# WELSH GOVERNMENT INTEGRATED IMPACT ASSESSMENT

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| **Title of proposal:** | **Sustainable Farming Scheme** |
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| **Department:** | **Land Management Reform Division** |
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| **Cabinet Secretary/Minister responsible:** | **Minister for Rural Affairs and North Wales, and Trefnydd** |

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## SECTION 1. WHAT ACTION IS THE WELSH GOVERNMENT CONSIDERING AND WHY?

# Legal background to the Sustainable Farming Scheme– Agriculture (Wales) Act 2023

The Agriculture (Wales) Act 2023 (the Act) includes provisions relating to a number of different policy areas within agriculture, including:

- Sustainable Land Management (SLM)
- Future support for agriculture and ancillary activities
- Monitoring and reporting of SLM
- Monitoring and reporting of future support
- Data collection and sharing

### *Sustainable Land Management*

The Act sets Sustainable Land Management (SLM) as the overarching principle for future agricultural policy, including regulation and support. SLM is defined by four strategic objectives within the Act. These are:

1. To produce food and other goods in a sustainable manner.
2. To mitigate and adapt to climate change.
3. To maintain and enhance the resilience of ecosystems and the benefits they provide.
4. To conserve and enhance the countryside and cultural resources and promote public access to and engagement with them, and to sustain the Welsh language and promote and facilitate its use.

The Act also states,

> For the purposes of the first objective, factors relevant to whether food and other goods are produced in a sustainable manner include, among other things, the resilience of agricultural businesses within the communities in which they operate and their contribution to the local economy.

Furthermore,

> For the purposes of the fourth objective, 'cultural resources' include, among other things, cultural heritage and the historic environment.

These objectives must be met in a way which:

a. Meets present needs without compromising the ability of future generations to meet their own needs; and
b. Contributes to the well-being goals in the Well-being of Future Generations (Wales) Act 2015.

The Act places a duty on Ministers to ensure future support for agriculture is provided in a way which they consider to best contribute to achieving the objectives of SLM.

### *Powers to provide support*

The Act provides Ministers with the powers of support, including the ability to open schemes, for agriculture and sets purposes for support. The powers of support are:

(a) Encouraging the production of food in an environmentally sustainable manner

(b) Reducing emissions of greenhouse gases

(c) Maximising carbon sequestration and storage

(d) Maintaining and enhancing the resilience of ecosystems

(e) Conserving and enhancing landscapes and the historic environment

(f) Improving air quality

(g) Improving water quality

(h) Maintaining and enhancing public access to and engagement with the countryside and the historic environment

(i) Mitigating flood and drought risks

(j) Achieving and promoting high standards of animal health and welfare

(k) Maximising resource efficiency

(l) Helping rural communities to thrive and strengthening links between agricultural businesses and their communities

(m) Improving the resilience of agricultural businesses

(n) Sustaining the Welsh language and promoting and facilitating its use.

## The Sustainable Farming Scheme

Following the introduction of the Agriculture (Wales) Act 2023, the Welsh Government proposes to introduce the Sustainable Farming Scheme (SFS), which will be the primary mechanism by which farms receive financial support in the future.

The SFS will have three 'layers':

- Universal Layer: Actions which all farms participating in the scheme will need to undertake, unless exempt[1].
- Optional Layer: A suite of actions from which farms will be able to choose those most suitable for their business.
- Collaborative Layer: Support for larger-scale projects where farms would work with one another and with other stakeholders to achieve outcomes at landscape scale.

[1] For example, animal health actions will not be relevant for farms that do not have livestock.

This Integrated Impact Assessment accompanies details of the Welsh Government's final proposals for the SFS, on which we are consulting. Please refer to the main consultation document for more detailed information about the proposed SFS and its implementation.

## Transition period

The Welsh Government is committed to ensuring no farmers experience a sudden cessation of their financial support. As such, there will be a managed transition period between 2025 and 2029. During this period, the SFS will be introduced, beginning with Universal Actions with the full suite of Optional and Collaborative Actions becoming available over time. In addition, we propose to utilise payment mechanisms to provide stability and allow farms to adjust, tapering out the current Basic Payment Scheme (BPS) and providing an additional Stability Payment to SFS farms to provide additional support while the Optional and Collaborative Actions are brought into operation.

## Impact

We recognise the introduction of SLM in the Act, and the transition away from existing payment schemes to the SFS, represents a substantial change for the agriculture industry in Wales. We also recognise that climate change, rising costs, new trade deals and the war in Ukraine are presenting significant challenges for our farmers. The SFS has been designed with the aim of supporting the resilience of the industry now, and ensuring farming remains sustainable and viable for future generations. The use of a five-year transition period is designed to help the management of this change; nonetheless it is inevitable that such significant changes will have a variety of impacts on farms, the wider agricultural industry, and Wales as a whole. These potential impacts are explored within this Integrated Impact Assessment.

## Costs and Benefits

As part of this consultation, we have published economic analysis undertaken in relation the SFS. Providing financial support to the agriculture industry comes at a cost to Welsh Government, however, implementation of SLM, including through the SFS, is expected to generate considerable benefits. At a societal level, this includes the value of environmental outcomes such as cleaner air, cleaner water, and carbon storage and sequestration. The Welsh Government commissioned eftec and ADAS, as part of the UK Centre for Ecology & Hydrology (UKCEH)-led ERAMMP programme, to assess the evidence concerning the social values from changes in natural capital and how these might be reflected in payment levels under the SFS. The full report can be found on the ERAMMP website[2]. At a farm level, the provision of financial support is expected to lead to economic stability, which will have subsequent cultural and social impacts. A number of Actions in the SFS will contribute to a farm's resilience in the face of adverse effects of climate change, such as flooding or drought. In addition, many sustainable farming practices can generate financial savings or benefits on farm, such as improved animal health, energy efficiency, and water storage. Such benefits are explored in the Regulatory Impact Assessment published alongside the Agriculture

[2] https://erammp.wales/en/integrated-monitoring-platform

(Wales) Act[3]. Ongoing analysis of the costs and benefits of the SFS will inform the final Ministerial decision on the SFS.

## The Five Ways of Working

The Well-being of Future Generations (Wales) Act 2015 includes five "ways of working"; long-term, integration, prevention, involvement and collaboration.

### Long term

The SFS is expected to support the delivery of a number of outcomes which contribute to societal long-term needs such as climate change mitigation, adaptation and the reversal of biodiversity decline, whilst enabling farmers to continue to make a living from agriculture. In our Sustainable Farming Scheme Outline Proposals, published in July 2022, we stated that keeping farmers on the land was one of the principles of scheme design. It is our aim to keep farmers farming, ensuring land continues to be managed by those who know it best, whilst also supporting them to adapt and prosper. The SFS will do this by supporting active farmers to adopt sustainable farming practices. Keeping farmers on the land will help deliver long-term outcomes, as well as supporting our rural communities, creating and reinforcing social networks and helping bring cohesion and resilience to communities. It also aims to conserve and enhance our cultural heritage, supporting the continued use of the Welsh language in our farming communities.

The SFS also recognises that food production is vital for our nation. The SFS is expected to help deliver against our ambition for Welsh farmers to be world leaders in sustainable farming, meeting our global obligations without offshoring food production to countries with lower standards. Farming is on the front line of climate change impacts. The SFS is designed to help protect and enhance our long-term food security by supporting farmers to adapt to climate change and extreme weather events, like drought and flooding.

### Prevention

Environmental issues associated with agriculture can arise from demands on land to deliver outputs beyond its natural capacity, and a narrow focus on economic outcomes. Impacts of large-scale issues such as climate change and biodiversity loss can also have substantial impacts on production. Our proposals attempt to integrate actions which will help mitigate or reverse these environmental impacts with agricultural practice in a way which enables the delivery of truly sustainable farming.

We recognise the delivery of environmental and social outcomes depends on farm businesses being economically and socially sustainable as well as environmentally sustainable. The SFS will therefore support farm businesses to become more resilient, enabling them to farm within a competitive and changing world whilst operating within the natural capacity of their land. This support will be in the form of monetary payments, but also through actions which increase resilience, and the continued provision of training and advisory services. The SFS will include a Universal Baseline Payment for undertaking a set of Universal Actions to provide farmers with

[3] https://www.gov.wales/sites/default/files/publications/2023-08/agriculture-wales-act-2023-explanatory-memorandum.pdf

much needed stability. The SFS will also have Optional and Collaborative Layers, which will enable farms to undertake additional actions which are relevant to their farm business. These actions will provide additional income and give farmers targeted support to increase their business resilience in the face of the climate and nature emergencies.

**Integration**

The SFS promotes an approach integrating the drivers of prosperity for agriculture with actions to enable long-term improvement of the rural environment. We believe this offers the best way forward for future agricultural support. The SFS will provide support targeted at outcomes in a way that delivers them together, minimising trade-offs. The SFS actions are designed to support farmers to produce food in a way which maximises their contribution to achieving each of these outcomes.

**Collaboration and Involvement**

We have engaged extensively with stakeholders throughout the development of the SFS. Three consultations, two phases of co-design and ongoing engagement helped us seek the views of farmers, farming and other organisations and the wider public about our proposals:

- 1,043 substantive responses were submitted to Brexit and our Land[4], our consultation on how we initially proposed to continue to support farmers after leaving the EU.
- We received 508 unique responses to our Sustainable Farming and our Land[5] consultation, which set out our revised proposals for supporting farmers.
- We received 232 responses from individuals and organisations on our proposals for the legislative framework[6] to support Welsh agriculture.

Our co-design work has allowed us to seek input from individual farmers across Wales, alongside a wide variety of organisational stakeholders, which has been central to scheme design. We completed a first phase of co-design in 2020, in which almost 2,000 farmers participated. Our most recent co-design work was completed in autumn 2022; we received 1,344 survey responses from farmers online or by paper and completed and an additional 101 surveys via phone or in-person interviews.

In addition, a total of 26 workshops were held to collect more detailed feedback on the SFS. There were 23 workshops covering the scheme actions and a further three which focussed on scheme processes (covering topics such as eligibility and registration).

Separately, a stakeholder feedback form was available for organisations and other individuals to contribute their views on the outline scheme proposals. We analysed 100 stakeholder responses from organisations and groups which sit across the broad spectrum of those who have an interest in the agricultural sector.

We have also established a number of working groups to explore the SFS from different perspectives, specifically farm tenancies, common land, and new entrant farmers.

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[4] https://www.gov.wales/sites/default/files/publications/2020-08/brexit-and-our-land-our-response.pdf

[5] https://www.gov.wales/sites/default/files/consultations/2020-07/our-response-sustainable-farming-and-our-land.pdf

[6] https://www.gov.wales/agriculture-wales-bill?_ga=2.119568328.1939994385.1673346125-1320603864.1673346125

## SECTION 2. WHAT WILL BE THE EFFECT ON SOCIAL WELL-BEING?

### 2.1 People and Communities

**How, and to what extent, will the proposal affect people and communities?**

The Sustainable Farming Scheme (SFS) will be the main source of future Government support for farmers in Wales. It will represent a shift from the previous support mechanism provided under the EU's Common Agricultural Policy (CAP). The CAP offered direct payments to farms based on farm area. The new funding model provides a support mechanism targeted at rewarding farmers for the delivery of environmental and social outcomes through the adoption of sustainable farming practices. Farmers will be rewarded for actions taken to respond to the climate and nature emergency, alongside the sustainable production of food, rewarding work to deliver clean air and water quality, mitigate flood risks, fight climate change and boost biodiversity.

Sustainable Land Management (SLM) was introduced as the framework for agricultural policy in Wales through the Agriculture (Wales) Act 2023 (the Act) and underpins the SFS. It is designed to have a positive impact on people and communities by protecting our natural resources and producing positive health outcomes for the people of Wales. SLM is designed to meet both the needs of present and future generations and contribute to the well-being goals as laid out in Section 4 of the Well-being of Future Generations (Wales) Act 2015.

SLM incorporates the economic, environmental and social contribution of farmers to society in Wales. It is an internationally recognised concept which encourages the use of land resources in such a way the needs of the current generation are balanced with our obligations to the next.

The SFS is structured in such a way that the actions in the scheme contribute to one or more of the SLM objectives as set out in the Act. The Universal Actions (UAs) within the SFS are designed to enable farmers to be rewarded for the delivery of specific SLM outcomes and for their contribution to the health and well-being of our nation. This will bring benefits to farmers, farming families, rural communities, consumers of Welsh produce and the people of Wales.

Farming is on the front line of climate change impacts. The SFS is designed help protect and enhance our food security by supporting farmers to adapt to climate change and extreme weather events, like drought and flooding, therefore ensuring they are able to stay sustainably and productively farming on their land despite our changing climate.

We recognise the delivery of environmental and social outcomes depends on farm businesses being economically sustainable. The SFS will therefore support farm businesses to become more resilient, enabling them to compete in a competitive and changing world whilst operating within the natural capacity of their land. It will include a universal baseline payment for undertaking certain Universal Actions to provide farmers with much needed stability. Many of the SFS actions are also designed to help farmers become more efficient by adopting an approach which makes the best use of their resources.

We recognise, however, that different groups will experience different impacts. We therefore provide an assessment of the expected impacts on particular individuals, groups and communities in the full impact assessments, which can be found in the Annexes of this document.

**2.2 Children's Rights**

Please see Annex A for the Children's Rights Impact Assessment.

**2.3 Equality**

Please see Annex B for the Equality Impact Assessment.

**2.4 Rural Proofing**

Please see Annex C for the Rural Proofing Impact Assessment.

**2.5 Health**

**Summary of predicted impacts**

### The Sustainable Farming Scheme (SFS)

It is anticipated the SFS will have several health impacts on both the general public and farming community. The Agriculture (Wales) Act 2023 has established the legislative framework for Sustainable Land Management (SLM) as the future policy framework for agriculture in Wales, with strategic objectives encompassing food production, climate change mitigation and adaptation, ecosystem resilience, and the conservation and enhancement of culture and the countryside. This has paved the way for the SFS to act as a vehicle for delivering SLM principles, which intend to benefit the people and land of Wales environmentally, socially, and economically. In relation to health, in particular, such outcomes will include:

- Environmental improvements that provide physical health benefits to the Welsh public. The SLM framework is designed to have a positive impact on the environment, with associated health benefits for the people of Wales.
- Prevention, control, and elimination of animal diseases, contributing towards safer food, improved public health and minimising the risk to people from diseases such as salmonellosis. There are specific actions within the Universal Layer of the scheme which address the aim of achieving and promoting high standards of animal health and welfare.
- Opportunities for increased physical activity through enhanced public access opportunities and contact with nature, and the positive impacts of this on the physical and mental health of the population. Maintaining and enhancing public access to the countryside is set as a purpose for support within the Act and specific actions will be available to farmers within the Optional and Collaborative Layers of the SFS.

The level of change does, however, have the potential to have negative impacts on farmer mental health if it is not managed appropriately. Clear advice, guidance, and support will be important to help mitigate this. In addition, there will be a multi-year transition period to provide farmers with stability in the move from the current Basic Payment Scheme (BPS) to the SFS. No farmer will experience a sudden cessation of the payments they receive, even if they choose not to partake in the new scheme. We are continuing to work with the Wales Farm Network, which represents the

main farming charities, and other stakeholders to understand issues involving mental health and to ensure suitable mitigations are in place where issues arise.

Throughout the development of the policy, mitigating actions which have been identified in our initial impact assessment have been incorporated into the proposed design and delivery of SFS.

**2.5a How, and to what extent, will the proposal impact health determinants?**

*Lifestyles*

The delivery of environmental outcomes through the SFS should provide moderate benefits to the lifestyle determinants of the health of the people of Wales. Improved opportunities for access to, engagement with, and enjoyment of, the countryside should contribute to better physical and mental health outcomes for the general population, as should food safety improvements resulting from increased animal health and welfare.

*Diet and Public Health*

The SFS intends to achieve and promote high standards of animal health and welfare. On adopting the scheme, relevant farms will be universally required to implement the Animal Health Improvement Cycle (AHIC), which will allow support to be provided to incentivise the prevention, control, and elimination of-animal diseases, contributing towards safer food and improved public health. The AHIC is expected to require different actions across farms (as no two farms are the same), which will be determined as farmers work closely with their vet. These measures are expected to minimise the risk of disease and improve the health of animals, which in turn will positively impact the quality and safety of Welsh animal produce. For instance, minimising the risk to people from diseases such as salmonellosis can help reduce the demand on health services and the need for antibiotic treatment.

Less healthy livestock are less efficient and likely to have higher greenhouse gas (GHG) emission intensities, i.e., they produce more kilograms of GHG per kilogram of edible output. Work commissioned by the UK Climate Change Committee (UKCCC) has identified improving animal health as a key greenhouse gas mitigation measure.[7] Healthier and more productive animals will lead to less pollution and greenhouse gas emissions, and therefore lower risk to human health.

Antimicrobial resistance (AMR) is one of the greatest, long-term threats to human health, both in Wales and globally. The impacts of unchecked AMR are wide-ranging and extremely costly, not only in financial terms, but also in terms of global health, food security, environmental wellbeing, and socio-economic development. Already, AMR is estimated to cause at least 700,000 deaths

[7] https://www.theccc.org.uk/publication/land-use-policies-for-a-net-zero-uk/

around the world each year. That figure is predicted, in a worst-case scenario, to rise to 10 million alongside a cumulative cost of $100 trillion, by 2050 if no action is taken.[8]

Wales will also be impacted by AMR if it is not controlled, though work to quantify the impact in terms of lives lost has not yet been done.

AMR is driven by the use of antibiotics. As part of the SFS UA for farms with livestock to adopt AHIC, farmers will be required to regularly calculate and report the average amount of antibiotics that are used on their farms. The AHIC intends to ultimately reduce antibiotic use, both in animals, whether farmed or kept for other purposes, and in people. For farmed animals, this means keeping them as healthy as possible in high health production systems. This reduces the need to use antibiotics and so reduces the risk of AMR development. The principles of the SFS are designed to drive healthy livestock production, taking a 'prevention is better than cure' approach, which would therefore help to address the issue of AMR.

*Lifestyles and Physical Activity*

One of the ways in which farmers support the physical and mental well-being of the general population is through their maintenance of the countryside and rights of way. The Welsh countryside provides space for physical activity which contributes to both physical and mental well-being. Spending time in the countryside has been shown to have positive mental health and well-being effects. Farmers manage approximately 90% of the land in Wales, which includes 16,000 miles of footpaths, 3,000 miles of bridleways, 1,200 miles of cycle network and 460,000 hectares of open access land, as well as hedgerows, dry stone walls and other landscape features.

The SFS will require compliance with the minimum legal requirements as part of the SFS Scheme Rules, and enable provision for improved and enhanced public access to, and engagement with, the countryside and cultural resources. The SFS Optional Actions (OAs) may include:

- Upgrading footpaths to multi-use paths.
- Enhancing existing paths to make them more accessible.
- Establishing joined-up and new access routes and trails.
- Establishing new access.
- Hosting educational and care farm visits.

Furthermore, Collaborative Actions (CAs) under the SFS would also support projects that would improve access for local communities and support national priorities. This should enable greater levels of recreation and enjoyment of the Welsh countryside by the people of, and visitors to, Wales.

