k**
%losing FBI	92.0%	97.6%	97.3%	95.6%	85.5%	91.6%	86.9%	85.9%	**90.3%**
Loss Median; Mean per farm (£)	-£3.1k; -£4.4k	-£3.9k; -£15.2k	-£4.5k; -£32.0k	-£2.4k; -£3.8k	-£1.4k; -£2.2k	-£2.3k; -£3.5k	-£2.2k; -£4.0k	-£2.3k; -£4.8k	**-£2.4k; -£5.8k**
Gain Median; Mean per farm (£)	£1.5k; £3.2k	£1.0k; £1.3k	£2.5k; £3.7k	£1.2k; £3.8k	£1.3k; £3.1k	£0.9k; £2.3k	£1.6k; £3.8k	£1.5k; £3.6k	**£1.2k; £3.1k**

Table 1.b: Estimated change in FBI under SFS UA requirements, by farm region (including part-time farms, n=15,555)

	Carmarthenshire (2,427)	Ceredigion (1,604)	NE Wales (2,159)	NW Wales (2,339)	Pembrokeshire (1,336)	Powys (3,525)	South Wales (2,158)	All farms (15,555)
FBI change, uncapped (£; %)	-£10.7m; -14.6%	-£4.8m; -10.4%	-£13.9m; -19.9%	-£7.4m; -14.1%	-£4.7m; -6.3%	-£18.6m; -24.9%	-£9.5m; -23.6%	**-£69.6m; -16.1%**
Median; Mean per farm (£)	-£1.8k; -£4.4k	-£1.9k; -£3.0k	-£2.4k; -£6.4k	-£1.8k; -£3.2k	-£2.3k; -£3.6k	-£2.5k; -£5.3k	-£2.0k; -£4.4k	**-£2.1k; -£4.5k**
%losing FBI	89.7%	89.9%	91.7%	85.8%	91.7%	90.4%	88.6%	**89.6%**
Loss Median; Mean per farm (£)	-£2.1k; -£5.1k	-£2.1k; -£3.7k	-£2.6k; -£7.4k	-£2.3k; -£4.9k	-£2.5k; -£4.2k	-£2.7k; -£6.5k	-£2.3k; -£5.4k	**-£2.4k; -£5.6k**
Gain Median; Mean per farm (£)	£0.7k; £1.7k	£0.9k; £3.2k	£1.8k; £4.9k	£2.1k; £7.1k	£1.1k; £3.3k	£1.7k; £6.8k	£1.4k; £3.5k	**£1.4k; £4.8k**
FBI change, capped (£; %)	-£10.9m; -14.9%	-£5.3m; -11.4%	-£14.7m; -21.0%	-£9.2m; -17.5%	-£4.9m; -6.6%	-£21.5m; -28.9%	-£9.9m; -24.4%	**-£76.3m; -17.7%**
Median; Mean per farm (£)	-£1.8k; -£4.5k	-£1.9k; -£3.3k	-£2.4k; -£6.8k	-£1.9k; -£3.9k	-£2.3k; -£3.7k	-£2.5k; -£6.1k	-£2.0k; -£4.6k	**-£2.2k; -£4.9k**
%losing FBI	89.9%	91.1%	92.5%	87.3%	91.8%	91.0%	89.0%	**90.3%**
Loss Median; Mean per farm (£)	-£2.1k; -£5.2k	-£2.1k; -£3.8k	-£2.6k; -£7.7k	-£2.3k; -£5.1k	-£2.6k; -£4.3k	-£2.7k; -£7.0k	-£2.3k; -£5.5k	**-£2.4k; -£5.8k**
Gain Median; Mean per farm (£)	£0.7k; £1.7k	£0.7k; £2.3k	£1.7k; £3.9k	£1.8k; £4.2k	£1.1k; £3.1k	£1.5k; £3.4k	£1.4k; £3.1k	**£1.2k; £3.1k**

Table 1.c: Estimated change in FBI under SFS UA requirements, by farm size (including part-time farms, n=15,555)