[8] https://www.who.int/docs/default-source/documents/no-time-to-wait-securing-the-future-from-drug-resistant-infections-en.pdf

There is a substantial body of evidence supporting the notion that increased access to the countryside, or 'green spaces', may contribute to positive individual and public health benefits. For instance:

- A 2007 review of the links between the natural environmental and well-being concluded 'the natural environment provides physical, mental and social well-being benefits. There are synergistic effects between these benefits".[9] It also noted 'increased levels of physical activity are known to have both a preventative role in cardiovascular and musculo-skeletal diseases and inhibiting stroke and cancer' and 'has a positive effect on range of health determinants such as body weight, blood pressure, cholesterol levels and so forth.'[10]

- A 2007 study looking at the mental health impacts of a range of countryside green activities across the UK concluded 'green exercise generates mental health benefits regardless of the level of intensity, duration or type of green activity undertaken'.[11] The study reported all participants demonstrated 'significant improvement in their self-esteem and total mood disturbance […] factors of anger-hostility, confusion-bewilderment, depression-dejection and tension-anxiety all significantly improved post-activity.'[12]

- A 2009 study evaluated changes in self-esteem and mood after walking in four different English National Trust natural and heritage sites.[13] It reported, Feelings of anger, depression, tension and confusion all significantly reduced and vigour increased. Thus, the environment plays an important role in facilitating physical activities and helping to address sedentary behaviours. Walking, in particular, can serve many purposes including exercise, recreation, travel, companionship, relaxation and restoration. However, walking in greenspaces may offer a more sustainable option, as the primary reward is enhanced emotional well-being through both exposure to nature and participation in exercise.

- A 2023 study, based in Finland, found that frequently visiting green spaces was associated with less frequent use of psychotropic, antihypertensive and asthma medications for those in urban environments.[14] The association did not apply with regards to residential green or blue space, or green or blue views from the home.

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[9] Newton, J., (2007) *Wellbeing and the Natural Environment: A brief overview of the Evidence*, Bath: University of Bath.

[10] Ibid.

[11] The activities included conservation, walking, mountain biking, woodland activities, horse riding, boating and fishing. See: Pretty, J., et al., (2007) 'Green exercise in the UK countryside: Effects on health and psychological wellbeing, and implications for policy and planning'. *Journal of environmental planning and management*, 50(2), pp.211-231.

[12] Ibid.

[13] Barton, J., Hine, R., & Pretty, J., (2009) 'The health benefits of walking in greenspaces of high natural and heritage value', *Journal of Integrative Environmental Sciences*, 6(4), pp.261-278.

[14]Turunen A.W., et al., (2023) 'Cross-sectional associations of different types of nature exposure with psychotropic, antihypertensive and asthma medication', *Occupational and Environmental Medicine*, 80, pp.111-118, available at: https://oem.bmj.com/content/80/2/111

*Farm Safety*

Data from the Health and Safety Executive (HSE) shows there were seven fatalities on farms in Wales in 2020-21, compared with a five-year moving average (2016-17 to 2020-21) of five per year. Many more have been seriously injured or made ill and as a result unable to work. On-farm health and safety is a fundamental requirement of a sustainable farming business and should be seen as an essential part of farm business management.

The SFS includes a UA whereby farmers will be required to complete a minimum baseline level of learning, including on health and safety which will be a mandatory requirement of the Scheme. It is expected that properly identifying and managing risks, along with high levels of education and skills, will lead to an improvement of health and safety standards on farms.

*Social and community influences on health*

A Public Health Wales (PHW) report identifies a number of key uncertainties and challenges with the potential to impact on farmers' well-being, one of which being isolation and loneliness.[15] There is evidence that involvement in environmental schemes can mitigate some of these well-being issues. For example, the EU LIFE report into the Burren LIFE project in Ireland noted 'Another initially unforeseen benefit of the subcontracted conservation work was its ability to offset the social isolation that many farmers experience as the work was usually carried out by teams of at least two and provided an opportunity for social interaction'.[16]

Similarly, a survey of Environmental Stewardship (ES) participants in England reported ES can,

> …play an important part in developing new social contacts and networks. Of the advisors used by agreement holders, 40% were not known to them previously, which indicates these agreement holders had to reach out beyond the established social networks around their farm or business for this expertise. This was particularly the case for HLS [Higher Level Stewardship] agreement holders and for the lowland dairy and livestock farms. These new linkages and flows of information can potentially lead to profound changes in social and business activity.[17]

The survey found ES schemes, particularly HLS, have also brought agreement holders into contact with more farmers and the general public. It appears the social contact prompted by scheme membership (hosting or attending farm walks, meetings to discuss options, advisor visits) can be greatly valued.

The above evidence suggests funding collaborative SLM action amongst farmers, and between farmers and members of the wider community, has the potential to reduce social isolation and loneliness for scheme participants, and therefore contribute to better mental health amongst

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[15] Public Health Wales and Mental Health Foundation, (2019) *Supporting farming communities at times of uncertainty. An Action Framework to support the mental health and well-being of farmers and their families,* available at: phw.nhs.wales/services-and-teams/knowledge-directorate/research-and-evaluation/publications/supporting-farming-communities-at-times-of-uncertainty/

[16] Technical Final Report (LIFE04NAT/IE/000125). Burren LIFE Farming for Conservation in the Burren.

[17] Mills, J., et al., (2010) 'Estimating the Incidental Socioeconomic Benefits of Environmental Stewardship Schemes. Final Report', Countryside and Community Research Institute.

farmers. The SFS will support farmers and rural communities to work together on a range of Collaborative Actions.

*Mental well-being*

As discussed above, the SFS will contain voluntary Optional and Collaborative Actions designed to support opportunities for access to, and enjoyment of, the countryside, contributing to better physical and mental health outcomes for the general population. The positive well-being impacts that landscape features have on those spending time in the natural environment are outlined in *A Countryside for Health and Wellbeing: The Physical and Mental Health Benefits of Green Exercise*, report.[18]

As well as general societal health and well-being, the mental health of farmers is an important consideration, as the reforms resulting from the SFS are likely to have a more noticeable impact on their day-to-day lives compared with the general population.

International data demonstrates farming has some of the highest incidents of suicide compared with other occupations, and social isolation at work may be an important factor in this.[19] In Wales, data from the Office for National Statistics showed 32 farmers died by suicide between 2011 and 2019 (31 males and 1 female). As an occupation grouping according to the Standard Occupational Classification (SOC), Farmers (SOC code 5111) was the joint eleventh highest occupation category for number of suicides among males in 2019.

The PHW report, mentioned above, states,

> dealing with uncertainty can increase anxiety and have a detrimental impact on mental well-being amongst farmers, their families and rural communities. Farmers experience high levels of stress and anxiety due to a lower sense of control over farming sector processes (competition, regulation and price margins) and the wider environment effecting farming practice (disease and weather). Farmers are at increased risk of feeling at times that life is not worth living, having a lack of social support, and have been identified as an occupational group at increased risk of suicide.[20]

The report identifies six key uncertainties and challenges with the potential to impact of farmers' mental health and well-being:

1. The uncertainty and viability of farming in Wales
2. Succession planning.
3. Regulation, administration and digitalisation.
4. Farmer's prioritising their own health.
5. Isolation and loneliness (detailed above under 'Social and community influences').

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[18]Available at: http://www.docs.hss.ed.ac.uk/education/outdoored/health_wellbeing.pdf

[19] See: Roberts S.E., Jaremin B., Lloyd K., (2013) 'High-risk occupations for suicide', *Psychological Medicine*, 43(6), pp.1231-1240; Stark, C., et al., (2006) 'Suicide in farmers in Scotland'.

[20] Public Health Wales and Mental Health Foundation, (2019) *Supporting farming communities at times of uncertainty. An Action Framework to support the mental health and wellbeing of farmers and their families*.

6. The underlying culture and expectations in farming.

Each of these key uncertainties and challenges are discussed, below, in relation to the SFS.

1. The uncertainty and viability of farming in Wales

Public Health Wales notes 'the Brexit process so far has resulted in significant financial and regulatory uncertainty, in particular for farmers post-Brexit trading scenarios and future funding mechanisms are recognised as challenges to the Welsh farming industry'.[21] Whilst the principles and policy direction for future support have been set out in the Agriculture (Wales) Act 2023, there remains uncertainty about the nature of UK trading relationships in agricultural produce now we have left the European Union (EU).

The Agriculture (Wales) Act 2023 has set out a significant reform to agriculture policy and support through establishing the SLM framework, and its future implementation through the SFS. These major changes to the agricultural sector may be a cause of uncertainly for the farming sector.

We have sought to mitigate this by designing and implementing a comprehensive communication plan which has encouraged stakeholder engagement from all who wish to contribute throughout the consultation and co-design stages of SLM and the SFS. This will contribute to greater knowledge and reduced uncertainty of the proposed scheme within the farming community. In time, the Agriculture (Wales) Act 2023, SLM, and the SFS will provide enhanced stability for farmers as it sets out the long-term approach for agricultural support in Wales. Specifically, 'improving the resilience of agricultural businesses' is one of the purposes for support set out in the Act, meaning that future support can be given for actions which make a positive contribution to the viability of farming in Wales. The resilience of agricultural businesses is also considered as a facet of sustainable food production in the objectives of the Act.

In addition, there will be a managed transition between the current BPS and the SFS. This means farmers will not experience sudden changes to their payments and there will be help to prepare for the introduction of the SFS prior to its launch.

2. Succession planning

A major review of farm succession strategies found 'the probability of intra-family succession increases with farm performance, which was measured in annual farm revenues' and 'family farms that pursue innovative and sustainable business strategies are expected to have a higher probability of succession because they are more attractive for the next generation.'[22] We have previously outlined that the SFS should be available to all eligible farms and should provide an

[21] Ibid.

[22] Suess-Reyes, J., & Fuetsch, E., (2016) 'The future of family farming: A literature review on innovative, sustainable and succession-oriented strategies', *Journal of Rural Studies*, 47, pp.117-140.

important revenue stream for participating farms. This should help support farms to undertake long-term planning for their businesses and support succession.

3. Regulation, administration and digitalisation

The PHW report, cites understanding and complying with regulation as a key challenge to maintaining good mental health and well-being of farmers and land managers.[23] It also recommends the Welsh Government revisit the progress made following the Working Smarter 2011 report. The SFS will be a voluntary scheme that will provide support for farmers to undertake actions above and beyond the regulatory requirements; however, since it will become the primary mechanism through which farms receive financial support, it is important to consider the impact of such a large change alongside consideration of regulation impacts.

Using Bovine Tuberculosis (TB) as an example, the untimely culling of any animal, and in some cases complete depopulation of entire holdings, can have a significant detrimental impact on the mental well-being of livestock keepers, which financial compensation alone cannot address. Stress and depression are linked to such events, which in turn may affect physical well-being. The SFS, which has high animal health and welfare amongst its Universal Actions is intended to reduce the risk of large-scale disease outbreaks and the frequency with which the negative impacts of more severe disease control measures are experienced. As discussed above, the SFS will require livestock farmers to adopt the Animal Health Improvement Cycle (AHIC) as a Universal Action, which is expected to both improve the health of animals and positively influence the well-being of farmers, amongst its range of impacts.

The Welsh Government, acknowledging the impact of TB breakdowns on the mental health of farmers and farming families, introduced the Cymorth TB programme to provide Government funded veterinary support from local, specially trained private veterinarians. The Welsh Government also contracted the Farming Community Network (FCN) to deliver bespoke Mental Health and Farmer Welfare support for those effected by TB. More recently there has been cross-divisional collaborative work undertaken within Welsh Government to support the development of a third sector group which includes FCN, Tir Dewi, the Daniel Picton-Jones Foundation and Mind Cymru. The SFS will continue to ensure farmers understand how to access mental health and welfare support.

4. Farmers prioritising their own health.

Regarding the impact of participation in an agri-environment scheme on farmers' mental health, evidence suggests, 'the self-reported mental health of farmers adopting agri-environmental

[23] Public Health Wales and Mental Health Foundation, (2019) *Supporting farming communities at times of uncertainty. An Action Framework to support the mental health and wellbeing of farmers and their families*.

schemes in Wales was significantly better than non-adopters. Although correlation was shown, rather than causation, interpretation of the results suggest that poor mental health of farmers may be one cause of non-adoption of agri-environment schemes.'[24]

It should be noted the correlation could go both ways; it may indicate that farmers with better mental health are more likely to participate in agri-environment schemes, rather than these schemes leading to improved mental health. It is evident, however, that the two are linked, and as such, the SFS has been designed with the aim of reducing causes of non-adoption.

5. Isolation and loneliness

This is discussed in greater detail, above, under the heading, 'Social and community Influences'.

6. The underlying culture and expectations in farming

The PHW report describes a culture of self-reliance in agriculture, with farmers expected to 'just get on with it' and not allow themselves to fail.[25] This culture and the pressures that accompany it were highlighted as a key challenge in addressing farmers' mental health. The report proposes 'prevention by supporting a cultural shift to seek advice and value health.'[26]

The SFS will include an advisory and support service, and opportunities for Continuous Professional Development, building on the work of the current Farming Connect programme. The recent SQW evaluation of Farming Connect (Hindle, 2021) found that it appears to have made the most difference in influencing farmers' personal development, particularly in strengthening confidence and ambition, and creating the "foundations" for change. This has influenced business management and decision-making processes alongside improved technical skills.

The SFS will facilitate peer-to-peer support, advice, and training through Farming Connect, which could encourage farmers to support one another in implementing SLM. As discussed above, moreover, the SFS will also support a range of CAs which may be expected to build relationships and networks between farmers.

In addition, we recognise that in implementing the SFS, farmers may experience challenges, unexpected consequences, or even find that actions they take may be unsuccessful in their particular circumstances. The SFS will seek to support farmers to overcome and rectify any problems, rather than penalising unforeseen failures.

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[24] Hounsome, B., et al., (2006) 'A note on the effect of farmer mental health on adoption: The case of agri-environment schemes', *Agricultural Systems*, 91(3), pp.229-241.

[25] Public Health Wales and Mental Health Foundation, (2019) *Supporting farming communities at times of uncertainty. An Action Framework to support the mental health and wellbeing of farmers and their families*.

[26] Ibid.

*Living/environmental conditions affecting health*

The Agriculture (Wales) Act 2023 has established SLM as the future policy framework for agriculture in Wales, and the strategic objectives of the Act include the mitigation of and adaption to climate change, and the maintenance and enhancement of ecosystem resilience. The SFS will encourage actions which contribute to better air quality (in particular through reductions in ammonia), reduced flood risk, and reversing the decline in biodiversity. As such, the SFS should therefore contribute to better physical and mental health outcomes in the general population.

The SFS will have the potential to directly impact public health through positive outcomes. The most significant of these include:

1. Improving air quality and reducing emissions of greenhouse gasses.

2. Improving water quality and mitigating flood and drought risks.

3. Maintaining and enhancing public access to and engagement with the countryside and the historic environment.

4. Achieving and promoting high standards of animal health and welfare.

We consider each of these outcomes and their positive impacts below.

1. Improving air quality and Reducing emissions of greenhouse gasses.

Each year in Wales, the equivalent of 1,604 (5.4%) deaths can be attributed to $PM_{2.5}$ (particulate $NO_2$).[27] National air quality objectives have been set out for the UK based on European Directive limit and target values for the protection of human health. The detail of these is set out in evidence from our Environment and Rural Affairs Monitoring and Modelling Programme (ERAMMP).[28]

PHW states the air pollutants of greatest public health concern are $PM_{2.5}$ and $NO_2$.[29] Air pollution, combined with other aspects of the social and physical environment, creates an inequitable disease burden on more deprived parts of society. As outlined by PHW, most local air pollution problems are caused by emissions from road vehicles; however, other sources also influence air quality such as industrial, agricultural and residential/domestic sources. As part of the Universal Actions, farms will be required to manage woodland on their farm an, where necessary, plant

[27] Public Health Wales, (2020) 'Air pollution and health in Wales'.

[28] Jones, L. et al., (2019) Annex 8: Improving Air Quality and well-being, ERAMMP Report to Welsh Government (Contract C210/2016/2017) (CEH NEC06297). See pp.12-14.

[29] Public Health Wales and Wales Health Impact Assessment Support Unit (2019). The Public Health Implications of Brexit Technical Annex 2.

additional woodland to reach 10% cover on the eligible land on their farm. New woodland planting will provide substantial benefits to air quality in Wales and subsequent benefits for human health.

Pollution from agriculture has the potential to severely impact physical health through the emission of pollutants such as ammonia or nitrous oxides. Air pollution can travel substantial distances, and so a reduction in pollution in rural areas has the potential to positively impact both rural and urban communities across Wales. Since 2005, ammonia emissions from the sector have not seen significant reductions at a UK level; indeed, ammonia emissions from fertiliser and digestate were higher in 2019 than in 2005.[30]

Clean air and clean water are two of the strategic objectives of SLM, and the SFS will contain actions to contribute to these objectives.

Appropriately sited woodland planting has the potential to intercept ammonia emissions. The SFS will build on the Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021 by further incentivising actions to lower the risk of diffuse pollution from farms. Implementing the SFS will have benefits for soil, air, and water quality through a reduction in pollution, which in turn should lead to an improvement in the health outcomes of the general public.

2. Improving water quality and Mitigating flood and drought risks

A number of actions in the SFS will contribute towards the improvement of water quality and the mitigation of flood and drought risks. The SFS will include actions to minimise the risk and lessen the impact of flooding. This essentially aims to lower the flow of water through a catchment using several techniques which work with the features of the landscape to slow down or store water. NFM methods are already included as separate actions in the SFS because they have other cascading benefits for the environment and agricultural business. For instance, improving soil health and structure, together with increasing soil organic matter, will allow more rapid infiltration of surface water and its retention within the soil for longer periods of time than would otherwise be the case. Correctly sited agroforestry also has the potential to increase infiltration to greater soil depth and reduce flood risk.

The SFS will also support farmers and other landowners to take a catchment approach to build a collective network of coordinated actions which aims to lower the risk of flooding. An Optional Action in the SFS is expected to include specific NFM actions such as water harvesting; Collaborative Actions may also include support for farmers working across a catchment to lower the risk of flooding, taking up collective actions such as introducing leaky barriers, offline storage areas or floodplain woodland.

The SFS also aims to improve water quality, as in many cases (as with flood mitigation) improvements in water quality may also be delivered through support for other actions. Soil quality

[30] National Atmospheric Emissions Inventory, ‘Ammonia emissions from agriculture’.

improvements resulting from the delivery of the SFS contribute to improved water quality, while reduction of emissions will also contribute to cleaner water as discussed above. Water pollution entering river catchments from agriculture travel downstream, and so reducing emissions will have positive benefits in urban areas as well as rural ones.

Overall, the SFS is designed to lead to a reduction in the risk to the public from flooding and drought, and an increase in water quality, which should contribute to positive physical and mental health outcomes.

3. Maintaining and enhancing public access to and engagement with the countryside and the historic environment.

The SFS will support farmers to maintain and enhance public access to, and engagement with, the countryside and historic environment. A number of Optional and Collaborative Actions are expected to provide support for the upgrading and maintenance of existing pathways, and the improvement of the existing historic environment. This should enable greater levels of recreation in the form of walking in, and enjoyment of, the Welsh countryside by the people of Wales and visitors to Wales.

4. Achieving and promoting high standards of animal health and welfare.

Information regarding how improved animal health and welfare can have positive impacts on human health are detailed above in the Diet and Public Health section.

*Economic conditions affecting health*

The economic impact of the SFS will be key to determining whether there will be any impacts on unemployment, income, and the associated socio-economic and health factors. Ongoing analysis of the costs and benefits of the SFS will inform the final ministerial decision on the SFS.

Information concerning the expected socio-economic impact of the SFS is detailed in the Socio-economic Duty IA in the Annex.

*Access and quality of services*

We do not anticipate the SFS will have an impact on the access and quality of services.

*Biodiversity*

A full Biodiversity Impact Assessment for the SFS can be found in Annex F.

*Climate*

The Welsh Government Programme for Government (2021) sets out, as key well-being objectives, the need to ‘Embed our response to the climate and nature emergency in everything we do’ and ‘Build a stronger, greener economy as we make maximum progress towards decarbonisation.’ In addition, the Agriculture (Wales) Act 2023 has set the objective to mitigate and adapt to climate

change. The SFS will contribute to these objectives through reducing the carbon footprint of the agricultural sector and increasing woodland cover, which in turn will have positive impacts on the health and well-being of the people of Wales. The UKCCC report highlights the co-benefits of reducing emissions, including improved health from increased air quality and improvements in flood alleviation.[31]

As the climate changes, the environment, biodiversity needs, and the biological ecosystem will also all change. SLM and the SFS are designed to meet the Programme for Government objectives but will also enable the Welsh Government to respond to these changes in order for farms to remain resilient.

**2.5b. Could there be a differential health impact on particular groups?**

We will consider the following categories:

- Age related groups
- Income related groups
- Groups who suffer discrimination or other social disadvantage
- Geographical groups

In addition, the potential impact on the mental health of farmers is discussed extensively in the Mental Well-being section of question 2.5a.

*Age related groups*

The SFS has been designed to be accessible to all eligible farmers, regardless of age. In recognition of, and to mitigate against, the prevalence of digital inequalities amongst older and rural generations, roadshows and workshops will aim to reach all farmers across Wales to discuss the details of the SFS before it is launched. Further details regarding this, and on the expected impacts of the SFS, including in relation to health, on different age groups can be found in the Equality Impact Assessment (Annex B).

Succession planning can be a source of anxiety for farmers and will likely have a more acute negative impact on the mental health of older farmers nearing retirement. Increased sustainability of farming businesses may have a positive impact by relieving mental health pressures if the SFS results in more successful succession planning, and this would be felt more keenly by older famers. The SFS has been designed to support succession plan by not including any historic reference periods or entitlements.

[31] UK Climate Change Committee, (2020) *Land Use Policies for a Net Zero UK,* available at: Land use: Policies for a Net Zero UK - Climate Change Committee (theccc.org.uk)

Regarding the population more generally, research demonstrates children and older people are more vulnerable to the negative effects of air pollution exposure.[32] The SFS is explicitly designed with the objective of responding to the climate emergency, and its expected positive environmental outcomes, such as cleaner air and the reduction of greenhouse gas emissions, is designed to achieve this objective. It is expected that, due to their increased vulnerability, children and older people will see the greatest health benefits from this.

*Income related groups*

The primary impacts of the SFS in relation to income related groups will concern farming households. Research into Small and Very Small farms in Wales (which account for 87% of Welsh farms) shows farm economic size does not necessarily predict household income for the majority of farms in Wales.[33] Very Small farms were more likely to have a household income of £10,000 to £29,999, while Small farms were more likely to have a household income between £50,000 and £69,999, though neither of these results were statistically significant in the research. Overall, the vast majority (82%) of Small and Very Small Welsh farms will have a household income between £10,000 and £69,999.[34]

In contrast to the BPS, the SFS will financially support farmers to undertake actions which deliver outcomes. It is not expected at this stage that the SFS will have a significant differential impact on income related groups, subject to the take up of the Universal, Optional and Collaborative Actions. Ongoing analysis of the costs and benefits of the SFS will inform the final ministerial decision on the SFS. Following this consultation, the scheme proposals will be reviewed, and the economic analysis updated.

*Groups who suffer discrimination or other social disadvantage*

We do not anticipate that the SFS will impact specifically on the health of groups who suffer discrimination or other social disadvantage, other than the health benefits for the general population we have described above. Further information regarding the impacts of the SFS on those who suffer socio-economic disadvantage, please see the Socio-Economic Duty Impact Assessment (Annex G), and for impacts on those possessing Protected Characteristics as set out in the UK Equality Act 2010, please see the Equality Impact Assessment (Annex B).

*Geographical groups*

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[32] Fann N., et al., (2011) 'Maximising health benefits and minimizing inequality: incorporating localscale data in the design and evaluation of air quality policies', Risk Analysis; 31(6), pp.908-922.

[33] The Welsh Government, (2021) *Understanding farmer motivations: very small and small farms*, available at: Understanding farmer motivations: very small and small farms | GOV.WALES (Please refer to section 5 of the document for further information on farm characteristics among respondents, including ownership and farm type.)

[34] Ibid.

No specific disproportionate impacts have been identified for the impact of the health of geographical groups. As described in our Equality Impact Assessment, the highest proportions of people aged 50 and over are found in rural areas in Wales such as Powys, Ceredigion, and Gwynedd. Whilst there are health impacts for older people living in rural areas, they are focussed on the delivery of key health, social services, and transport issues. Whilst change is often unsettling, we have no evidence the SFS scheme design will impact negatively on the well-being of older people in rural areas.

**2.6 Privacy**

**Will the proposal involve processing information that could be used to identify individuals?**

Please see the Data Protection Impact Assessment (Annex D).

## SECTION 3. WHAT WILL BE THE EFFECT ON CULTURAL WELL-BEING AND THE WELSH LANGUAGE?

### 3.1 Cultural Well-being

The Well-being of Future Generations (Wales) Act 2015's goal for culture is 'A society that promotes and protects culture, heritage and the Welsh language and which encourages people to participate in the arts and sports and recreation'. Culture includes museums, archives, libraries and the arts; heritage includes the built historic environment as well as intangible heritage such as traditions; the arts encompass performance and creative sectors including music, literature, theatre and art, whilst sports and recreation include both elite and community sports as well as opportunities to participate in wider outdoor recreation.

**3.1a How can the proposal actively contribute to the goal to promote and protect culture and heritage and encourage people to participate in the arts sports and recreation? (for Welsh Language see section 3.2)**

Welsh culture and heritage are intricately linked to the landscape and natural environment. The Welsh Government's *Light Springs through the Dark: A Vision for Culture in Wales,*[35] emphasises the importance of the Welsh landscape in framing and inspiring much of the cultural output in Wales. An integral part of this relationship is agriculture as an estimated 90% percent of Welsh land is devoted to agriculture.

The Area Statements developed by Natural Resources Wales demonstrate this relationship between landscapes, culture, and heritage in Wales. For instance, the reclaimed agricultural land of the Gwent levels (South-East Area Statement) is not only of historical and archaeological importance but is also an important habitat for many species. Likewise, the North-East Area Statement demonstrates how the history of Wales is embedded in the landscape through the medieval field systems of the Clwydian Range and Dee Valley.

The Agriculture (Wales) Act 2023 has set SLM as the future policy framework for agriculture in Wales and has four objectives which Ministers will need to consider. The fourth of these objectives aims to 'conserve and enhance the countryside and cultural resources and promote public access to and engagement with them, and to sustain the Welsh language and promote and facilitate its use'. Therefore, culture and heritage, including the Welsh language, are considered as a key

[35] The Welsh Government, (2016) *Light Springs through the Dark: A Vision for Culture in Wales.*

aspect of the future of farming in Wales, alongside the objectives relating to food production, climate change, and ecosystem resilience.

According to the Charted Institute for Archaeologists, 'over 80% of archaeological heritage assets in Wales are located on agricultural land.'[36] Any landscape changes through the SFS could not be to the detriment of heritage assets and the historic environment as SLM requires government and farmers to consider the landscape holistically in order to meet the strategic objectives set out in the Agriculture (Wales) Act 2023. Although landscape change is inevitable over time through natural processes, change brought about by the SFS should not undermine the cultural value derived from individual features or the context provided by their surrounding landscape.

As the report, *Sustainable Farming Scheme: Outline Proposals for 2025,*[37] identifies, the rural landscapes of Wales are 'a precious part of our heritage' and 'our historic features on farmland are fundamental to our national character, cultural identity and economy.' In recognition of their social, cultural, and economic value, the SFS will support farmers to manage and enhance the landscape and the historic environment through several Universal, Optional, and Collaborative Actions.

All participating farms in the SFS will be provided with a map of historic features on their land via Data Map Wales. Such features may include:

- Scheduled Monuments
- Historic Environment Features
- Listed Building
- Traditional Farm Buildings
- Parks & Gardens: Registered & Unregistered
- Landscape Features (including Historic Boundary Features)

Farms with registered Historic Landscapes or Historic Landscape Character areas Farms with historic features identified on their land will, as part of a Universal Action (UA), need to follow guidance on how to manage them. This is expected to involve regular management, straightforward conservation, and a 'do no damage' approach to their historic features.

An Optional Action (OA) also is proposed to support farmers or land managers for reporting on the condition of historic features and how they are managed. Where appropriate, they will be supported to repair or conserve a historic feature with professional guidance. As an additional OA, farmers may also be supported to deliver more for protected landscapes. Such actions will be bespoke to the farm and surrounding area and will align with the special qualities of Areas of Outstanding Natural Beauty or a National Park.

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[36] https://www.archaeologists.net/advocacy/toolkit/Agriculture_wales_campaign

[37] https://www.gov.wales/sustainable-farming-scheme-outline-proposals-2025

The SFS will also support Collaborative Actions (CAs) in relation to landscape-based collaborative projects which would enhance the historic environment and designated landscape across multiple farms. Moreover, the SFS may also support CAs to improve access for local communities and support national priorities.

Further detail regarding the way the SFS is expected to promote and protect our natural environment and countryside, and therefore our cultural heritage, is included in the Biodiversity Impact Assessment in Annex F. Moreover, the Welsh Language Impact Assessment deals in full with the impacts of the SFS on this particular aspect of Welsh culture (Annex E).

The SFS will continue to support the management of our landscapes and make the countryside accessible. We have no evidence the SFS will directly affect, positively or negatively, the participation of people in the arts or in sport.

**3.1b Is it possible that the proposal might have a negative effect on the promotion and protection of culture and heritage, or the ability of people to participate in arts, sport and recreation? If so, what action can you take to avoid or reduce that effect (for example by providing alternative opportunities)?**

We have no evidence the SFS might have a negative effect on the promotion and protection of culture and heritage, or the ability of people to participate in arts, sport and recreation. Wales has a rich agricultural heritage and farms are of cultural importance to many communities in Wales. The SFS has been designed to support the resilience of these businesses, which would therefore positively impact rural communities. The SFS also aims to help rural communities thrive as well as improve the resilience of agricultural businesses. We set out further detail in our Rural Proofing Impact Assessment (Annex C).

## 3.2 Welsh Language

Please see Annex E for the Welsh Language Impact Assessment.

## SECTION 4. WHAT WILL BE THE EFFECT ON ECONOMIC WELL-BEING?

Supporting growth in the Welsh economy, and through this tackling poverty, is at the heart of the Welsh Government's Programme for Government.

### 4.1 Business, the general public and individuals

***How, and to what extent, will the proposal impact business and the public***

**Farm businesses**

The introduction of the Sustainable Farming Scheme (SFS) represents a significant change to the way in which farm businesses receive public money. Previously, under the EU's Common Agriculture Policy (CAP), financial support was provided to farms in Wales on the basis of land area, with additional support for specific actions available under agri-environment schemes such as Glastir.

The Agriculture (Wales) Act 2023 (the Act) set Sustainable Land Management (SLM) as the overarching policy framework for agriculture in Wales, defined by four objectives covering the sustainable production of food, mitigation of climate change, resilience of ecosystems, and the preservation and enhancement of cultural resources. The SFS has been designed to deliver SLM and as such will require farmers to undertake sustainable farming practices in order to receive public money.

The primary impact on economic wellbeing to farm businesses will be through the change in the way money is received from Welsh Government. We have published the proposed payment methodology as part of the consultation document, alongside independent reports commissioned by WG to undertake economic analysis of the proposed SFS and explore the issue of social value of environmental outcomes. It is proposed that the Universal Baseline Payment received by a farm in the SFS Universal Layer will be the sum of component payments relating to habitat management actions, woodland management and creation actions, and the other farm management actions required of SFS participants. As such, each farm will have a bespoke payment based on their farm area, including its woodland and semi-natural habitat area. Detail of the proposed payment methodology is set out within the main consultation document.

The economic analysis, using illustrative payment rates based on the costs of undertaking the Universal Actions, shows that the potential economic impacts of the SFS vary across farm types and economic sizes, with some farms set to receive greater levels of payment than their previous Basic Payment Scheme (BPS) , while others may be eligible for less. While the economic analysis considers the potential impact on all farms, in reality, each farmer will make an informed decision whether or not to participate in the SFS, and as such, industry-level findings can be considered to be an extreme upper bound. This analysis also excluded the benefits which will be available through participation in Optional and Collaborative Actions.

To mitigate potential negative economic impacts, Welsh Government are committed to a managed transition period from 2025 to 2029. We propose to reduce BPS payments in increments over this period for farms who opt not to join the SFS. Those who join the SFS will be eligible for aStability Payment, linked to the previous year's BPS entitlement, to ensure that no farmer experiences a large drop or sudden cessation in their payments.

The implementation of SLM, including through the SFS, is designed to support economic viability in the long-term, by helping farms to be resilient to, and mitigate, the effects of adverse circumstances due to climate change (such as flooding and drought), and by providing financial support to undertake actions that will lead to cost savings for farms (such as improved animal health and soil condition).

**Wider agricultural and rural industries**

The SFS is a farming scheme, but since it is a mechanism designed to support the resilience of farm businesses, it is expected that there will be indirect impacts on the wider agricultural industry and rural businesses more widely. Specifically, a number of Universal Actions are likely to increase the need for provision of goods and services to farms, presenting opportunities for other businesses. These include woodland creation, animal health and welfare actions, and creation of scrapes on the farm.

**General Public and Individuals**

The SFS should impact positively on individuals and the general public. Many of the positive impacts are related to health and well-being and are outlined in the Health Impact Assessment and our Equality Impact Assessment. Potential socio-economic impacts are outlined in the Socio-Economic Duty Impact Assessment.

In particular, the following impacts on the general public are expected:

- The maintenance of Welsh food production standards will provide quality food for consumers whilst protecting the Welsh landscape and natural resources.
- Improved provision for opportunities for public access to the countryside will bring health, well-being and tourism benefits.
- The protection of landscapes and the historic environment will maintain our cultural assets for current and future generations.
- Improved air and water quality, through the delivery of SLM within the SFS, will also positively impact on health and well-being.
- High animal health and welfare will contribute towards safer food, improved public health, reduced demand on health services and the need for antibiotic treatment. Animal diseases are a constant threat to the livestock sector in Wales and an outbreak can have a devastating effect on industry, rural communities, and the economy of Wales. There is also a risk of zoonotic diseases (diseases transferrable from animals to humans e.g. salmonella) which can have public health impacts. Healthy livestock kept to high standards of welfare contribute to rural communities by sustaining profitable farm businesses, supporting marketing and trade opportunities and helping farmers increase profit margins, as well as safeguarding and creating jobs.

## 4.2 Public Sector including local government and other public bodies

**How, and to what extent, will the proposal impact the public sector?**

Primary impacts on the public sector will relate to those bodies involved in delivery of the SFS. In particular, aspects of the SFS Universal Layer will require technical expertise for the purpose of verification from several public bodies such as Rural Payments Wales (RPW), Natural Resources Wales (NRW), and Cadw. NRW currently supports the technical delivery of Glastir schemes, particularly with Environmental Impact Assessment opinion, consents for proposals on designated sites, European Protected Species licences and felling licence applications. We will be continuing to work with such public bodies as our proposals for future support develop.

The SFS may also help to achieve reduced costs for the public sector. The Universal Layer includes actions relating to biosecurity and increased animal health and welfare; reducing the likelihood and scale of disease outbreaks could lead to substantial cost savings in relation to dealing with and responding to such incidents.

Ongoing analysis of the costs and benefits of the SFS will inform the final Ministerial decision on the SFS, including the impact on the public sector.

## 4.3 Third Sector

**How, and to what extent, will the proposal impact third sector organisations and what they do?**

We have engaged with third sector organisations during our consultations and co-design work and will continue to engage with them as the SFS is finalised.

In particular, a number of third sector organisations provide mental health support to farmers in Wales. We recognise that agriculture in Wales is going through a period of substantial change and that this may impact on the mental health of some farmers. A more detailed assessment of these impacts, and relevant mitigations, is given in Section 2. Third sector organisations providing support in this area may see changes to the level of demand and type of assistance being requested.

The SFS is a farming scheme, and as such, third sector organisations will not be the main participants or recipients of funding from the Universal Baseline Payment. Where a tenant farmer farms land owned by a third sector organisation, it is the farmer themselves who we expect to enter the Scheme, undertake actions, and receive payments. However, in the Collaborative Layer there will be opportunities for third-sector organisations to work alongside farmers to achieve outcomes at landscape scale, on innovation and other opportunities where individuals and organisations work together can achieve greater benefit.

It is anticipated that some third-sector organisations may provide guidance and support to inform the actions of farmers, but the SFS does not require third-sector organisations or volunteers to deliver any aspect of the scheme, nor will it require the use of community facilities/assets owned by the third sector.

## 4.4 Justice Impact

The SFS relates to on-farm actions above and beyond regulatory requirements. The Scheme does not:

- Bring forward any new legislation.
- Create, remove, or amend an offence.

- Result in any other impact on the justice system (e.g. through increased litigation, need for legal aid, appeal against a decision of a public body).

As such, a Justice System Impact Assessment is not required for the proposals.

## SECTION 5. WHAT WILL BE THE EFFECT ON ENVIRONMENTAL WELL-BEING?

Under Section 9 of the Environment (Wales) Act 2016, the Welsh Ministers are required to prepare, publish and implement a natural resources policy and to take all reasonable steps to implement it and to encourage others to take such steps. The Natural Resources Policy was published in August 2017.

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|---|---|---|
| **Required for all proposals:** | • Natural Resources Policy national priorities, challenges and opportunities | 5.1a<br>5.1b |
| **Required for all proposals** | • Biodiversity | 5.2 and Annex F |
| **Required for all proposals** | • Climate Change | 5.3 |
| Certain plans and programmes requiring SEA under the Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 | • Strategic Environmental Assessment | 5.4 and IIA Guidance |
| Proposals which may affect a Special Area for Conservation or a Special Protected<br>Area (SAC/SPA): | • Habitats Regulations Assessment | 5.5 and IIA Guidance |
| Certain projects relating to town and country planning; transport; agriculture; forestry; marine, land drainage; and electricity which require EIA | • Environmental Impact Assessment | 5.6 and IIA Guidance |

| | | |
|---|---|---|
| under the various EIA Regulations | | |

## 5.1 Natural Resources

### 5.1a How will the proposal deliver one or more of the National Priorities in the Natural Resources Policy (NRP)?

The National Priorities in the NRP are:

- **Delivering nature-based solutions.**
- **Increasing renewable energy and resource efficiency.**
- **Taking a place-based approach.**

The delivery of Sustainable Land Management (SLM) through the Sustainable Farming Scheme (SFS) will help deliver on each of the three National Priorities as set out in the Natural Resources Policy.

**Nature-based solutions:** The SFS has targeted support in the form of a number of Universal, Optional and Collaborative Actions available to support more nature-based interventions and actions aimed at contributing towards healthy soil, clean air, and a resilient environment with increased biodiversity.

The SFS as a whole will encourage more of a focus on natural solutions and enhancing the habitats and biodiversity on agricultural land across Wales. Universal Actions (UAs) and Optional Actions (OAs) will support land users to make these changes in farm management practice. For example, increasing tree coverage on eligible land (managed in line with the National Forestry Standard), together with the action of actively managing habitiat should help to reduce flood risk and contribute towards decarbonisation.

**Increasing resource efficiency:** The SFS sets a number of direct funded actions with the intention of delivering against increasing resource efficiency, which is one of the desired SLM outcomes. Increased resource efficiency on farms can be achieved through measuring and improving performance, which in turn helps minimise use of inputs and reduces overhead costs.

This efficiency not only positively influences farm profit but has positive environmental benefits. Becoming more efficient means the farm works well within its environment and makes the best use of the natural resources available to it. Many of the SFS actions are designed to help farmers become more efficient by adopting an approach which makes the best use of their resources. For example, the action requiring farmers to self-assess each year will provide benchmarking, giving farmers a starting point to understand how their business is performing, providing them with evidence on the impact of the changes they make on the ground.

Benchmarking through frequent self-assessments, will support farms to understand their costs and identify where improvements can be made, including the use of renewable energy, to increase efficiency and sustainability.

Offering additional support such as an onsite carbon assessment will support agricultural businesses to manage energy effectively. Improved energy efficiency is expected to lead to cost savings for agricultural businesses and it also helps to reduce overall pressure on the national energy supply.