	Very Small (3,489)	Small (5,949)	Medium (3,324)	Large (1,324)	Very Large (1,469)	All farms (15,555)
FBI change, uncapped (£; %)	-£2.8m; -22.7%	-£11.0m; -33.1%	-£11.9m; -16.0%	-£7.6m; -13.1%	-£36.4m; -14.3%	**-£69.6m; -16.1%**
Median; Mean per farm (£)	-£0.8k; -£0.8k	-£2.0k; -£1.8k	-£3.2k; -£3.6k	-£4.3k; -£5.7k	-£5.3k; -£24.8k	**-£2.1k; -£4.5k**
%losing FBI	87.4%	89.1%	89.8%	88.7%	97.1%	**89.6%**
Loss Median; Mean per farm (£)	-£0.9k; -£1.1k	-£2.1k; -£2.5k	-£3.4k; -£4.6k	-£4.9k; -£8.3k	-£5.5k; -£26.3k	**-£2.4k; -£5.6k**
Gain Median; Mean per farm (£)	£0.8k; £1.7k	£1.2k; £3.1k	£2.4k; £5.4k	£4.7k; £14.4k	£4.3k; £24.1k	**£1.4k; £4.8k**
FBI change, capped (£; %)	-£2.8m; -22.8%	-£11.5m; -34.6%	-£13.3m; -17.8%	-£9.5m; -16.6%	-£39.3m; -15.5%	**-£76.3m; -17.7%**
Median; Mean per farm (£)	-£0.8k; -£0.8k	-£2.0k; -£1.9k	-£3.3k; -£4.0k	-£4.6k; -£7.2k	-£5.7k; -£26.7k	**-£2.2k; -£4.9k**
%losing FBI	87.4%	89.4%	91.3%	90.9%	97.8%	**90.3%**
Loss Median; Mean per farm (£)	-£0.9k; -£1.1k	-£2.1k; -£2.5k	-£3.5k; -£4.8k	-£5.0k; -£8.7k	-£5.8k; -£27.5k	**-£2.4k; -£5.8k**
Gain Median; Mean per farm (£)	£0.8k; £1.6k	£1.2k; £2.7k	£1.9k; £4.2k	£3.7k; £7.2k	£2.2k; £7.5k	**£1.2k; £3.1k**

Table 2.a: Estimated change in FBI under SFS UA requirements an uncapped payments, relative to dynamic BPS tapering baseline, by farm type (including part-time farms, n=15555)

	Arable (301)	LFA Dairy (924)	Lowland Dairy (621)	Lowland grazing (2,124)	Lowland Mixed/ other (1,680)	LFA Mixed grazing (4,752)	Specialist beef SDA (978)	Specialist sheep SDA (4,175)	All farms (15,555)
FBI change if BPS@100% (£; %)	-£1.1m; -7.5%	-£12.6m; -9.8%	-£19.2m; -16.6%	-£7.3m; -35.0%	-£2.3m; -8.5%	-£13.5m; -27.5%	-£2.4m; -29.7%	-£11.3m; -16.6%	-£69.6m; -16.1%
Median; Mean per farm (£)	-£2.9k; -£3.6k	-£3.7k; -£13.7k	-£4.3k; -£30.9k	-£2.3k; -£3.4k	-£1.1k; -£1.4k	-£2.1k; -£2.8k	-£1.8k; -£2.5k	-£1.8k; -£2.7k	-£2.1k; -£4.5k
%losing FBI	92.0%	97.4%	97.3%	95.5%	85.2%	91.3%	85.7%	84.2%	89.6%
Loss Median; Mean per farm (£)	-£3.0k; -£4.2k	-£3.8k; -£15.0k	-£4.5k; -£31.9k	-£2.4k; -£3.8k	-£1.4k; -£2.2k	-£2.3k; -£3.4k	-£2.1k; -£3.6k	-£2.3k; -£4.3k	-£2.4k; -£5.6k
Gain Median; Mean per farm (£)	£1.5k; £3.5k	£1.1k; £36.1k	£2.5k; £4.0k	£1.2k; £4.2k	£1.3k; £3.4k	£1.0k; £2.6k	£1.9k; £4.5k	£1.7k; £5.7k	£1.4k; £4.8k
FBI change if BPS@60% (£; %)	£1.1m; 9.0%	-£6.6m; -5.4%	-£14.1m; -12.8%	£1.8m; 15.4%	£3.7m; 17.8%	£12.2m; 53.8%	£3.9m; 288.4%	£18.4m; 53.6%	£20.4m; 6.1%
Median; Mean per farm (£)	£3.6k; £3.6k	£2.5k; -£7.1k	£2.6k; -£22.7k	£0.9k; £0.8k	£1.1k; £2.2k	£1.7k; £2.6k	£2.4k; £3.9k	£2.8k; £4.4k	£1.8k; £1.3k
%losing FBI	7.3%	24.7%	29.6%	21.6%	9.9%	11.5%	10.6%	10.9%	13.9%
Loss Median; Mean per farm (£)	-£0.8k; -£9.8k	-£15.0k; -£39.9k	-£34.7k; -£86.5k	-£0.4k; -£4.3k	-£0.1k; -£1.2k	-£0.3k; -£3.5k	-£1.0k; -£5.8k	-£0.8k; -£7.6k	-£1.1k; -£15.4k
Gain Median; Mean per farm (£)	£3.7k; £4.7k	£3.2k; £3.6k	£3.5k; £4.2k	£1.4k; £2.3k	£1.3k; £2.6k	£2.1k; £3.4k	£3.0k; £5.1k	£3.4k; £5.9k	£2.4k; £4.0k
FBI change if BPS@40% (£; %)	£2.2m; 20.1%	-£3.0m; -2.6%	-£11.5m; -10.7%	£6.4m; 90.4%	£6.8m; 38.2%	£25.4m; 268.4%	£7.2m; -354.2%	£35.3m; 201.7%	£68.8m; 24.0%
Median; Mean per farm (£)	£6.8k; £7.3k	£5.5k; -£3.3k	£5.8k; -£18.5k	£2.5k; £3.0k	£2.3k; £4.1k	£3.7k; £5.3k	£4.9k; £7.4k	£5.6k; £8.5k	£4.0k; £4.4k
%losing FBI	3.3%	20.2%	26.1%	8.1%	1.8%	3.6%	3.8%	3.7%	5.9%
Loss Median; Mean per farm (£)	-£0.9k; -£19.7k	-£17.7k; -£44.1k	-£37.0k; -£93.3k	-£3.6k; -£8.3k	-£0.6k; -£2.8k	-£2.3k; -£6.4k	-£1.9k; -£9.6k	-£4.4k; -£12.4k	-£5.9k; -£30.9k
Gain Median; Mean per farm (£)	£6.8k; £8.2k	£6.5k; £7.1k	£7.0k; £7.9k	£2.9k; £4.0k	£2.4k; £4.2k	£4.0k; £5.8k	£5.1k; £8.1k	£6.0k; £9.2k	£4.4k; £6.6k
FBI change if BPS@20% (£; %)	£3.3m; 33.6%	£0.5m; 0.4%	-£8.9m; -8.5%	£10.9m; 444.8%	£9.9m; 67.2%	£38.6m; -1033.7%	£10.6m; -195.8%	£52.2m; 8273.7%	£117.2m; 49.2%
Median; Mean per farm (£)	£9.9k; £11.0k	£8.3k; £0.5k	£8.8k; -£14.4k	£4.2k; £5.2k	£3.5k; £5.9k	£5.9k; £8.1k	£7.3k; £10.9k	£8.7k; £12.5k	£6.3k; £7.5k
%losing FBI	2.3%	17.6%	23.3%	5.7%	0.5%	2.0%	1.7%	1.5%	4.0%
Loss Median; Mean per farm (£)	-£0.6k; -£26.5k	-£17.1k; -£46.1k	-£42.6k; -£99.5k	-£3.6k; -£8.9k	-£2.4k; -£4.2k	-£2.3k; -£6.7k	-£1.6k; -£10.9k	-£5.1k; -£17.7k	-£8.3k; -£40.7k
Gain Median; Mean per farm (£)	£10.1k; £11.9k	£9.5k; £10.5k	£10.3k; £11.5k	£4.6k; £6.0k	£3.6k; £6.0k	£6.1k; £8.4k	£7.5k; £11.2k	£8.8k; £13.0k	£6.6k; £9.5k