**Place based approach:** The SLM framework encourages a place-based approach, which is demonstrated by a number of proposed UAs within the scheme. SLM intends to support farming in a way which works with nature, helps tackle the climate and nature emergency, supports vibrant rural communities as well enabling and supporting the sustainable production of food. SFS actions aim to deliver the positive outcomes of SLM, yet such actions will vary by farm, location, and local priorities. We will continue to take account of a range of evidence, including the State of Natural Resources Report (SoNaRR) and NRW's Area Statements to identify the local priorities and opportunities to support collaboration at a catchment or landscape scale, which are included within the SFS Collaborative Layer.

An example of the place-based approach can be found with the UA relating to tree planting. The Welsh Government advocates having the right trees in the right places. It will be important to consider where tree planting can be an asset to the farm; for example, shelter belts could protect livestock from prevailing weather, and wider buffers on farm boundaries may provide valuable biosecurity. This action will be supported by the requirement to carry out an environmental assessment, which would include a Level 1 Habitat Baseline Review (HBR1). We will help to identify to farmers where tree planting will be most beneficial on their land. We acknowledge that the 10% target could risk unintended negative environmental consequences if applied as a one-size-fits-all. To mitigate against this, we are providing a list of exemptions for farmers who are not able to undertake tree planting for reasons outside of their control.

### 5.1b Does the proposal help tackle the following national challenges and opportunities for the sustainable management of natural resources?

- *Reverse the decline in biodiversity – by developing resilient ecological networks.*
- *Safeguard and increase carbon stores in soils and biomass.*

To understand each farm's pathways to net zero and support the farmer in identifying opportunities to reduce carbon emissions and increase carbon sequestration, farms will complete a Single Application Form (SAF), Carbon Assessment, and Habitat Baseline Review Level 1 (HBR1).

The initial data inputted from the carbon assessment will be baseline data. After the farmer has started or finished the universal soil testing action that data can then be fed into a carbon calculator. Ongoing engagement and use of a carbon calculator will be required in order to track the effectiveness of low carbon initiatives undertaken on the farm, empowering farmers to understand their current emissions and help identify areas which can be improved through farmers adopting actions to reduce the climate change impact of agriculture.

The review will also help identify opportunities for local and landscape level projects (anaerobic digestion [AD], renewable energy projects or ammonia reduction actions within urban areas), such as cooperative emissions reductions projects (e.g. peat restoration).

As outlined in the Environment and Rural Affairs Monitoring & Modelling Programme (ERAMMP) logic chains report,[38] carbon sequestration occurs in different habitats across Wales, including woodland, saltmarsh, peatland, and grassland. Safeguarding and increasing carbon stores can be achieved by practices such as sward management, nutrient management and increasing tree cover.

Additionally, the management and restoration of natural habitats which act as carbon stores, should lead to an increased capacity for different ecosystems to retain carbon. Evidence[39] shows:

- Increases in Soil Organic Carbon (SOC) due to a given change in management or land use are finite. SOC stocks will tend to saturate as a new equilibrium state is reached. Similarly, potential SOC gains may be greatest in areas which currently have low SOC stock which are undergoing land use changes, rather than minor management changes.

- Increases in SOC due to a given change in management or land use may not be permanent. Returning to original management is likely to release accrued SOC so long-term changes in practice is important.

- Increasing Soil Organic Matter (SOM) could also have synergistic effects through agricultural GHG emissions reduction; small increases in SOM could improve soil properties and plant productivity while reducing dependency on Nitrogen fertiliser.

The actions within the SFS are intended to support farms to undertake a range of management practices which would positively impact carbon stores in soils and biomass. Our proposals for Optional Actions relating to habitat and agroforestry and woodland management will increase carbon sequestration in the timber and habitats created.

***Maintain productive capacity, in particular, by improving soil quality and biosecurity.***

***Soil Quality***

Soil quality is integral to the principle of SLM and must be maintained and enhanced if the strategic objectives are to be met.

The Royal Society notes,

[38] https://erammp.wales/sites/default/files/ERAMMP%20Rpt-40%20SFS%20Logic%20chains%20v1.0_en.pdf

39 Alison, J., et al. (2019). Annex 3: Soil Carbon Management. ERAMMP Report to Welsh Government (Contract C210/2016/2017) (CEH NEC06297).

> Biodiversity and soil structure are closely linked; soil structure influences the nature and activity of soil organisms, while soil organisms affect the physical structure of the soil. Good soil structure benefits a number of species and habitats. In addition, soil biodiversity, and its associated influence on soil structure, contributes to a range of ecosystem functions such as decomposition of dead matter and nutrient cycling. Soil also contributes to ecosystem services such as support of above-ground biodiversity, control of plant, animal and human pests and diseases, and climate regulation.[40]

In terms of the importance of soil quality to productive capacity, the Royal Society also contends,

> there is a correlation between improvements in soil structure and increasing grain yield of cereals. A well-structured soil can improve crop productivity through providing a habitat for earthworms and other soil organisms. Compacted soil is often associated with a decrease in yield through detrimental effects on the crop's root system. Improved soil structure can help to prevent soil erosion, where the upper layer of soil is displaced. Soil erosion significantly affects the productivity of soil, with Defra estimating that the total cost of erosion in England and Wales is in the region of £150 million a year.[41]

A report by ERAMMP also advises,

> Taking account of nutrients supplied by organic materials is crucial to minimise nutrient losses to water and air from agricultural systems. Manure nutrient use efficiency can be improved by ensuring manures are applied at application rates that do not supply nutrients in excess of crop demand. Targeting manure applications to soils that require phosphate applications to maintain soil fertility will reduce the risks of phosphate losses to water, along with avoiding applying manure to soils that already have adequate P levels.[42]

Targeted application of slurry (i.e., through injection) would lead to benefits including increased crop yields, whilst at the same time minimising nutrient loss and runoff, which has led to environmental effects harmful to biodiversity including eutrophication.

Evidence from SoNaRR shows the importance of protecting our soils:

- The soils of best quality and most productive agricultural land are a scarce and finite resource in Wales, accounting for less than 7% of land area.

- Soil quality has deteriorated across all habitats apart from woodlands where there has been some improvement.

The severity and spatial extent of soil erosion has not been directly quantified in Wales. Around 10-15% of grassland fields in England and Wales are thought to be affected by severe soil compaction and 50-60% are in moderate condition.[43]

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[40] The Royal Society, (2020) 'Soil structure and its benefits'.

41 Graves, A., et al., (2015) 'The total costs of soil degradation in England and Wales', *Ecological Economics*, 119, pp.399-413.

42 Williams J.R., et al., (2019) Annex 1: Soil nutrient management for improved land. ERAMMP Report to Welsh Government (Contract C210/2016/2017) (CEH NEC06297).

43 Natural Resources Wales, (2016) State of Natural Resources Report (SoNaRR): Assessment of the Sustainable Management of Natural Resources. Technical Report.

On-farm actions to improve soil quality will often also deliver wider benefits such as reduced GHGs, improved water quality, improved air quality and increased ecosystem resilience therefore maintaining the productive capacity of the land.

Carrying out soil testing is set as one of the UAs within the SFS. This will give every farmer an understanding of their soil and the demands of their crops. By testing their soils and following a nutrient accounting process, farmers will have the information needed to make informed decisions.

Support for Nutrient Management Planning and soil testing can help ensure farmers implement the most appropriate management for their farm, whilst also improving:

- Farm profitability – through input cost management.
- Soil biome – through diverse soil life such as fungi or larger small organisms e.g. worms.
- Soil structure – through better soil aggregation and stable soil carbon; reducing erosion.
- Soil carbon sequestration.
- Soil infiltration rate – allowing more water to be retained by soils, reducing flooding.

*Biosecurity*

Endemic, production-limiting diseases are a major constraint on efficient livestock production and have an impact on the carbon footprint, efficiency, and profitability of farms. Welsh systems are particularly vulnerable to endemic disease impacts because they are largely pasture-based. The UK Climate Change Committee (UKCCC) has identified better animal health through biosecurity as an effective mitigation measure, which is estimated to provide savings to farmers and contribute to the $CO_2e$ emission abatement.

The ERAMMP logic chains report[44] showed that healthier and more productive livestock from increased biosecurity could deliver:

- Improved productivity, resulting in fewer livestock needed for the same output.
- Maintaining and enhancing biosecurity as a benefit in itself.
- Reduced effects from veterinary medicines on other species (e.g. dung beetles) and associated ecosystem processes (e.g. nutrient cycling) and services (e.g. water quality).
- Reduced antibiotic leakage to the environment.
- Improved air quality and reduced carbon emissions per unit outputs, which are indirect benefits from more productive animals.

[44] Dickie I. & Neupauer, S., (2021) ERAMMP Report-40: SFS Logic Chains. Report to Welsh Government (Contract C210/2016/2017)(UKCEH 06297/06810)

The Universal Actions offer support for achieving and promoting high standards of animal health, welfare and biosecurity. The Biosecurity Universal Action will enable a good level of biosecurity across farms, through the ability to provide support to undertake actions such as ensuring boundaries are secure to stop stock straying, making sure wash stations are available, and securing feed stores to keep out wildlife and vermin.

Further UAs supporting biosecurity include:

- The option of selecting related Continuous Professional Development modules
- A requirement to calculate and report the average amount of antibiotics used on the farm.
- All farmers are required to have the necessary biosecurity measures in place to minimise the risk of catching and spreading disease.

*Reducing the risk of flooding*

Flood risk is influenced by a range of factors such as topography, habitat and rainfall.[45] The ERAMMP logic chains report highlights a range of on-farm actions which would be expected to mitigate flood risk:

- Sward management and cover cropping can increase infiltration rates and water retention.
- Establishing hedgerows and other buffers (e.g. in riparian zones) can slow water run-off.
- Farm woodland improves water interception through improved soil structure.

A wide variety of ecosystems have a demonstrable benefit to flood control when in good condition. One example of this is raised by Natural Resources Wales in relation to the areas of Ffridd in South Central Wales, where flood mitigations are mentioned as one of several benefits from the ecosystem being managed well.[46]

Evidence from ERAMMP shows that,

> restoring floodplain wetlands has Flood Risk Management benefits in terms of reduced frequency and increased time lag of flood events, although there is also a potential risk (shared by most WWNP interventions) of peak synchronisation leading to flooding downstream. Their effectiveness is influenced by site-specific factors, especially how well

[45] Keenleyside, C.B. et al., (2019) Annex 9: Flood mitigation. ERAMMP Report to Welsh Government (Contract C210/2016/2017) (CEH NEC06297).

46 Natural Resources Wales. South Central Wales Area Statement: Building resilient ecosystems. https://naturalresources.wales/about-us/area-statements/south-central-wales-area-statement/building-resilient-ecosystems/?lang=en

they are connected to the river, and also their location, landscape topography, soil characteristics and type of management.[47]

The ERAMMP evidence also notes the biodiversity benefits of restored floodplains, which 'can provide a wide range of habitats (including priority habitats such fens, reed beds and lowland raised bog) and benefits for species that use these as feeding, breeding and resting areas.' Species and taxa benefiting from this include 'waders, wildfowl, fish, mammals, amphibians and invertebrates. Three quarters of restored wetlands are used by migrating birds.'[48]

Soil management can also contribute to reduced flood risk. The Royal Society notes 'soil can act as 'natural flood management infrastructure' by increasing water infiltration into the ground and also by providing natural water storage, for example through uptake into root systems.'[49] They observe, however, that 'both these benefits are negatively affected by compacted soil structure. Compaction of the pores within the soil reduces the ability of rainfall to infiltrate the soil and acts as an obstacle to root penetration.'[50] As such, 'the degree to which soil can contribute to flood prevention is strongly reliant on it being well-structured'.[51]

The above evidence demonstrates that many other SLM actions which could be undertaken may also be expected to positively impact the ability to mitigate flood risk. The value of floodwater storage provided by trees in Wales is estimated to be £82.5m a year compared with bare soil, and £34.4m compared with grassland.[52]

UAs proposed, which support the flood risk mitigation objectives, include:

- Where habitat exists, farmers will need to manage it appropriately.
- Have at least 10% tree cover on the eligible area of their farm. This should be managed in line with the UK Forestry Standard.
- Manage new and existing hedgerows in line with the hedgerow management cycle.
- Have a multi-species cover crop on all land which is uncropped over winter.
- Actively manage at least 10% of their land to maintain and enhance semi-natural habitats. Where there is insufficient semi-natural habitat available, farmers will need to select actions to create permanent or temporary habitat features on other agricultural land.

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47 Keenleyside, C.B. et al., (2019) Annex 9: Flood mitigation. ERAMMP Report to Welsh Government (Contract C210/2016/2017) (CEH NEC06297).

48 Ibid.

49 The Royal Society, (2020) Soil structure and its benefits.

50 Ibid.

51 Ibid.

52 https://cdn.forestresearch.gov.uk/2023/01/Revised-valuation-of-flood-regulation-services-of-existing-forest-cover-2023.pdf

- Restore and manage existing permanent wildlife ponds and/or create a number of temporary ponds (scrapes).

*Supporting climate change mitigation and adaptation through ecosystem approaches.*

Agricultural emissions are a significant part of Wales's GHG, contributing approximately 12.8% of total emissions.[53] Welsh Government has set net zero targets for 2050 and the industry is targeting 2040. Given the size of industry's GHG emissions a significant opportunity exists for farming to help deliver climate change mitigation.

Ecosystem approaches to climate change adaptation are defined by the Convention on Biological Diversity as 'the use of biodiversity and ecosystem services […] to help people adapt to the adverse effects of climate change'.[54] This 'may include sustainable management, conservation and restoration of ecosystems, as part of an overall adaptation strategy that takes into account the multiple social, economic and cultural co-benefits for local communities.[55]

Importantly, this definition places an emphasis on the well-being of people and communities and using measures which deliver wider benefits. This aligns with the strategic SLM objective of mitigating and adapting to climate change which must be done in a way that:

- Meets the needs of the present without compromising the ability of future generations to meet their own needs; and
- Contributes to the well-being goals of the Well-being of Future Generations (Wales) Act 2015.

Healthy ecosystems can act as a buffer against severe weather events induced by climate change. NRW has advised, in the North-West Wales area statement, that the effects of climate change are already occurring in Wales with severe drought, wildfires and stress on our native habitats becoming more common.[56] The below UAs would support the intended outcomes of SLM in relation to climate change mitigation and adaptation:

1. Carry out soil testing.
2. Where habitat exists, farmers will need to manage it appropriately.

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[53] The Welsh Government, (2019) Agriculture: Sector Emission Pathway.

[54] Convention on Biological Diversity (CBD), (2009) Connecting Biodiversity and Climate Change Mitigation and Adaptation. Report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change. CBD Technical Series No. 41. Secretariat of the Convention on Biological Diversity, Montreal, Canada.

[55] Convention on Biological Diversity (CBD), (2010) Decision adopted by the Conference of the Parties to the Convention on Biological Diversity at its 10th Meeting. X/33. Biodiversity and climate change. UNEP/CBD/COP/DEC/X/33.

[56] Natural Resources Wales. North West Wales Area Statement. https://naturalresources.wales/about-us/area-statements/north-west-wales-area-statement/climate-and-environment-emergency-adaptation-and-mitigation/?lang=en

3. Have at least 10% tree cover on the eligible area of their farm. This should be managed in line with the UK Forestry Standard.
4. Manage new and existing hedgerows in line with the hedgerow management cycle.

**High Soil Carbon content.** The Royal Society observe that 'soil is the largest terrestrial store of organic carbon and its potential as a carbon sink means it could have an important role in climate change mitigation.'[57] They note, however, that 'the capacity for soil carbon sequestration depends on soil type and land use. For example, the soil of wetlands and peatlands accumulates carbon at faster rates, due to high soil moisture and decreased rates of microbial decomposition […] the restoration of former crop fields to grassland or forests can restore soil carbon.'[58]

**Peatland restoration.** Evidence[59] shows restoring peatland is 3.4 times less nitrogen costly than mineral soil carbon sequestration, and involves a much smaller land area demand, calling for a stronger consideration of peatland rehabilitation as a mitigation measure.

**Agroforestry.[60]** Evidence[61] shows agroforestry systems can contribute to slowing down those increases [in atmospheric carbon dioxide ($CO_2$) concentrations] and, thus, contribute to climate change mitigation. The soil organic carbon (SOC) pool, in particular, is the only terrestrial pool storing some carbon (C) for millennia which can be deliberately enhanced by agroforestry practices. Up to 2.2 Petagrams (Pg) of Carbon (1 Pg = $10^{15}$ g) may be sequestered above and below ground over 50 years in agroforestry systems.

**Woodland.** The UKCCC note the importance of increasing woodland cover (at a UK level):

> 'Our analysis shows that using land released from agriculture for carbon sequestration and restoring natural habitats can deliver deep emissions reduction to 2050. Alternative uses of land could lead to emissions reductions of as much as 35-80% (20-40 Mt $CO_2$e per annum) by 2050. The key measures to deliver this are: afforestation (increasing forest cover from 13% of all UK land today up to 19% by 2050) and better management of existing forests; restoring 55-70% of peatlands could reduce emissions by 4-11 Mt $CO_2$e annually by 2050; sustainable energy crops representing up to 5% of land where wider environmental risks are managed; and more diverse uses of land that include trees on farms and hedgerow planting. Afforestation and restoring peatlands would also provide a range of additional benefits, including increased biodiversity, improved water quality and flood alleviation.'[62]

57 The Royal Society, (2020) 'Soil structure and its benefits'.

58 Ibid.

59 Leifeld, J., & Menichetti, L., (2018) 'The underappreciated potential of peatlands in global climate change mitigation strategies', *Nature communications*, *9*(1), pp.1-7.

60 Agroforestry refers to the production of crop, livestock, and tree biomass on the same area of land.

61 Lorenz, K., & Lal, R., (2014) 'Soil organic carbon sequestration in agroforestry systems: A review', *Agronomy for Sustainable Development*, *34*(2), pp.443-454.

62 UK Committee on Climate Change, (2018) 'Land use: Reducing emissions and preparing for climate change'.

The UK Climate Change Committee advise a cross-UK implementation will lead to a benefit of £61 billion in total from Carbon Sequestration, without even taking into account the social benefits of these actions.[63]

Trees and hedges offer shade and shelter for livestock which will be important as we face more extreme weather due to climate change. Studies have shown, by providing shelter, lamb losses can by reduced by up to 30% and daily liveweight gain can increase by 10-21%.[64] Hedges also improve biosecurity and trees can offer an alternative income stream.

The UAs cited would enable farmers to apply the above ecosystem approaches, amongst others, on their farm. This should help increase resilience to climate change, but importantly provide wider social, economic, and cultural benefits by ensuring the sustainability of agriculture and rural communities.

*Reducing noise pollution, and pollution levels in our air, and enhancing air quality.*

Agricultural gas emissions (e.g. ammonia) impact air quality and have negative effects on human health and ecosystems. Many of the ecosystems and natural resources in Wales act in ways to reduce pollution. This includes carbon sequestration and interception of ammonia emissions by woodlands along with a number of benefits from different landscapes. Expected health impacts of enhanced air quality are covered in the Health Impact Assessment.

Nitrogen is lost to the air as ammonia when urine mixes with muck and from spreading fertiliser. It builds up in the atmosphere and then falls on to the land, interfering with ecosystems. In 2018, 88% of sensitive habitat in Wales received excess nitrogen above thresholds where it is harmful to sensitive plants and biodiversity. Additionally, nitrogen is having an adverse effect on 29% of the most sensitive habitats.[65]

Annual nutrient losses from Welsh agriculture are estimated to be around 20,000 tonnes of ammonia and 8,000 tonnes of nitrous oxide to air.

For the UK to meet the National Emissions Ceiling Directive (NECD) target for 2030, ammonia emissions need to be 16% lower compared with 2005 levels. Compared with the other NECD pollutants, ammonia emissions fell between 1990 and 2007 but have since been rising.