N.B. some percentage changes are extreme due to small starting values

Key sensitivities

26. The estimates presented above are subject to various sensitivities and caveats, many of which are outlined briefly in Appendix A below. However, some merit particular attention. First, the choice of 2019 as a baseline year was made when modelling work commenced. However, downward trends in livestock numbers in more recent years (for reasons other than introduction of the SFS) mean that anticipated stocking density restrictions will now be less binding than in the model. That is, existing reductions in sheep and beef cattle headcounts will have created some headroom to accommodate SFS constraints without further adjustment. Consequently, whilst some farms will still be affected, estimated aggregate livestock displacement and therefore SFS-related output and income losses may be exaggerated here.[8] Similarly, although financial data have been updated to 2022/23, those FBS data will not reflect the very most recent market conditions.

27. Second, Gross Margin (GM) reductions reflect the estimated loss of livestock where assumed stocking density restrictions are adhered to for semi-natural habitats and displaced animals cannot be accommodated elsewhere on a farm. However, the stocking densities are merely guidance rather than obligations. Consequently, it is possible that individual enrolled farmers may choose to not follow the guidance. If so, livestock displacement and subsequent reductions in GM and Farm Business Income could be lower. Hence financial results presented here are sensitive to the degree of assumed adherence to guidance.

28. Unfortunately, the propensity of an individual farmer to adhere to the guidance is unknown. If none adhere, all of the estimated GM and FBI reductions might be avoided (although alternative management might itself incur some costs); if all adhere, the estimates stand (subject to other caveats). However, between these two extremes lie a variety of possibilities. For example, if guidance were not uniformly followed for 10% of the affected livestock population across all farms, c.6.0k fewer livestock units would be displaced and GM and FBI reductions would be c.£4.1m smaller; if 20% then c.12.1k fewer livestock would be displaced and reductions would be c.£8.3m less.

29. However, as Table 6 shows, the distribution of non-adherence also matters. For example, if the c.6.0k of 10% avoided displacement occurred uniformly across only specialist sheep farms, GM loss would be c.£1.6m smaller but if it occurred only on dairy farms it would be c.£9.2m smaller. These differences stem from systematic variation in management intensity and profitability across different farm types - much of the displacement and hence financial losses still occur on dairy farms.

[8] At an aggregate level, whilst dairy cattle numbers have largely been maintained, sheep and beef cattle numbers have fallen significantly, possibly by 40k to 50k in livestock unit terms

Table 3.a: Estimated avoidance of livestock unit displacement and associated avoidance of GM reductions under different illustrative propensities of non-adherence to SFS stocking density guidance

	LU displacement avoided (k)	GM loss avoided if uniformly across all farm types (£m)	GM loss avoided if uniformly across only sheep farms (£m)	GM avoided if uniformly across only dairy farms (£m)
% Non-adherence to guidance	**All farms**	**All farms**	**All farms**	**All farms**
0%	0.0k	£0.0m	£0.0m	£0.0m
10%	6.0k	£4.1m	£1.6m	£9.2m
20%	12.1k	£8.3m	£3.3m	£18.6m
30%	18.7k	£12.4m	£5.0m	N/A
100%	60.3k	£41.3m	N/A	N/A

Note: N/A where required livestock headcount exceeds farm type's total

30. It is possible that propensity to not adhere to guidance might be greater on more intensively managed farms facing higher livestock displacement, but equally low intensity farms may have greater scope for alternative habitat management. However, much will depend on individual farmers' confidence in being able to meet inspection requirements if there is a risk that perceived habitat quality might be lower under alternative management practices.

31. Third, a proportion of estimated compliance costs for the Whole Farm Payment may already be being incurred through some farms adhering to what is essentially best practice. For example, soil testing, nutritional planning and Continuing Professional Development. As such, they are not all necessarily additional or attributable to introduction of the SFS. However, the propensity of individual farmers to adhere to best practice is unknown. If they all adhere, none of the compliance costs would be additional but if none adhere then the estimates stand (subject to other caveats). As with adherence to guidance, other permutations lie between these two extremes.

32. For example, if best practice is uniformly followed across 10% of all farms, approximately 10% of estimated compliance costs (c.£3.5m) will already be being incurred and hence will not be additional under the SFS (Table 7). However, again, the distribution of current adherence to best practice matters. For example, if the 10% (i.e. c.1,556) of farms adhering to best practice were all very small or small, non-additional compliance costs would be c.£2.9m for all farms, but c.£4.6m if the 10% of farms already adhering were all medium, large or very large.

Table 4.a: Estimated Whole Farm compliance costs already being incurred and hence non-additional under different illustrative propensities of baseline adherence to best practice

	Compliance costs already incurred if adherence uniformly across all farm types (£m)	Compliance costs already incurred if adherence uniformly across only very small and small farms(£m)	Compliance costs already incurred if adherence uniformly across only medium or bigger farms (£m)
% Adherence to best practice	**All farms**	**All farms**	**All farms**
0%	£0.0m	£0.0m	£0.0m
10%	£3.5m	£2.9m	£4.6m
20%	£7.1m	£5.7m	£9.1m
30%	£10.6m	£8.5m	£13.7m
100%	£35.3m	N/A	N/A

Note: N/A where required farm count exceeds farm size count

33. The degree of variation across farm groups is smaller than in Table 6 because most compliance elements take the form of fixed overhead costs that are the same for all farm types and sizes. It is possible that propensity to currently adhere to best practice might be greater on larger full-time farms, especially members of Quality Assurance schemes, or those farms delivering environmental conditionality through their supply chain (e.g. some contracts in the dairy sector).

34. Fourth, variation in current adherence to prescribed compliance and habitat management practices also has potential implications for the additional amount of labour devoted to such tasks by farmers and/or upstream suppliers because of the SFS. That is, some practices may already be being undertaken. For example, farmers' time on planning, vets' time in relation to animal health, and contractors' time in relation to hedge maintenance. If current adherence to practices prescribed by the SFS is low, the additional required effort will be high. This applies both on-farm (partially offsetting on-farm reductions in SLRs due to lower production) and, by extension, to upstream suppliers (stimulating additional jobs to partially offset reduced demand for other services). Conversely, additional labour requirements (and associated compliance costs) will be lower if the relevant practices are already undertaken across a proportion of farms.

35. Finally, the modelling approach was mostly comparative static rather than dynamic. This means that many potential farm-level adjustments to enterprise mixes, management practices and resource allocations were not included. Consequently, although the results indicate where structural pressure may be felt, they may underplay the resilience and adaptiveness of farming and land use patterns. As such, it is important that communications around the SFS include consideration of possibilities for change and how these may be supported (e.g. through future Optional and Collaborative layers and/or advice, training and capital grants). Transition to the SFS undoubtably presents some disruption, but continued commitments to support a foundational component of the Welsh economy remain and provide opportunities as well as challenges.

Annex A: Model overview

36. The model simulates the effect of SFS Universal Actions on individual farms' land use and livestock numbers plus outputs, costs and incomes. The population used for analysis is farm businesses registered under the Integrated Administration and Control System (IACS) and in receipt of Pillar I or Pillar II CAP support payments in 2019. A biophysical and financial profile was constructed for each farm business by combining various existing datasets through Geographical Information Systems (GIS) and relational databases. The purpose of the model is to estimate upper-bound effects of the SFS Universal Actions. Consequently, 100% uptake is assumed (i.e. all farm businesses are assumed to enrol) and in general only first-order, static impacts are considered rather than allowing for potential dynamic adjustments to management practices and resource allocations.

37. Notwithstanding the use of best available data, information weaknesses and gaps are apparent and create uncertainty about farm-specific accuracy. In addition, modelling unavoidably invokes simplifying assumptions. Consequently, use of the model and interpretation of results are caveated. For example:

    a) Many of the biophysical spatial datasets contain imperfectly aligned boundaries and/or offer incomplete coverage and/or contain other ambiguities that require ground-truthing.

    b) Financial data are taken from the Farm Business Survey (FBS), matched to the modelled population using Propensity Score Matching (PSM). The FBS is not necessarily representative of all farms (particularly very small farms) and PSM is itself an estimation process. Moreover, the most recent market conditions are not reflected in FBS data which are always a year or two behind.