The causes of ammonia emission will vary on every farm but, in order of overall importance, they are:[66]

- Slurry and muck spreading (26%)

63 Committee on Climate Change, (2020) 'Land use: Policies for a Net Zero UK', p.58.

64 Forestry Commission, (2023) 'There's more to trees than meets the eye.'

65 https://cdn.cyfoethnaturiol.cymru/media/692923/sonarr2020-aim-1-assessment.pdf

66 https://gov.wales/sites/default/files/publications/2019-04/code-of-good-agricultural-practice-guidance-on-reducing-ammonia-emissions.pdf

- Livestock housing (24%)
- Fertiliser, especially urea (19%)
- Grazing (12%)
- Muck and slurry storage (11%)

As covered in the Health Impact Assessment and Economic Impact Assessment, the following UAs are also expected to have health benefits for the people of Wales and economic benefits for the farm business through reduced input costs:

- Carry out soil testing to include a combination of:
    - Nitrogen (N), Potassium (P), Phosphorous (K), Carbon and pH –
    - a biological measure e.g. respiration counting 'proxy' species (worms) –
    - a physical assessment e.g. Visual Evaluation of Soil Structure (VESS).

- Improve livestock performance by using the Animal Health Improvement Cycle (AHIC).

These following interventions are consistent with the SLM objectives which would deliver enhanced air quality:[67]

- Managing nitrogen (N) losses on the farm and improving N use efficiency are the key components for overall reduction in $NH_3$ emissions. For example, on mixed livestock farms, between 10% and 40% of the N loss is related to $NH_3$ emissions.[68]

- The use of fertiliser recommendation systems (i.e. matching nutrient supply from organic manures and manufactured fertilisers to crop nutrient requirements) has the potential to reduce nitrogen and phosphorus losses to water and ammonia and nitrous oxide emissions to air by c.5%.

- Other ammonia abatement options have the potential to reduce ammonia losses from the targeted loss pathway by up to 80% (e.g. rigid covers on slurry stores - covering liquid manures stores, combined with the use of precision application technologies for spreading liquid manures, will reduce ammonia emissions).

Other evidence from ERAMMP notes: '*focus can be placed on five broad areas where ammonia abatement has already been well researched and proven as an effective method. These are:*

[67] Williams J.R., et al., (2019) Annex 1: Soil nutrient management for improved land, ERAMMP Report to Welsh Government (Contract C210/2016/2017) (CEH NEC06297).

[68] Jones, L. et al., (2019) Annex 8: Improving Air Quality and well-being, ERAMMP Report to Welsh Government (Contract C210/2016/2017) (CEH NEC06297).

- Livestock feeding strategies.
- Decreasing ammonia emissions from animal housing.
- Preventing emissions from slurry storage facilities.
- Low-emission slurry application techniques.

$NH_3$ emission from mineral fertiliser application can be reduced by opting for low emission N fertilisers, such as ammonium nitrate, avoiding urea which is associated with much higher emissions.'[69]

Further evidence from ERAMMP on the social values of the Universal Actions, which accompanies the SFS consultation, provides an estimate of potential impacts on air quality from undertaking a range of on-farm actions consistent with SLM.

Whilst noise pollution is not specifically targeted within the SFS, it could be expected that actions in the scheme could also reduce noise pollution. A report by Eftec for Defra found natural capital assisted with the mitigation of road noise levels of between 8,000 – 22,000 homes in Wales.[70] Increasing ecosystem resilience could further support this.

*Improve the quality and ensure the quantity of our water.*

Annual nutrient losses from Welsh agriculture are estimated to be around 37,000 tonnes of nitrate-N and 700 tonnes of phosphorus to water.[71] Emissions of nitrates, phosphates and sediment from agricultural land is one of the main pressures on freshwater quality in Wales.[72]

Improving water quality can be achieved by a range of on-farm measures[73] which reduce losses of nutrients, erosion of topsoil, and prevent any losses from reaching water courses:

- Nutrient management planning can ensure the right quantities are applied at the right time, reducing losses to water.
- Hedgerows, habitat and trees can increase interception of nutrients, preventing them from reaching watercourses.
- Cover cropping can increase retention of nutrients, reducing losses and preserving top soil.

Proposed Universal Actions consistent with the SLM intention to reduce harm to the quality of waterways, include:

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69 Ibid.

70 Eftec & CEH, (2018) Modelling noise mitigation for UK urban natural capital accounts. Report. Pg. 38.

71 Williams J.R., et al. (2019). Annex 1: Soil nutrient management for improved land. ERAMMP Report to Welsh Government (Contract C210/2016/2017) (CEH NEC06297).

72 https://erammp.wales/sites/default/files/ERAMMP%20Rpt-40%20SFS%20Logic%20chains%20v1.0_en.pdf

73 Ibid.

- Soil testing.
- Heavily modified peatland and habitat management (where appropriate).
- 10% tree cover managed in line with the UK Forestry Standard (as part of this 10%).
- Management of new and existing hedgerows in line with the hedgerow management cycle.
- Multi-species cover crop on all land which is uncropped over winter.

These actions support the reduction of nutrient runoff resulting from soil erosion along with natural barriers being created to reduce pollution from entering waterways. We therefore expect the SFS to have a positive impact on water quality.

*Taking action to reduce the pressures on natural resources, such as through resource efficiency and renewable energy.*

Resource efficiency and effective energy management are intended SLM objectives captured within the development of the SFS. Resource efficiency is essential for climate change mitigation and the sustainability of agriculture. Farm resources may be environmental (e.g. water, soil) or may be inputs (e.g. energy, fertiliser, diesel, pesticides).

The SFS aims to support farms to become sustainably productive, by improving the efficiency of their production within the natural capacity of the land.

UAs supporting resource efficiency include:

- The completion of an on farm self-assessment once a year against a minimum of the sector and industry KPIs.
- Soil testing and nutrient accounts.
- Integrated pest management assessments.
- Multi species crop coverage requirements.

Improved efficiency can not only improve farm business resilience, through reducing costs and waste (e.g. through reduced energy or fertiliser use), but can also help reduce resource pressure for current and future generations.

The wider delivery against the SLM purposes, such as clean air, clean water, and increased carbon sequestration, will also reduce the pressure on natural resources and increase the resilience of our ecosystems.

We expect the SFS to have a positive effect on resource efficiency and to reduce pressures on natural resources.

*Supporting preventative approaches to health outcomes, with a particular focus on key public health issues of transport related air and noise pollution, tackling physical inactivity and mental health.*

The SLM framework, which SFS has been developed under, is intended to reduce air pollution, improve air quality, and improve provision for opportunities for public access to, and engagement

with, the countryside. We have set out the evidence in our Health Impact Assessment the main areas where our proposals will contribute to mental and physical health.

*Supporting action to tackle health and economic inequalities.*

The SFS' UAs will contribute to better air and water quality, and to the extent poor air and water quality disproportionately affect those living in low-income households (in deprived areas), the SFS should have a positive impact on the health inequalities of low-income households.

Parts of Wales still have some of the worst air quality in Britain, contributing to around 1,000-4,000 deaths every year.[74] Alongside this, Public Health Wales has described the situation as a public health crisis, with an estimated cost to the Welsh economy of £1 billion related to lost workdays and costs to our health service.[75] UAs supporting air and water quality would help to improve this situation.

Our Equality Impact Assessment notes the environmental outcomes delivered by the SFS will positively impact each of the three physical environment sub domains (air quality; flood risk; and access to green space) of the Welsh Index of Multiple Deprivation (WIMD).[76] As such, this could reduce the number of areas[77] in Wales shown as being environmentally deprived under the physical environment domain in the WIMD. This would impact positively on the well-being of those people living in those areas and contribute positively towards reducing environmental inequality.

*Supporting community cohesion.*

The SFS is expected to positively contribute to social capital and community well-being. Rural communities are at the forefront of the climate and nature emergency. If action is not taken to address these challenges, the sustainable production of food and resilience of rural economies and communities are under threat. The UAs within the SFS have been designed to support the mitigation of these challenges in a way which also benefits social cohesion, culture and heritage and supports decarbonisation in a fair and prosperous way. The intention is for the SFS to enable the strengthening of links between agricultural businesses and their communities and helping rural communities thrive.

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[74] Public Health Wales, (2020) 'Air pollution and health in Wales'.

75 Natural Resources Wales, South Central Wales Area Statement – Improving our Health, available at: https://naturalresources.wales/about-us/area-statements/south-central-wales-area-statement/improving-our-health/?lang=en

76 Welsh Government, (2019) Welsh Index of Multiple Deprivation (WIMD) Results Report.

77 Lower Super Output Areas (LSOAs)

The need to meet the SLM objectives, which underpin the SFS, is strengthened by the requirement that they must be achieved in a way which:

a) Meets the needs of the present without compromising the ability of future generations to meet their own needs; and
b) Contributes to achieving the well-being goals in section 4 of the Well-being of Future Generations (Wales) Act 2015.

The SFS will support the delivery of outcomes to increase the resilience of agriculture and the rural environment, which in turn supports community cohesion as outlined in our Rural Proofing and Economic Wellbeing Impact Assessments.

*Supporting secure and stable employment.*

Estimates for 2021 show the total number of people working on agricultural holdings in Wales is 50,401.[78] Of this total, there are 37,953 principal farmers, directors, business partners and their spouses. The total includes 12,448 regular full time, regular part-time and seasonal/casual farm workers. The figure does not include self-employed people or contractors who may also work on the farm.

We expect the combination of Universal, Optional and Collaborative Action, in some cases, to change the labour requirement on farms towards more positive environmental actions. Evidence from Tir Gofal in Wales[79] and Entry Level Stewardship in England[80] has found these agri-environment schemes were associated with an increased labour demand. Additionally, at UK level, it is suggested 'the contribution of Pillar 2 to rural employment is higher (1.2%) compared to the contribution of Pillar 1 (1.0%)'.[81]

Improving the resilience of agricultural businesses in Wales is one of the SLM principles underpinning the SFS. Through SLM, a resilient agricultural sector will also contribute to secure and stable employment by enabling current and future generations to continue the sustainable

78 June Survey of Agriculture and Horticulture (2021).

79 Agra CEAS (2005). Socio-economic evaluation of Tir Gofal, report for CCW and Welsh Government. A sample of 251 participants in Tir Gofal (just over 20% of the 1,166 participants who had received payments at project inception) were surveyed.

80 Mills, J., Courtney, P., & Gaskell, P. (2010). Assessing the Incidental socio-economic impacts of Environmental Stewardship.

81 Rizov, M., Davidova, S., & Bailey, A. (2018). Employment effects of CAP payments in the UK non-farm economy. *European Review of Agricultural Economics*, *45*(5), 723-748.

production of food and the outcomes we are seeking. This should support jobs in the agricultural sector, wider supply chain and rural communities.

It is essential that any changes to agriculture, land use, and associated practices are fair and create opportunities across the rural (and wider) community. This will require appropriate advice, support, and skills development. As part of SFS there will be an advisory service to support all farm businesses in delivering SLM.

Additionally, the protection and increased sustainability of Welsh heritage, landscapes and natural resources may lead to a number of additional tertiary benefits related to the creation of secure and stable employment. This may be particularly applicable in the area of agri-tourism where Welsh natural resources have created a natural environment which is world renowned. This is evidenced by the Wales Visitor survey which highlights the natural environment as the key reason for tourists to choose Wales as a holiday destination.[82]

## 5.2 Biodiversity

Please see Annex F for the Biodiversity Impact Assessment.

## 5.3 Climate Change

Climate change has been identified as one of the biggest threats facing our future generations. We need to reduce our emissions through decarbonisation action (5.3a) and to adapt to the impacts of climate change by increasing our resilience (5.3b).

The impacts of climate change on agriculture and forestry in the UK have been extensively detailed.[83] Likewise, there is evidence concerning the impact of climate change on Wales's Natural Resources,[84] and on its protected sites.[85]

82 McAllister & McDonough (2017).Wales Visitor Survey 2016 Report: UK Staying Visitors. Welsh Government, GSR report number 14/2017. Available at: http://gov.wales/statistics-and-research/wales-visitor-survey/?lang=en

83 Morison, J. & Matthews, R., (eds.) (2016) *Agriculture and Forestry Climate Change Impacts Summary Report, Living With Environmental Change.*

84 Natural Resources Wales, (2016) State of Natural Resources Report (SoNaRR): Assessment of the Sustainable Management of Natural Resources. Technical Report.

85 Natural Resources Wales, (2018) Natura 2000 Thematic Action Plan Climate Change and Habitat Fragmentation, LIFE Natura 2000 Programme for Wales.

In their report on land use, the UKCCC conclude 'throughout the UK there is an urgent need for a new approach: the legislative opportunities for real change are available and should progress immediately.'[86]

The Environment (Wales) Act 2016 commits the Welsh Government to reducing GHG emissions to net zero by 2050. Moreover, the Agriculture (Wales) Act 2023 has set a strategic framework to consider mitigating and adapting to climate change within agriculture in Wales, designed to help Wales decarbonise in a fair and prosperous way.

### 5.3a Decarbonisation

**How, and to what extent, will the proposal affect emissions in Wales?**

The SFS has been designed to support farmers to deliver on the SLM objectives in the Agriculture (Wales) Act 2023 including to mitigate and adapt to climate change**.**

In 2019, agriculture accounted for 14% of Welsh emissions (5.3Mt$CO_2$e).[87] Emissions are primarily methane (66%) and Nitrous Oxide (22%). These emissions are mainly accounted for by:

- Enteric fermentation: 58%
- Manure Management: 16%
- Inorganic fertilisers and lime: 11%
- Fuel for mobile machinery: 10%

In order to access the SFS, all farm businesses will need to complete a Single Application Form (SAF), a Carbon Assessment and a Habitat Baseline Review Level 1 (HBR1).

The intention is to set the baseline to facilitate a step change in farm performance, by giving farmers the tools to understand how their farm is performing and the data and evidence from any interventions carried out throughout the scheme to allow for considered evaluation. This is also supported by the Benchmarking Universal Action.

The carbon assessment is intended to measure the carbon impact of the entire farm business (and will be applicable to all farm businesses in Wales) as well as product level ($CO_2$e per unit of output). The assessment is expected to:

- Use dual reporting i.e. both $GWP_{100}$ and GWP*, which are the two internationally recognised metrics for quantifying the impact of methane.
- Follow the PAS2050:11 standard where possible (taking in to account the above requirement).

This should support farmers in their ability to maximise carbon storage, as every farmer will have the opportunity to develop an understanding of their soil and the demands of their crops and be

[86] UK Committee on Climate Change, (2020) Land use: Policies for a Net Zero UK.

[87] https://gov.wales/sites/default/files/publications/2021-10/net-zero-wales-carbon-budget-2-2021-25.pdf

able to use the assessment and soil testing to support decision making by offering data on the impact of potential changes and/or offer suggested areas for improvement.

In many cases, the UAs are also expected to contribute towards meeting this target, such as supporting agricultural businesses to manage energy efficiently and generate on-site renewable energy.

Ongoing analysis of the costs and benefits of the SFS will inform the final ministerial decision on the SFS, including assessments of the value of environmental benefits generated from the SFS.

*Reducing emissions*

A report by *ERAMMP* examined the potential reduction in emissions from the management of livestock, manures and fertilisers.[88] It found that a Maximum Technical Potential Reduction[89] of 22.5% for nitrous oxide and 32.4% for methane could be achieved by 2050 with the largest reductions gained through improved diet, management and genetics in dairy and beef and also an increase in Nitrogen use efficiency. Combined with improvements in agriculture engine emissions the report showed a potential for a reduction in emissions to 3.8 $MtCO_2e$/year.

Uas directly supporting a reduction in emissions include:

- Completing the carbon calculator to help understand where efficiencies can be made on each farm.
- Completing an annual self-assessment once per year against a set of standard key performance indicators (dependant on farm type).
- Soil testing to encourage farmers to make the best use of artificial fertiliser through nutrient management (testing includes Nitrogen, Phosphorous, Carbon.

*Maximising carbon storage*

To maximise carbon storage, existing carbon stocks need to be protected and the size of our stocks, increased. In Wales, woodland is the main sink for emissions[90] (-1.27 $MtCO_2e$) followed by harvested wood products (-0.22 $MtCO_2e$). Soils and biomass are also an important sink for carbon sequestration but need to be managed appropriately in order to avoid them becoming a source of emissions.

In terms of sward management and grassland, evidence[91] shows that 'Improved pasture lands contain large stocks of carbon primarily because of their dominance in area coverage in Wales. […] Soil carbon in pastureland [is estimated] to be equivalent to 47% of Wales's soil carbon stocks

[88] Prosser, H., (2022) ERAMMP Report-68: ERAMMP Report-68: Review of GHG Emission Reduction and Carbon Sequestration in Agriculture to Inform Agricultural and Land Use Policy. Report to Welsh Government (Contract C210/2016/2017) (UKCEH 06297/06810)/

[89] At current production levels.

[90] https://gov.wales/sites/default/files/publications/2021-10/net-zero-wales-carbon-budget-2-2021-25.pdf

[91] Emmett, B.A., et al., (2019) Report 10b: Considerations for the new scheme. ERAMMP Report to Welsh Government (Contract C210/2016/2017) (CEH NEC06297).

to a 1m depth. Preserving these and all soil carbon stocks are critical if soils are not to contribute to further climate change when they should be helping mitigate climate change by ongoing carbon storage.'

In the case of management of woodland stocks, evidence also suggests:

> If a woodland is sustainably managed and each rotation of trees grows to return to the pre-harvest carbon stock, then the forest carbon stock is renewed on a cyclical basis. Furthermore, if the harvested wood is used in products with a long lifespan this can result in a timber production woodland system contributing more to climate change mitigation than an unharvested woodland. This benefit will be magnified further if the use of these harvested wood products: (a) substitutes for materials like concrete, steel or plastic; and (b) substitutes for wood imported from countries where the production forests are not managed sustainably.[92]

Expansion of woodland and hedgerows is a fundamental way to increase carbon sequestration. The UKCCC has recommended Wales achieves 45,000 ha of new woodland planting by 2030 and 180,000 ha by 2050. Reaching this target could lead to additional Land Use, Land-Use Change and Forestry (LULUCF) emissions reductions of up to 304 kt $CO_2$e/yr in 2050, a reduction of 2176 kt $CO_2$e/yr.[93]

Uas supporting an increase in carbon sequestration, and maintaining existing carbon stores, include:

- Completing the Baseline Carbon Assessment and the Habitat Baseline Review Level 1 (HBR1).
- Carrying out soil testing on at least 20% of the eligible land to include a combination of: nitrogen, potassium, phosphorous, carbon, pH and magnesium.
- Maintaining and managing heavily modified peatland and habitats appropriately.
- Managing existing woodland and agroforestry on land and/or
    - Creating a minimum 10% tree cover on eligible land.
    - Managing in line with the UK forestry standard.
- Establishing multi-species cover crop on all land which is uncropped over winter to protect soils from erosion and degradation.

*Achieving and promoting high standards of animal health and welfare*

Healthy animals are more productive. Fewer healthy animals are required to produce the same amount of produce compared with unhealthy ones, resulting in fewer greenhouse gas emissions (GHGE).

The Welsh Government commissioned a unique study, using life-cycle analysis techniques, to determine the impact of Bovine Tuberculosis (TB) on GHGE.[94] The study showed eradication of TB

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[92] Ibid.

[93] Prosser, H., (2022) ERAMMP Report-68: ERAMMP Report-68: Review of GHG Emission Reduction and Carbon Sequestration in Agriculture to Inform Agricultural and Land Use Policy. Report to Welsh Government (Contract C210/2016/2017) (UKCEH 06297/06810)

[94] Williams, A. & Sanders, D., (2016) Greenhouse Gas Emissions from bovine tuberculosis (bTB) in Wales. Report for the Welsh Government (available on request)

in Wales would reduce GHGE from the cattle sector by approximately 2% through reduced wastage and greater efficiency – a small, but significant, contribution to the overall goal of reducing GHGE from farming.