    c) Although FBS data have been updated to 2022/23, farm profiles in terms of land use, livestock numbers and CAP support payments are taken from 2019 as a baseline. Although this conveys a degree of temporal consistency across various datasets, downward trends in livestock numbers in more recent years mean that stocking density restrictions will now be less binding than modelled for many farms, and hence the degree of estimated livestock displacement and subsequent FBI loss is likely to be exaggerated (i.e. some of the estimated change has already occurred for other reasons).

    d) If a proportion of farms choose alternative, less costly, management practices rather than adherence to recommended guidance (e.g. on stocking densities) to deliver policy objectives, then model estimates of livestock displacement and associated reductions in output and income will be too high (i.e. some costs may be avoided).

    e) If a proportion of farms already implement best management practices now prescribed under the Whole Farm Payment (e.g. planning), the model will over-estimate compliance costs attributable to the SFS (i.e. some costs are already being incurred).

    f) The 2019 baseline acts as a policy counterfactual but includes adjustments for estimated costs of compliance with the Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021 and replacement of entry level Glastir options with the Habitat Wales scheme.

    g) The absence of proposals for Optional and Collaborative layers means that the level of funding support modelled is less than the total that may be available in future.

    h) Rough grazing is taken as a proxy for semi-natural habitats. However, IACS data significantly under-report rough grazing relative to the June Agricultural Survey.

Consequently, business-level areas of rough grazing have been estimated, including with reference to land capability. The accuracy of estimated rough grazing and its habitat status should be ground-truthed.

i) In particular, although reasonable in aggregate, the overlapping spatial match between estimated rough grazing as a proxy for semi-natural habitats and Section 7 priority habitat areas used to set indicative stocking density restrictions is imperfect. This means that some farms are assumed to comply with stocking restrictions over a smaller area than they receive habitat payments for whilst some farms will receive habitat payments for a larger area than that to which stocking restrictions apply.

j) Similarly, the total area of land available to some farm businesses through formal and/or informal seasonal grass lets is captured imperfectly for modelling purposes. This means that, although the aggregate area may be correct its distribution may not be and hence the pressure for livestock displacement on some farms may be exaggerated.

k) Unlike previous model Phases, livestock displaced from one part of a farm are now permitted to be reallocated elsewhere on the farm if spare carrying capacity is available. The carrying capacity (i.e. maximum stocking density) of rough grazing, permanent pasture and temporary grass is linked to their estimated average Dry Matter yields (and baseline estimated utilisation of bought-in feed). This neglects potential (but unobserved) variation across farms in Dry Matter yields and other constraints on carrying capacity (and as noted above, neglects possible spare carrying capacity created since 2019 through general downward trends in livestock numbers). The inclusion of bought-in feed to allow retention of livestock under reduced grassland management intensity similarly neglects possible variation in Dry Matter yields and utilisation, including the local and global availability of feed to purchase.

l) Strictly, SFS proposals no longer include explicit restrictions on stocking densities, only guidance. However, guidance has been interpreted as continued de facto restrictions since otherwise the model has no tractability – although some sensitivity analysis is presented by varying the assumed rate of adherence to the guidance.

m) Stocking rates for land parcels only partially covered by target habitats (e.g. environmental designations, Section 7) are restricted if coverage is at least 50%, otherwise they are unrestricted. Different threshold choices would affect model results but also have implications for practical adherence to and monitoring of SFS guidance.

n) Stocking density restrictions and livestock displacement are expressed in terms of Grazing Livestock Units (GLUs). However, the coefficients for converting different categories of livestock are somewhat dated and may not be accurate e.g. the convention of a dairy cow being equivalent to one GLU assumes a milk yield significantly below current industry norms. Different coefficients would affect policy guidance (e.g. dairy farms would become more heavily stocked in GLU terms), with implications for modelling and actual farm management.

o) Similarly, the Standard Labour Requirement (SLR) coefficients used to estimate on-farm labour usage are also somewhat dated and may generate over-estimates e.g. changing management practices, new technologies and structural change might be expected to have lowered labour requirements for many activities. That is, given that labour usage may already have fallen for other reasons, modelled labour

reductions attributed to the SFS may be further exaggerated. Newly published SLR coefficients will be considered for future model Phases.