There are many endemic diseases whose control could bring about even greater GHGE reduction. However, quantifying the impact is complex and expensive, and resource has, until now, largely been focussed on making health improvements, rather than measuring GHGE impacts of those improvements.

The SFS has been designed to enable the delivery of improved and enhanced animal health and welfare. As outlined above, prevention of disease should result in healthier and more productive animals, with fewer animals emitting fewer emissions. Preventing large scale animal disease outbreaks will reduce the chance and scale of the environmental impact such outbreaks have, both in terms of the outbreak itself and the actions required in responding to it. The 2001 Foot and Mouth Disease outbreak required the disposal of approximately six million animals via mass burial, pyre burning and rendering, impacting on the quality of water, air, and land. Furthermore, the intensive use of over 1.3 million litres of Government approved disinfectant, which was required to clean infected premises and at road access points across England and Wales by October 2001, accounted for 18% of all pollution incidents recorded during the outbreak. There were also longer-term effects, as biological sewer treatment processes at small plants were disrupted.[95] Whilst animal disease outbreaks cannot be predicted, increased preventative action through enhanced biosecurity and animal health and welfare should reduce the likelihood of occurrence and, should they occur, scale. This should reduce the negative environmental impact and potential implications resulting from responsive action.

UAs supporting animal health and welfare improvements include:

- Self-assessment once a year (deadline is anniversary of joining the scheme) against a standard set of Key Performance Indicators (KPIs – two per sector).
- Carrying out actions, identified by working closely with their vet, through the Animal Health Improvement Cycle (AHIC).
- Undertake training and assess the livestock performance for lameness and body condition.
- Calculating and reporting the average amount of antibiotics used on the farm.
- Having the necessary biosecurity measures in place on each farm

***Summary***

The SFS will financially support farm businesses to undertake farming practices to achieve reductions in emissions and increases in carbon storage.

Depending on the level of funding and future participation, the impact of the SFS on decarbonisation has the potential to be significant.

[95] http://environmentdata.org/archive/ealit:4290/OBJ/x69_EA_Footandmouthdisease_2001_0.pdf

*Assessment using the HM Treasury Green Book Greenhouse Gas valuation methodology*[96]

The HM Treasury Green Book, which provides guidance on how to appraise and evaluate policies, projects, and programmes, has been used by the ERAMMP consortium to develop logic chains, which set out the relationship between the social value of ecosystem goods and services and SLM actions. The logic chains[97] include the following:

- Climate regulation.
- Increased tree cover.
- Saltmarsh.
- Peatland.
- Grassland.
- Decarbonisation.

This work has informed our impact assessment regarding potential decarbonisation effects of the scheme proposals.

### 5.3 b Adaptation

**How, and to what extent, will the proposal affect ability to adapt to the effects of climate change?**

The 2021 Programme for Government makes the commitment to embed our response to the climate and nature emergencies in everything we do. The SFS is part of this commitment, offering incentives to Scheme participants for actions which help farms to mitigate and adapt to the predicted impacts of climate change. Without mitigation and adaptation to climate change, the resilience of our ecosystems, the sustainable production of food, and our cultural resources are under threat.

Agriculture is particularly vulnerable to the effects of climate change:

In the context of livestock farming, evidence suggests,

> climate change is a threat to livestock production because of the impact on quality of feed crop and forage, water availability, animal and milk production, livestock diseases, animal reproduction, and biodiversity… the livestock sector will be a key player in the mitigation of GHG emissions and improving global food security. Therefore, in the transition to sustainable livestock production, there is a need for: a) assessments related to the use of adaptation and mitigation measures tailored to the location and livestock production system in use, and b) policies that support and facilitate the implementation of climate change adaptation and mitigation measures.[98]

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96 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685903/The_Green_Book.pdf

97 https://erammp.wales/sites/default/files/ERAMMP%20Rpt-40%20SFS%20Logic%20chains%20v1.0_en.pdf

98 Rojas-Downing, et al., (2017) 'Climate change and livestock: Impacts, adaptation, and mitigation', *Climate Risk Management*, *16*, pp.145-163.

In the context of arable crops, research contends the

> key effects [of climate change] will be felt through changes in the timing of the crop calendar and hence the farming year in: quality, yield, pest and disease management and crop distribution. Farmers may adapt readily to changes in average climate since effects will be gradual, but adaptations to some extremes will require more forward planning. Possible adaptation options by farmers, e.g. changing crop cultivars, and the wider industry, e.g. developing new varieties, need to be considered.[99]

In the context of dairy farming, it is argued to be 'essential to establish and adopt mitigation strategies covering available tools from management, nutrition, health and plant and animal breeding to cope with the future consequences of climate change on dairy farming.'[100]

Further evidence on the need for resilience to be built into the agricultural sector due to the prospect of climate change can be found in the Wales Rural Development Programme SWOT analysis.[101]

The UAs aim to enable action to be taken on farm to adapt to the effects of climate change and increase the resilience of farm businesses.

In addition to actions specifically targeted at climate change adaptation, the SFS will support farms to become more sustainably productive, managing land within their productive capacity. This sustainable management of natural resources should improve the condition of our ecosystems, which in turn increases the ability of the environment to mitigate the effects of climate change. For example, increased tree cover can have a cooling effect and also mitigate flood risk. Improving soil health and structure, together with increasing soil organic matter, will allow more rapid infiltration of surface water and its retention within the soil for longer periods of time than would otherwise be the case. Soil quality improvements will also contribute to improved water quality.

Changing climates and rising temperatures increase the risk of certain animal diseases, in particular vector-borne diseases. Bluetongue Virus, for instance, is a disease transmitted by midges, which have a higher survival rate in warmer temperatures. Additionally, warmer temperatures alter the migratory patterns and routes of wild birds, presenting an increased risk of avian influenza (AI) to our national flock. Increased animal health, welfare and biosecurity should act to minimise disease risks, including the increased disease risk created by climate change.

UAs supporting climate adaptation include:

- Carrying out the Carbon Assessment and Habitat Baseline Review Level 1.
- Animal biosecurity requirements.
- Habitat maintenance and management (e.g., to support flood mitigation and reduce).
- 10% tree coverage requirements (e.g., offering shade, flood mitigation).

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[99] Hughes, G., & Hossel, J., (2008) 'Adapting UK arable agriculture to climate change', In *HGCA conference*, pp. 23, 24.

[100] Gauly, M., et al., (2013.) Future consequences and challenges for dairy cow production systems arising from climate change in Central Europe-a review.

[101] United Kingdom – Rural Development Programme (Regional) – Wales. Page 81 onwards. https://gov.wales/sites/default/files/publications/2019-07/rural-development-programme-document-2014-to-2020.pdf

- Hedgerow management (e.g., supporting shade and shelter, buffer strips, and slowing water flow).
- Multi species crop coverage on uncropped land over winder (e.g., reducing soil erosion and run off during winter months).

## 5.4 Strategic Environmental Assessment (SEA)

The SFS does not meet the criteria for an SEA to be undertaken.

## 5.5 Habitats Regulations Assessment (HRA)

The SFS does not meet the criteria for an HRA to be undertaken.

## 5.6 Environmental Impact Assessment (EIA)

The SFS does not meet the criteria for an EIA to be undertaken.

# SECTION 6. SOCIO-ECONOMIC DUTY WHAT WILL BE IMPACT ON SOCIO-ECONOMIC DISADVANTAGE?

### 6.1 The Socio-economic Duty.

Please refer to Annex G for the full Socio-Economic Duty Impact Assessment.

## SECTION 7. RECORD OF FULL IMPACT ASSESSMENTS REQUIRED

| Impact Assessment | Yes/No | If yes, you should |
|---|---|---|
| Children's rights | Yes | Annex A |
| Equality | Yes | Annex B |
| Socio-economic Duty | Yes | Annex G |
| Rural Proofing | Yes | Annex C |
| Health | Yes | Section 2 |
| Privacy | Yes | Annex D |
| Welsh Language | Yes | Annex E |
| Economic / RIA | Yes | Section 4 |
| Justice | No | Section 4 |
| Biodiversity | Yes | Annex F |
| Climate Change | Yes | Section 5 |
| Strategic Environmental Assessment | No | Refer to the Integrated Impact Assessment Guidance |
| Habitat Regulations Assessment | No | Refer to the Integrated Impact Assessment Guidance |
| Environmental Impact Assessment | No | Refer to the Integrated Impact Assessment Guidance |

# SECTION 8. CONCLUSION

## 8.1 How have people most likely to be affected by the proposal been involved in developing it?

### Consultations

- In July 2018, we published the *Brexit and Our Land* consultation. Over 12,000 responses were submitted. This included over 1,000 substantive responses with the remaining responses coming from seven unique campaigns.
- In July 2019, we published the *Sustainable Farming and our Land* consultation. Over 3,300 responses were received over the course of the consultation. Just over 500 were unique responses from individuals and organisations with the remainder made up of three distinct campaigns.
- In December 2020 we published the Agriculture (Wales) White Paper consultation. We received 232 unique responses and a further 887 from one campaign.
- We have also published a summary of responses[102,103,104] and our own response to the views expressed for each of these three consultations.[105,106,107]
- Across these consultations we have engaged directly with farmers and other rural stakeholders at regional agricultural shows and a range of dedicated events to further explain and discuss our proposals.
- Those who submitted individual responses to our consultations represented a diverse range of voices and perspectives. The largest proportion of respondents reported they were directly engaged in farming, while the second largest groups of respondents were individuals and organisations with environmental interests.
- In each of our consultations we have sought views on the effects our proposals may have on the Welsh language and how they could be formulated to have a positive impact.

### Co-design and wider stakeholder engagement

- We engaged with over 1,900 stakeholders (the majority of whom were farmers) through the first phase of co-design to gain insight into their views on our proposals for a Sustainable Farming Scheme (SFS).
- Our most recent co-design work was completed in autumn 2022; we received 1,344 survey responses from farmers online or by paper and completed and an additional 101 surveys via phone or in-person interviews. In addition, a total of 26 workshops were held to collect

[102] https://gov.wales/sites/default/files/consultations/2019-05/summary-of-responses-brexit.pdf

[103] https://gov.wales/sites/default/files/consultations/2020-05/sustainable-farms-summary-of-responses_1.pdf

[104] https://gov.wales/sites/default/files/consultations/2021-09/agriculture-wales-bill-summary-of-responses.pdf

[105] https://gov.wales/sites/default/files/publications/2020-08/brexit-and-our-land-our-response.pdf

[106] https://gov.wales/sites/default/files/consultations/2020-07/our-response-sustainable-farming-and-our-land.pdf

[107] https://gov.wales/sites/default/files/consultations/2021-09/agriculture-wales-bill-our-response-forward-plan.pdf

more detailed feedback on the SFS. There were 23 workshops covering the scheme actions and a further three which focussed on scheme processes (covering topics such as eligibility and registration). Separately, a stakeholder feedback form was available for organisations and other individuals to contribute their views.

- All co-design work was undertaken bilingually.
- While developing the Agriculture (Wales) Act 2023 and our proposals for the Sustainable Farming Scheme (SFS) we have sought the views of stakeholder organisations such as the farming unions, environmental organisations and those who represent specific sections of the sector such as the Tenant Farmer Association and the Country Land and Business Association. We also received consultation responses from the Welsh Language Commissioner and Young Farmer Associations.

### 8.2 What are the most significant impacts, positive and negative?

Traditionally, support for agriculture has been focussed on policies that have increased agricultural production and provided cheaper food. These policies have resulted in increased levels of production per hectare for many, but this increase has come at a wider environmental and societal cost. The impacts of some intensification practices on biodiversity, air and water quality, public health and the climate are issues that must be urgently addressed.

The SFS is designed to support the agriculture sector while delivering against the challenges of the climate and nature emergency. Public Health Wales have identified farming as being particularly vulnerable to the impacts of climate change. The Well-being of Future Generations (Wales) Act 2015 and the Environment (Wales) Act 2016 establish an important legislative framework, focused on sustainability, upon which our proposals for future land management policy are based. This framework also underpins our legislative provisions.

Support for the agricultural sector will need to deliver against the Sustainable Land Management framework, and the Agriculture (Wales) Act 2023 sets out the purposes for which any future scheme may provide support.

Supporting farmers to deliver SLM outcomes through the SFS will increase the ecological resilience of the land they manage and the economic resilience of their businesses. Improving the efficiency of the farm business model within the natural capacity of the land will enable current and future generations to continue farming, offering long-term resilience to the communities they are embedded in. This is expected to have positive onward impacts for rural communities in Wales, keeping farms at the heart of their communities, providing trade for local businesses, and offering opportunities for employment.

The provision to support farmers to deliver these outcomes will also offer an alternative revenue stream, unaffected by changes in trading conditions. This income stream should also support resilient rural communities, particularly for local businesses which rely on custom from farms.

Farmers will be required to undertaken action to receive funding and the economic impact of this new funding mode will vary between farms of different types and sizes.

Concerns were raised, through responses to our previous consultations and our first phase of co-design, about the potential impact of a new scheme on rural areas and the subsequent effect on the Welsh language. While there are no specific Universal Actions in the SFS relating to the Welsh language, the SFS is designed to support the sustainability of farm businesses within their

communities, which will help rural communities to thrive and safeguard the use of the Welsh language for current and future generations. Ongoing analysis of the costs and benefits of the SFS will inform the final Ministerial decision on the SFS and encompass wider societal and cultural benefits where possible.

By supporting farming to deliver within the SLM framework we should see the delivery of outcomes such as improved air and water quality, where this is currently affected by agriculture. This is vital for the health of our nation, and for the well-being of future generations.

**8.3 In light of the impacts identified, how will the proposal:**

- **Maximise contribution to our well-being objectives and the seven well-being goals and/or avoid, reduce or mitigate any negative impacts?**

- **Contribute towards achieving the SLM objectives?**

**The SFS and the and the well-being goals**

The SFS will make a number of contributions to achieving the well-being goals, as set out in the Well-being of Future Generations (Wales) Act 2015[108]. Sustainable farming practices and their subsequent outcomes will directly contribute to the goals for a globally responsible Wales, a more resilient Wales and a healthier Wales. Through supporting the agricultural industry and ensuring that farmers are able to remain on their land and participate in their local communities, the SFS will make indirect contributions to goals for a prosperous Wales, a Wales of more cohesive communities, a Wales of vibrant culture and thriving Welsh language, and a more equal Wales.

**Mitigation of potential impacts**

We recognise the importance of any potential economic impact on the sector, rural communities, and the potential for varying impacts across different areas of Wales. The SFS is being designed on the principle it should be available to different farm types, including tenants and those with rights to common land. Our proposals for a set of Universal Actions for the scheme will mean the SFS is accessible to active farmers who meet good environmental and animal health standards. This will give farmers stability and provide a foundation for those wishing to choose additional actions for further payment.

We are considering how we can structure payments at the different layers of the scheme, e.g., through capping, to ensure a fair distribution of funding.

A period of transition between the current system of support and the SFS will allow farms to adjust and ensure that farmers do not experience a sudden cessation of their payments, regardless of whether or not they choose to enter the proposed SFS.

The SFS will be accompanied by an advisory service which will be available to all farms across Wales. This service will be available bilingually and will support farms to transition into the SFS and

[108] https://www.gov.wales/well-being-of-future-generations-wales

perform the actions within the scheme. This service will help ensure farms have access to the advice and guidance needed to adjust to the changes.

**Contribution towards achieving the SLM objectives**

The SFS has been designed and developed with the intention of supporting the resilience of the agricultural sector, its businesses and its farmers whilst simultaneously ensuring farming remains sustainable and viable for future generations. To this end, the SFS has been developed with the purpose that each of the actions have been designed to support farmers to produce food and other goods in a sustainable way, whilst simultaneously supporting agricultural actions which maximises their contribution towards the economic, environmental, social and cultural objectives embedded within the SLM objectives.

Throughout the IIA we have continually provided an assessment of the SFS against the SLM objectives in some instances some actions contribute towards achieving more than one objective.

For ease, we have identified below several examples to highlight the integral relationship between SFS actions and the SLM objectives, further details can be found within the sections or annexes identified under each of the SLM objectives.

A final assessment will be provided to Welsh Ministers in line with the provision of advice for the introduction of the SFS.

1. **To produce food and other goods in a sustainable manner:**
   The SFS has been developed in line with the SLM objectives as outline within the Agriculture (Wales) Act 2023. We have captured a number of the economic impacts of the SFS across the sector, including the impact against economic well-being, which has been addressed at Section 4.

   Annex G – Socio-Economic Impact Assessment – provides details on the benefits anticipated to be realised as a result of the actions and subsequent support via the SFS. It highlights not only the on-farm economic benefits of stable payments for actions which result in the production of food and other agricultural goods in a sustainable manner, but also the wider impacts this has on the resilience of agricultural businesses within the communities in which they operate and their contribution to the local economy. For example, this may extend to farm diversification and additional employment opportunities for the local community.

2. **To mitigate and adapt to climate change.**
   Section 5 of the IIA focuses on the environmental well-being effects, and captures the impacts of the actions and their contribution towards achieving the second SLM objective to mitigate and adapt to climate change, from soil-based actions to tree planting, and habitat management to peatland restoration.

   Section 5.1 includes the impact of the actions which meet the second SLM objective and how this, in turn, will help deliver on three National Priorities as set out in the Natural Resources Policy. From nature-based solutions to increasing resource efficiency to place based approach, all actions have been developed to align with the SLM objective. For example, for nature-based solutions, the focus is on natural solutions and enhancing the habitats and biodiversity on agricultural land across Wales. Specific actions will support farmers / agricultural businesses to make these changes in farm management practice, this includes universal actions from

increasing tree coverage on eligible land, to actively managing habitats to reduce flood risk and contribute towards decarbonisation.

Section 5.3 identifies specific actions to be completed by farmers within the SFS, such as the completion of a carbon assessment which is intended to measure the carbon impact of the entire farm business (applicable to all farm businesses in Wales) as well as product level ($CO_2e$ per unit of output). The Carbon Calculator should further support farmers in their ability to identify opportunities to maximise carbon storage, through developing an understanding of their soil and the demands of their crops and be able to use the assessment and soil testing to support their decision making via data collected on the impact of potential changes and/or offer suggested areas for improvement.
The actions are not limited to soil and carbon, but also include actions a farmer can take for the generation of on-site renewable energy in support of managing energy efficiently.

3. **To maintain and enhance the resilience of ecosystems and the benefits they provide.**
The SFS has been designed to target a number of key areas which are aligned with the SLM objectives. One of these are targeted actions / support in regard to environmental actions. These actions are in the form of a number of Universal, Optional and Collaborative Actions available to support more nature-based interventions and actions aimed at contributing towards healthy soil, clean air, and a resilient environment with increased biodiversity. The SFS actions encourage greater emphasis on natural solutions and enhancing the habitats and biodiversity on agricultural land across Wales.

Section 5.1.b outlines the potential impacts SFS actions undertaken to mitigate and adapt to climate change could also have on the diversity, scale, conditions and adaptability of ecosystems. It also captures the impacts of actions taken in support of managing flood risk, from sward management and cover cropping to hedgerow management and how this supports the flora and fauna of the ecosystems which are found around a farm.

Annex F – Biodiversity Impact Assessment - further provides additional examples of the links between the actions taken at a scheme level and their contribution towards the resilience of ecosystems and the benefits therein. One of these key SFS actions is a Habitat Baseline Review (HBR), which covers both Universal and Optional Actions. The HBR and other Universal Actions enable farmers to complete data sets to support benchmarking of the impact of actions taken as well as to facilitate a step change in farm performance, by giving farmers the tools necessary to gain an understanding of how their farm is performing. The data captured through the Universal Actions will provide information on for example, all habitat types for use in managing biodiversity, whereas the Optional Action will be expected to be more complex, targeted and tailored to each individual farm, and supported by more technical advisors.

4. **To conserve and enhance the countryside and cultural resources and promote public access to and engagement with them, and to sustain the Welsh language and promote and facilitate its use.**

Section 3 of this IIA captures the cultural well-being and Welsh language assessments of the support to be delivered under the SFS. This section aligns with the assessment of the SFS against the fourth SLM objective, which captures the cultural impacts of agriculture. For

example, Section 3.1a refers to ‘over 80% of archaeological heritage assets in Wales are located on agricultural land.’ We, therefore, have a responsibility to ensure that any activity on agricultural land is conserved for the benefit of both present and future generations, including access to historical sites located on agricultural land.

In recognition of their social, cultural, and economic value, the SFS will support farmers to manage and enhance the landscape and the historic environment through several Universal, Optional, and Collaborative Actions, such as those participating farms will be provided with a map of historic features on their land via the HBR and include such features as, Scheduled Monuments, Historic Environment Features, and Listed Buildings, to name but a few.

Further detail regarding the way the SFS is expected to promote and protect our natural environment and countryside, and therefore our cultural heritage, is included in the Biodiversity Impact Assessment in Annex F. Moreover, the Welsh Language Impact Assessment deals in full with the impacts of the SFS on this particular aspect of Welsh culture (Annex E).

### 8.4 How will the impact of the proposal be monitored and evaluated as it progresses and when it concludes?

A future monitoring and evaluation strategy will detail how Welsh Government intends to assess the delivery of environmental, economic, social and cultural outcomes within the SFS, and identify impacts during the life of the SFS.

The monitoring and evaluation strategy will also inform a regular review of the SFS design to ensure it is still fit for purpose and meet the obligations of the Agriculture (Wales) Act 2023.

## SECTION 9. DECLARATION

**Declaration**

I am satisfied that the impact of the proposed action has been adequately assessed and recorded.

Name of Senior Responsible Officer / Deputy Director: Mark Alexander

Department: Land Management Reform Division

Date:  November 2023

# FULL IMPACT ASSESSMENTS

## A. CHILDREN'S RIGHTS IMPACT ASSESSMENT

The Rights of Children and Young Persons (Wales) Measure 2011 places a duty on the Welsh Ministers to pay due regard to the United Nations Convention on the Rights of the Child (UNCRC) and its Optional Protocols when exercising any of their functions.

### 1. Policy objectives

The Agriculture (Wales) Act 2023 (the Act) has established Sustainable Land Management (SLM) as the policy framework for agriculture support in Wales.

The Act has provided Ministers with the power to provide support for agriculture in Wales.

SLM is designed to meet the challenges of the climate and nature emergencies whilst enabling and supporting the sustainable production of food and the protection of our natural resources, culture and heritage. The Sustainable Farming Scheme (SFS) has been designed as the delivery mechanism of SLM, which aims to deliver the following SLM outcomes:

- Clean air
- Clean water
- Enhanced access to, and engagement with, the natural environment
- Promotion of animal health and welfare
- Maximisation of carbon storage
- Mitigation of flood and drought risks
- Protection natural landscapes and historic environmental spaces
- Reduction of greenhouse-gas emissions
- Establishment of a resilient ecosystem
- Resource efficiency

As children will not be participants of the SFS, they would not be directly impacted by it. However, children on participating farms may be impacted through changes to their family's farming practice; we also recognise children may be undertaking age-appropriate activities on farms within the SFS. Such impacts are discussed further below. Moreover, children on participating farms may be expected to be indirectly impacted by any potential economic changes to their family's business. The potential economic impacts of the SFS for farmers are considered fully in the Socio-Economic Duty Impact Assessment (Annex G).

Generally, however, the SFS is expected to have positive outcomes for children, young people and their families through positive environmental impacts, and indirect improvements to living standards.

The agricultural sector has the highest mortality and accident rate of any industry in the UK, including the highest child injury rate in a workplace environment.[109] Farming is moreover the sole high-risk industry in the UK where children are a constant presence (either as part of the family or as members of public).[110] The HSE reports that children in the UK are killed every year in relation to agricultural work and activities; furthermore, most children who die in such incidents are family members.[111]

The SFS is expected to make positive impacts to the health and well-being of children who live on, or near, a farm. For instance, one UA will require farmers to complete a minimum level of learning, including a mandatory module on Health and Safety, which may raise awareness of dangers that could harm children, in particular (e.g. through failure to assess the risks that may impact children in general; the dangers that may threaten unsupervised young children; children [14 and above] working unsupervised, or without adequate training).

Furthermore, the UA that requires livestock farmers to adhere to prescribed animal health and welfare practices through the Animal Health Improvement Cycle (AHIC) can be expected to reduce or prevent several physical harms to children. Such harms may include the spread of infectious diseases; the transfer of zoonoses from animals to children; as well as reduce the risk of children being exposed to harmful chemicals and pollutants in the farm environment.

The SFS will impact young people entering the agricultural sector in Wales who may also seek to join the SFS. It has been designed to ensure it is accessible and appropriate for all farmers. A working group was established to explore the SFS proposals from the perspective of new entrants during the co-design process. New entrants into farming bring new ideas, energy and entrepreneurial vigour, and as such can be the enablers of positive change in the industry.

However, new entrants to agriculture face the multiple challenges of access to land, finance, and (for some) skills and training. Previous support schemes have led to new entrants experiencing difficulties meeting the investment threshold required to qualify for grants; the value for monies associated with purchasing only new equipment; as well as challenges applying for payments where quotas or entitlements were based on payments received during previous reference periods.

## 2. Gathering evidence and engaging with children and young People

### Climate Change

[109] HSE, 'Fatal injuries in agriculture, forestry and fishing in Great Britain: 1 April 2022 to 31 March 2023', [online] available at: https://www.hse.gov.uk/agriculture/assets/docs/agriculture-fatal-injuries-2023.pdf

[110] *Farm Child UK* (2003), a report by the HSE, examines the many types of dangers that children on farms may be exposed to; available at: https://www.hse.gov.uk/research/rrpdf/rr110.pdf.

[111] HSE, 'Children and public safety' [online], available at: https://www.hse.gov.uk/agriculture/topics/children.htm

UNICEF have declared the climate crisis to be a children's rights crisis.[112] The basic rights of access to clean water, clean air and health are threatened by climate change and children are disproportionately vulnerable to negative ecological impacts.

UNICEF's Children's Climate Risk Index (CCRI) assesses children's exposure and vulnerability to climate-change hazards across the world.[113] This Index is structured according to two pillars:

1) Exposure to shocks and stresses such as air pollution, flood, water pollution.

2) Vulnerability in terms of health, nutrition, access to education, sanitation, and poverty.[114]

The UK has scored 'medium' on the CCRI (point three on a five-point scale where five is most at risk) due to a high exposure to environmental shocks and hazards[115]. This indicates children's rights in the UK are threatened by climate change and its cascading environmental impacts.

There is also growing evidence children and young people are increasingly experiencing 'climate anxiety' as a consequence of climate change, which may lead to negative mental-health and wellbeing impacts.[116, 117] For instance, a survey (of 10,000 children and young people) conducted by Marks et al., found more than 45% of respondents reported their feelings in relation to climate change negatively affected 'their daily life and functioning', whereas 60% expressed feeling 'very' or 'extremely' worried about climate change[118] Moreover, more than half of respondents felt 'betrayed' by government inaction to tackle the climate crisis.[119]

Taking action to mitigate climate change and reduce exposure to hazards such as air pollution and extreme weather events, should therefore reduce threats to the rights of children in Wales and work towards improving their physical and mental health and well-being.

Mitigating and adapting to climate change is an objective of SLM. Actions to address and mitigate against the climate emergency, as well as meet several SLM outcomes, are detailed in

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[112] UNICEF, (2021) *The Climate Crisis is a Child Rights Crisis,* [online] available at: https://www.unicef.org/reports/climate-crisis-child-rights-crisis?utm_campaign=climateindex&utm_source=twitter&utm_medium=organic-

[113] Ibid.

[114] Ibid.

[115] Ibid.

[116] Marks, E., et al., (2021) 'Young People's Voices on Climate Anxiety, Government Betrayal and Moral Injury: A Global Phenomenon', *The Lancet Planetary Health*, vol. 5(12), pp.863-873, available at: https://www.sciencedirect.com/science/article/pii/S2542519621002783

[117] Sanson, (2019) Responding to the Impacts of the Climate Crisis on Children and Youth (wiley.com) https://srcd.onlinelibrary.wiley.com/doi/pdfdirect/10.1111/cdep.12342

[118] Marks, E., et al., (2021) 'Young People's Voices on Climate Anxiety, Government Betrayal and Moral Injury: A Global Phenomenon'.

[119] Ibid.

the Consultation for the SFS. The purposes for support as set out in the Agriculture (Wales) Act 2023 will allow direct action to mitigate this risk through the delivery of the SFS and can therefore be expected to impact children positively.

**Different groups**

To the extent that poor air and water quality disproportionately affect low-income households (in deprived areas) and ethnic minorities in Wales, and throughout the UK,[120] the SFS should positively impact the health and well-being of children in such households.

It was recently found that approximately 535,000 children under the age of 18 (of which 356,000 are under the age of 12) live in neighbourhoods where the average annual concentration of $PM_{2.5}$ are above WHO guidelines.[121] Moreover, there are over 1,200 schools in these polluted areas.[122]

There are fewer areas above the WHO guidelines for safe levels of $NO_2$. Approximately 93,000 children under 18 (of which 64,000 are under 12) live in such N02 polluted areas, where there are 169 schools.[123]

Furthermore, it has also been found that younger children are more at risk from air pollution than older children and adults.[124] Pregnancy, infancy, and early childhood are critical developmental stages; as such, developing babies and young children are particularly vulnerable to air pollution and other negative environmental stresses.[125] As noted by the Royal College of Physicians and the Royal College of Paediatrics and Child Health,

> The developing heart, lung, brain, hormone systems and immunity can all be harmed by pollution. Environmental effects on the embryo, fetus, baby and toddler may last a lifetime, but may take years or even decades to become apparent. […] There is also clear evidence that early exposure to air pollution can damage the lungs, and increase the risk of lung infections that may be fatal. It is known to have an effect on heart health in adult life.[126]

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[120] Friends of the Earth (2022) 'Air Pollution Analysis: Wales', available at: https://foe.cymru/research-shows-link-between-income-and-air-pollution. This research found that air pollution disproportionately impacts lower-income and relatively deprived areas, as well as communities with higher ethnic-minority populations.

[121] ibid.

[122] Ibid.

[123] ibid.

[124] See UNICEF (2016) *Clear the Air for Children: The impact of air pollution on children*, [online] available at: https://www.unicef.org/reports/clean-air-children; Royal College of Physicians and the Royal College of Paediatrics and Child Health (2016), *Every breath we take: the lifelong impact of air pollution,* [online] available at: https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution ; Kings College London Environmental Group (2015), *Pollution stunts children's lungs*, available at: https://www.kcl.ac.uk/news/living-near-a-busy-road-can-stunt-childrens-lung-growth

[125] Ibid.

[126] Ibid.

As we note in our Equality Impact Assessment, the SFS is designed to generate environmental outcomes, which will positively impact each of the three physical environment sub domains (air quality, flood risk, and access to 'green space') of the Welsh Index of Multiple Deprivation [WIMD]).[127] As such, this could reduce the number of areas shown as being environmentally deprived under the physical environment domain in the WIMD, and positively benefit children in these areas. These benefits include reducing the health risks posed by air pollution, reducing the risk of flooding events and the danger and disruption they can cause for children, and increasing the opportunity to enjoy the physiological and mental health benefits of increased access to green space.

Children in rural areas are more likely to be vulnerable to the effects of severe weather events such as flooding. Ten of the SFS UAs are designed to deliver against the SLM outcome of mitigating risk from flood; therefore, children in these areas could directly benefit from these actions and outcomes.

Our Welsh Language impact assessment outlines potential impacts on Welsh speakers, including those in rural areas.

**Health and Safety**

- What participatory work with children and young people have you used to inform your policy? If you have not engaged with children and young people, please explain why.[128]

While children in farming families may undertake age-appropriate activities on the farm, children will not be formal participants in the SFS, nor be responsible for carrying out agricultural activities. As such, no specific engagement is required through the consultation and implementation of these proposals.

Nonetheless, children are expected to benefit from the SFS, as its expected outcomes should continue to support resilient rural communities and improve the sustainability of the agricultural sector over the long-term. In addition, young people in farming families will have the opportunity to gain knowledge and skills relating to sustainable farming practices and will be able to use such knowledge and skills in the future, should they take over the farm or begin farming elsewhere.

During the co-design process for the SFS, a number of working groups were established to support its development. These included a 'new entrants working group', inclusive of stakeholders from the 'Wales Federation of Young Farmers Clubs (YFC)', 'Bridgend College' and 'Grŵp Llandrillo Menai'. The Welsh Government has also promoted the co-design process by attending agricultural shows, markets and events to raise the profile of the SFS as widely as possible.

127 Welsh Government (2019) Welsh Index of Multiple Deprivation (WIMD) Results Report.

[128] Article 12 of the UNCRC stipulates that children have a right to express their views, particularly when adults are making decisions that affect them, and to have their opinions taken into account.

Responses to our previous consultations[129] have included those from organisations representing younger/the next generation of farmers and we expect to continue this engagement in the current consultation before the SFS is finalised and launched.

### 1. Analysing the evidence and assessing the impact

- Using the evidence you have gathered, what impact is your policy likely to have on children and young people? What steps will you take to mitigate and/or reduce any negative effects?

Based on the evidence collated to date, we expect the SFS to positively impact the lives of children. Positive impacts related to the expected SLM outcomes include:

- Better air quality.
- Better water quality.
- More resilient ecosystems and species recovery.
- Improved access opportunities to the countryside for exercise and social wellbeing.
- Protection of landscape features.
- Resource efficiency.
- Mitigation against climate change.

These outcomes should positively affect the lives of children, now and in the future.

In the Health Impact Assessment, we have noted the potential of the expected environmental outcomes to positively impact the health outcomes of the population generally. As already discussed, better air quality is likely to benefit children. Public Health Wales states 'It is well-documented that different people are affected in different ways by air pollution exposure; […] children, older people and those with chronic lung or heart conditions are considered more vulnerable to the effects of air pollution exposure.'[130]

A potential positive impact of the SFS on children is also expected from an increase in the resilience of agricultural businesses due to the proposed Optional Actions offered as support within the scheme. Resilient agricultural businesses should support resilient rural communities, which in turn will benefit children in these areas. The economic impacts of the SFS, which may impact

[129] Welsh Government, (2019) *Brexit and our land: Securing the future of Welsh farming, Summary of responses*, available at: https://gov.wales/sites/default/files/consultations/2019-05/summary-of-responses-brexit.pdf; Welsh Government, (2020) *Sustainable farming and our land: Summary of response*, available at: https://gov.wales/sites/default/files/consultations/2020-05/sustainable-farms-summary-of-responses_1.pdf; Welsh Government, (2021) *Agriculture (Wales) White Paper: Summary of responses*; available at: https://gov.wales/sites/default/files/consultations/2021-09/agriculture-wales-bill-summary-of-responses.pdf

130 Public Health Wales and Welsh Government (2018) *Working together to reduce outdoor air pollution, risks and inequalities: Guidance to support policy and practice development across the NHS in Wales,* available at: https://www.gov.wales/sites/default/files/publications/2019-06/working-together-to-reduce-outdoor-air-pollution-risks-and-inequalities.pdf

children (positively or negatively) have been discussed in detail in the Economic Impact Assessment.

The desired SLM outcomes detailed in the SFS actions narrative aim to ensure that there is a resilient agricultural sector for current and future generations, which should positively impact children.

As outlined in our Welsh Language and Rural Proofing Impact Assessments, changes to the agriculture industry have the potential to impact both rural communities and the Welsh language, which in turn may affect children.

Healthier animals with high standards of welfare also help build resilience into rural economies and communities (explored further in the Rural Proofing Impact Assessment), providing opportunities and possible positive impacts for children and young people in those communities.

The SFS will also support the resilience of rural and Welsh speaking communities, thus positively impacting the lives of children in these areas and across Wales.

- How does your proposal enhance or challenge children's rights, as stipulated by the UNCRC articles and its Optional Protocols? Please refer to the articles to see which ones apply to your own policy.

| **UNCRC Articles or Optional Protocol** | **Enhances (X)** | **Challenges (X)** | **Explanation** |
|---|---|---|---|
| **Article 24 (health and health services):** Every child has the right to the best possible health. Governments must provide good quality health care, clean water, nutritious food, and a clean environment and education on health and well-being so that children can stay healthy. Richer countries must help poorer countries achieve this. | X | | Children are disproportionately vulnerable to the effects of climate change. Exposure to hazards such as air pollution and extreme weather events can threaten health and wellbeing.<br><br>The SFS enables support for the delivery of Sustainable Land Management purposes for support such as clean air, improved water quality, ecosystem resilience and enhanced access to the countryside. This would provide children with improved opportunities for healthy activities in a safe environment, and good physical and mental health. |

| | | | |
|---|---|---|---|
| **Article 27 (adequate standard of living):** Every child has the right to a standard of living adequate for the child's physical, mental, spiritual, moral and social development. | X | | Mitigating climate change is one of the SLM objectives covered in the SFS. Extreme weather events such as flood and storms can destroy housing and create unsafe environments. Moreover, witnessing impacts on animal welfare during drought events can have the potential to seriously impact a child's mental wellbeing. The SFS has been designed with actions to reduce and mitigate against flood and drought risk.<br><br>Scheme actions are also targeted to improve air and water quality and reduce greenhouse gases (GHGs). Delivery of these outcomes will help protect and improve the environment children grow up in. |
| **Article 31 (leisure, play and culture):** Every child has the right to relax, play and take part in a wide range of cultural and artistic activities. | X | | A review of the importance of nature to childhood development concluded 'contact with nature is supportive of healthy child development in several domains – cognitive, social and emotional. Until proven otherwise, we can continue to assume, just as they need good nutrition and adequate sleep, children many very well need contact with nature.[131]<br><br>Increased opportunities for providing access to the countryside could facilitate children enjoying increased contact with nature. This would contribute positively to childhood development, based on the above evidence. The SFS will have a number of Optional and Collaborative Actions specifically designed to support the improvement of access whilst protecting and enhancing our natural |

[131] Taylor, A. F., et al., (2006) *Is contact with nature important for healthy child development? State of the evidence. Children and their environments: Learning, using and designing spaces*, *124*.

| | | | |
|---|---|---|---|
| | | | landscapes and heritage, providing culture for children now and in the future. |

## 2. Ministerial advice and decision

- How will your analysis of these impacts inform your ministerial advice?

As with other impact assessments, compiled within the IIA, this CRIA will be used to inform ministerial advice as progress is made towards the development and delivery of the SFS.

## 3. Publication of the CRIA

This CRIA will be published in full as part of the IIA for the SFS.

## 4. Communicating with Children and Young People

- If you have sought children and young people's views on your proposal, how will you inform them of the outcome?

As outlined in Question 1, we have not explicitly sought children's views on the SFS, although responses to our previous consultations have included those from organisations representing younger/the next generation of farmers.

## 5. Monitoring and Review

- Please outline what monitoring and review mechanism you will put in place to review this CRIA.

Future policy or implementation revisions of the SFS will be subject to further impact assessment. As such, this CRIA will be kept under review as proposals are developed.

- Following this review, are there any revisions required to the policy or its implementation?

Future policy or implementation revisions of the SFS will be subject to further impact assessment. As such, this CRIA will be kept under review as proposals are developed.

## B. EQUALITY IMPACT ASSESSMENT

**1. Describe and explain the impact of the proposal on people with protected characteristics as described in the Equality Act 2010.**

The Equalities Act (2010) places a General Equality Duty on Welsh public authorities to have 'due regard' to the need to eliminate unlawful discrimination, harassment, and victimisation, as well as to advance equality of opportunity and to foster good relations between people who share a protected characteristic and those who do not.

*The Sustainable Farming Scheme (SFS)*

The SFS will be available to all eligible farmers who wish to participate. It is aimed at maintaining economically, socially, and environmentally sustainable farm businesses through the delivery of SLM.

The SFS is not expected to have any negative impacts on people who share protected characteristics; however, potential impact on different groups is considered as part of this Impact Assessment. The SFS is expected some general benefits for the whole population, including people who share a protected characteristic. These generic benefits relate to:

- The impacts on people's health from the environmental outcomes delivered as a result of on-farm action.
- The benefits of improved opportunities to access the countryside and protection of landscape features.

**Record of Impacts by protected characteristic**

The following statistics use Census 2011[132] data to examine issues facing rural Wales. They demonstrate that certain groups are overrepresented or underrepresented in rural communities. This means that there are more or fewer people possessing particular characteristics than would be expected if such groups were proportionately distributed across urban and rural areas according to population numbers.

In later sections of the Equality Impact Assessment, we examine the potential impacts of the SFS on different protected groups, including positive impacts that could contribute to greater equality in Wales.

- **Children:** Children (aged under 16) tend to be underrepresented in the Rural Local Authorities[133] (LAs) in Wales. Although the majority of children living in Rural LAs do live in

[132] An updated rural/urban classification is not yet available for undertaking equivalent analysis of Census 2021 data.

[133] Classification of Local Authorities is done according to https://gov.wales/sites/default/files/statistics-and-research/2018-12/080515-statistical-focus-rural-wales-08-en.pdf

Rural Areas,[134] the underrepresentation effect is slightly pronounced in these areas, with children overrepresented in Urban Areas.

- **Young people**: Census 2011 data shows young people, aged 16 to 24, are underrepresented in Rural Areas; this was the case in 18 of Wales' 22 LAs. For example, in Pembrokeshire, 73% of residents aged 16 to 24 lived in Rural Areas compared with 78% of residents over the age of 25.[135]

- **Older working age people:** Older workers, aged 60 to 64, are overrepresented in the Rural Areas of almost every LA in Wales.[136]

- **Older people over 64.** Some of the highest proportions of people aged 64 and over are found in the Rural LAs of Wales. In many of these LAs, older people are overrepresented in the rural population, accounting for more than one fifth of residents.

- **Disability.** Prevalence of disability in Wales was highest in Neath Port Talbot and the Valleys Local Authorities. At the Output Area level, prevalence of disability tends to be marginally higher in Urban Areas than Rural Areas. It is important to note, however, the needs of disabled people in Rural Areas may be very different to those in Urban Areas, with greater challenges in accessing appropriate care and support. Disability is also concentrated amongst older age groups; more than half of those reporting their day-to-day activity was limited a lot are aged 65 and over.

- **Race and ethnicity:** Census data shows in 2011, 4.4% of the Welsh population was made up of individuals belonging to ethnic minority groups[137]. There is, however, a substantial concentration of ethnic minority groups in Urban Areas; 88% of those belonging to an ethnic minority group lived in an Urban Area, with the vast majority specifically living in Cardiff, Newport, or Swansea. In 18 of Wales' 22 Local Authorities, the proportion of individuals belonging to ethnic minority groups in Rural Areas was less than half the figure for Wales as a whole (less than 2.2%).

- **Sex and gender:** With regard to economic activity, both men and women in Rural Areas in Wales were more likely to be in employment than those in Urban Areas at the time of the Census in 2021; both less likely to be unemployed, or to be economically inactive. The Rural LAs in Wales generally have unemployment rates lower than the Welsh average. For those who were economically inactive in Rural Areas, men were slightly more likely

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[134] Here, Urban/Rural Area refers to the designation given to each Output Area, a geographical area containing between 100 people (or 40 households, whichever is smaller) and 625 people (or 250 households, whichever is larger). Output Areas are designed to be small enough that they do not contain a mixture of urban and rural environments.

[135] The discrepancy is particularly pronounced for Gwynedd and Ceredigion, however it is likely that high student numbers relative to the population (attending university in Bangor, Aberystwyth and Lampeter) lead to a disproportionate number of young people in urban areas. The Census is conducted during term time.

[136] Caerphilly is the only exception. This holds true even when those aged 18 to 24 are removed from the calculation to remove the effect of student populations in predominantly rural counties. Please see previous footnote.

[137] Mixed/multiple ethnic groups, Asian British, Black/African/Caribbean/Black British, and Other ethnic group. White minority groups are not included in this grouping.

than women to be so due to long-term sickness or disability. Women were almost eight times more likely than men to be looking after the home or family; the discrepancy is more pronounced than in Urban Areas.

These findings demonstrate there are notable differences in the general characteristics of those living in rural Wales, compared with those living in urban areas. It is unlikely that these demographic findings will have changed substantially since the 2011 Census so as to no longer be valid. Indeed, estimates from the Office for National Statistics (ONS) for 2020 indicate that in relation to age, the overrepresentation of older people and underrepresentation of younger people may have become more pronounced in rural Local Authorities[138].

**What are the possible negative impacts on people in protected groups and those living in low income households and how will you mitigate for these?**

**Children**

As outlined in the Children's Rights and Health Impact Assessments, the SFS could indirectly impact children in several ways. The impact of the SFS on children is expected to be positive, through the delivery of environmentally beneficial outcomes such as clean air and water which provide health benefits, and improved opportunities for access to the countryside facilitating increased contact with nature.

Any positive or negative economic impact of the SFS may be felt by children in farming families and the wider rural community. The SFS is designed to support the resilience of agricultural businesses and will therefore support resilient rural communities, benefitting children in these areas, and making them more viable locations for families to live.

**Young People**

It is a noted issue that net outward migration of young people from rural areas can have a substantial negative impact on farm succession planning and rural economies. In order to address these issues and increase the sustainability of farming for the future, there needs to be opportunities for young people to enter agriculture; both those raised in farming families and those wishing to enter the industry from other backgrounds.

The SFS will include the development of advice and guidance for farmers, as well as the provision of appropriate Continued Professional Development as part of the Universal Actions. The SFS will consider how best to provide support to all types of farmers, and these sources of advice and guidance should be particularly valuable for those who are new to the industry, for example, young people who have recently finished education.

Young and new entrants to the farming industry currently face a number of challenges including access to land and finance, as well as gaining the knowledge/skills needed to run a successful business. Farming Connect has led a number of initiatives to address these challenges, and we are continuing to consider how best to build on these initiatives in future.

[138] https://www.ons.gov.uk/datasets/mid-year-pop-est/editions/mid-2020-april-2021-geography/versions/1

Young Farmer representative groups[139] have engaged in our consultations and co-design programme and have raised the need to support new entrants into the industry.

Findings from the second phase of Sustainable Farming Scheme Co-design[140] showed that the percentage of land ownership gradually increases in proportion to the older age of farmers. Younger farmers (under the age of 40) who responded to the survey were less likely to wholly own farmland and were more likely to depend wholly upon tenanted farmland. As a greater percentage of younger farmers depend wholly or in part on tenanted farmland, they may face additional barriers to joining the SFS as they may be unable to carry out UAs on land that they do not own. For instance, the SFS Co-design research found that older farmers were more willing to undertake the 10% tree cover UA than younger farmers, and that this willingness appears to correlate with land ownership and the issue of management control.

However, there is some evidence[141] to suggest younger farmers are more likely to embrace new technologies and knowledge. Research into farmer motivations found farmers under the age of 40 were most likely to strongly agree or agree that they are always actively looking to learn new skills and are open to new technology.[142] Given that the SFS will support farmers to adopt new and innovative methods in addition to traditional farming practices, young farmers may be well-placed to implement SLM and benefit from the SFS. As such, the SFS may be expected to positively impact younger farmers as they may be more inclined to opt into it.

**Older People**

Issues for older people living in rural areas tend to focus on the delivery of key health, social services, and transport issues.[143] We have no evidence that the SFS will impact negatively on the well-being of older people in the wider rural community; rather, it is expected to support a thriving and sustainable rural economy and so any positive impact on the viability of rural communities would benefit older residents. In terms of potential positive impacts, we note in our Health Impact Assessment (in Section 2) the potential of the environmental outcomes, resulting from the SFS, to impact positively on the health outcomes of the population generally. We note the reference to the impact on older people of exposure to poor air quality.

The estimated median age of a farmer in Wales in 2016 was 61 years old, with the majority of principal farmers in Wales over the age of 55 (68%).[144] The SFS represents a substantial change

[139] The young farmer representative groups that engaged with the consultation process, include Anglesey Young Farmers Club, Erwood Young Farmers Club, and Radnor Young Farmers Club.

[140] https://www.gov.wales/sites/default/files/publications/2023-07/sustainable-farming-scheme-co-design-final-report.pdf

[141] The research considered only ‘small’ and ‘very small’ farms; these account for 87% of farms in Wales and cover 60% of Welsh farmland.

[142] https://gov.wales/sites/default/files/publications/2021-08/understanding-farmer-motivations-very-small-small-farms-full-report.pdf

[143] Older People’s Commissioner for Wales (undated) Equality and Rurality Factsheet.

144 Welsh Government, (2019) Agriculture in Wales.

in the way farmers receive government support and this needs to be reasonably communicated to all farmers.

Although digital mediums are a useful way to keep publications up to date, the Public Health Wales *Supporting farming communities at times of uncertainty* 2019 report, cites digitalisation as a challenge, particularly for older farmers.[145] It is clear we cannot rely solely on digital means of communication for matters relating to the SFS, else there could be a disproportionate negative impact on older farmers. Roadshows and in-person workshops will run concurrently with the SFS consultation and aim to reach all farmers across Wales. Hence, older farmers who may be digitally disadvantaged should have an opportunity to learn more about the SFS.

We have experience communicating with farmers through the Farm Liaison Service and the Gwlad newsletter and will use this knowledge in our communication strategies. Steps were taken to ensure a fair representation of farmers from all age groups participating in the co-design programme.

Conversely to the findings relating to young farmers, research suggests that older farmers are least likely to strongly agree or agree they are always actively looking to learn new skills and they are open to the use of new technology.[146] This may be linked to the fact they are closer to retirement and choose to leave decisions around change for their successor. They may also face greater physical challenges than younger farmers in undertaking actions as part of the SFS. We will need to ensure older farmers are encouraged to participate in the SFS and that they are supported to adopt SLM more generally in a way that is feasible and compatible with succession planning. The knowledge and support services provided alongside the scheme will be integral to this.

**Disability**

Throughout development of advice and guidance in relation to agricultural policy, officials will work to ensure this is accessible to all farmers and therefore will consider reasonable adjustments for those with disabilities.

As noted above, we expect the outcomes delivered as a result of the SFS to impact positively on the health outcomes of the population generally, including people with disabilities. In addition, any improvements to current access routes, undertaken under the Optional Layer of the SFS, that increase accessibility may have a positive impact by allowing a greater number of disabled people to enjoy the countryside and its associated benefits. The aim will be to increase the proportion of public rights of way that are open, easy to use – including for those with limited mobility – and well signed.

A detailed discussion regarding the mental health of farmers can be found in Section 2 of this document.

**Race and ethnicity**

[145] Davies, A. R., et al., (2019) Supporting farming communities at times of uncertainty.

[146] https://gov.wales/sites/default/files/publications/2021-08/understanding-farmer-motivations-very-small-small-farms-full-report.pdf

There are no expected adverse impacts on race and ethnicity from the SFS. As noted above, it the implementation of SLM through the SFS is expected to lead to outcomes that will positively impact the health outcomes of the population. However, the varying geographic distribution of different race and minority ethic groups across Wales may mean that expected benefits also vary across groups.

Recent research has found that higher levels of air pollution disproportionately impact communities with higher ethnic minority populations in Wales (and indeed throughout the UK).[147] It also found that people from ethnic minority communities are 2.5 times more likely to live in an area highly polluted by particulate matter ($PM_{2.5}$) than a White ethnic person and are also 5 times more likely to live in a neighbourhood polluted by $NO_2$.[148] This is due to the fact, as outlined above, that ethnic minority communities tend to be concentrated within urban areas.

As such, it is pertinent to consider the extent to which the positive health impacts of the SFS will be felt in towns and cities as well as in the countryside. We expect that the SFS UA of woodland management and creation will improve the air quality of urban populations according to the proximity of participating farms to these areas. Therefore, where these urban areas in proximity to new SFS woodland have a higher proportion of ethnic minority communities, there may be a higher benefit from improved air quality for these groups. Further detail on the potential spatial variation in benefits arising from SFS actions can be found on the ERAMMP website.[149]

Both air and water pollution can travel substantial distances, so any reduction in emissions from agriculture will have a positive impact for those in both rural and urban areas, and therefore across race and ethnicity. Agriculture is the main source of ammonia emissions in Wales[150] which contributes to the formation of $PM_{2.5}$, and in turn this poses risks to human health in communities across Wales. The SFS intends to reduce ammonia emissions through a range of Universal, Optional, and Collaborative Actions, such as,

- (UA) The requirement to have at least 10% tree cover on holdings.
- (UA) The management of new and existing hedgerows in line with the hedgerow management cycle.
- (OA) Housing, e.g. frequent slurry scraping and drying poultry manure.
- (OA) Slurry storage, e.g. covering slurry stores and acidifying slurry.
- (OA) Precision slurry spreading, e.g. trailing shoe and injection.
- (CA) Support for collaborative approaches which would allow farmers to work together to deliver actions to lower ammonia emissions. These may be targeted to where they will have the most benefit to ecosystems. This will include local co-ordination between farmers

[147] Friends of the Earth (2022) 'Air Pollution Analysis: Wales', available at: https://foe.cymru/sites/default/files/Air%20pollution%20research%20Wales_bilingual%20%281%29.pdf

[148] (Ibid.).

[149] https://erammp.wales/en

[150] https://cdn.cyfoethnaturiol.cymru/media/693285/sonarr2020-theme-air-quality.pdf

and other landowners to develop Shared Nitrogen Action Plans with the aim of restoring habitats and maximising local economic benefits.

Regarding water, most Welsh towns and cities are located near rivers, and agricultural pollution entering the catchment upstream will therefore affect urban areas too. For example, investigations have shown that without reduction in agricultural pollution in the Clwyd catchment, improvements in water quality for bathing in Rhyl will not be realised.[151] Reductions in water pollution will also have positive benefits for recreation for all users of the countryside, as well as reducing water treatment costs.

There are known disparities in access to the countryside[152] among different ethnic groups, with issues such as lack of awareness cited as drivers of this disparity.[153] The SFS will support farmers to deliver enhanced access and engagement in their local communities within the Optional Layer, including in ways aimed at children, which will raise awareness among families, including those belonging to ethnic minority groups, and encourage greater countryside use by those children later in life.

With regards to farmers themselves, data from the ONS[154] shows in 2018-19, over 99% of those working in Skilled Agricultural and Related Trades in the UK were White. This is compared with the general working population at the time where 88% were White. Elementary Agricultural Occupations is contained within a larger grouping of Elementary Trades and Related Occupations, so while we cannot make a direct comparison, there may be more diversity within Elementary Agricultural Occupations. We do not have data for Wales specifically and note that arable farms which require larger numbers of seasonal workers for activities like harvesting are less common in Wales than England. In addition, the high level of casual and unpaid work within agriculture can make it challenging to establish the true number or workers.

It is typically difficult for new entrants to farming to begin a farming career, due to high levels of farm inheritance. In addition to the known concentration of ethnic minorities in Urban Areas, this may contribute to the substantial underrepresentation of ethnic minorities in farming.

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[151] https://environment.data.gov.uk/wales/bathing-waters/profiles/profile.html?site=ukl1302-40650

152 Jay, M.,et al., (2012) Towards access for all? Policy and research on access of ethnic minority groups to natural areas in four European countries. *Forest Policy and Economics*, *19*, 4-11.

[153] http://www.ben-network.co.uk//uploaded_Files/Ben_1/Ben_file_1_26.pdf

[154]

https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/adhocs/10663occupationatuklevelbysectorindustryageandethnicity

| Ethnicity | 51: Skilled Agricultural and Related Trades | 91: Elementary Trades and Related Occupations | Population aged 16 to 64 |
|---|---|---|---|
| White | 99.2% | 89.1% | 87.5% |
| Mixed/Multiple ethnic groups | * | 0.7% | 12.4% |
| Indian | - | 2.7% | 1.2% |
| Pakistani | * | 1.4% | 2.8% |
| Bangladeshi | - | 0.3% | 1.5% |
| Chinese | 0.2% | 0.11% | 0.6% |
| Any other Asian background | * | 0.8% | 0.5% |
| Black/African/Caribbean/ Black British | 0.4% | 2.5% | 3.0% |
| Other ethnic group | 0.2% | 2.4% | 2.8% |

51: Skilled Agricultural and Related Trades includes Farmers (5111), Horticultural trades (5112), Gardeners and landscape gardeners (5113), Groundsmen and greenkeepers (5114), and Agricultural and fishing trades n.e.c. (5119)

91: Elementary Trades and Related Occupations includes Elementary Agricultural Occupations (911), Elementary Construction Occupations (912) and Elementary Process Plant Occupations (913). In turn, 911: Elementary Agricultural Occupations includes Farm workers (9111), Forestry workers (9112) and Fishing and other elementary agriculture occupations n.e.c. (9119)

* = Sample sizes are under 3 persons and too small to provide reliable estimates

- = No figures to report

The SFS actions with regard to farming are therefore likely to have less of an impact on ethnic minority groups than those in the White ethnic groups, as they are substantially underrepresented in the agriculture industry.

**Marriage and civil partnership**

We do not expect the SFS to have particular impacts on people because of whether or not they are married or in a civil partnership.

**Pregnancy and maternity**

SFS Universal Actions in relation to biosecurity and increased animal health and welfare should reduce the risks caused by disease within the livestock population, which could enter the food chain. Certain zoonotic diseases (transferrable to humans) and infectious agents are a serious risk to pregnant women and their unborn babies in particular; hence, we expect any action to minimise disease to have a positive impact on them. In addition, general health impacts such as better air quality will also be of particular importance to pregnant women, as discussed in greater detail in the Children's Rights IA.[155]

**Gender reassignment**

We do not expect the SFS to have particular impacts on people because they are undergoing or have undergone gender reassignment.

**Religion and belief**

We do not expect the SFS to have particular impacts on people because of their religion or faith.

**Sexual orientation**

We do not expect the SFS to have particular impacts on people because of their sexual orientation.

**Sex/gender**

Farm managers and sole holders are predominantly male;[156] however, estimates from the Annual Population Survey[157] show the number of women farmers in Wales has more than doubled since 2001. Women face a number of barriers within farming; in 2015, Farming Connect launched a Woman in Agriculture initiative to support women in the industry. There are no specific Universal Actions in the SFS relating to sex and gender; however, the Welsh Government is able to consider specific support provision under the wider powers of support in the Agriculture (Wales) Act 2023 in order to build on previous initiatives.

Furthermore, even where the primary farmer is male, women in farming families are often active in running the farm business, though they may not be recognised as formal employees. In addition, the nature of farming as a household-oriented business means that changes in the way funding is received and requirements to undertake specific actions within the SFS will have impacts beyond the principal farmer.

**Low Income Households**

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[155] See UNICEF, (2016) *Clear the Air for Children: The impact of air pollution on children*; Royal College of Physicians and the Royal College of Paediatrics and Child Health, (2016) *Every breath we take: the lifelong impact of air pollution*; Kings College London Environmental Group, (2015) *Pollution stunts children's lungs*.

156 EU Farm Structure Survey (2016).

[157]https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/adhocs/009745workersbysexindetailedoccupationgroupings2000to2018

Farm business income is subject to volatility influenced by agricultural conditions (including weather) and market conditions. This volatility can bring challenges to long-term business planning. The SFS will provide an income stream based on the delivery of SLM; these are unaffected by this volatility. For participating farms, this should have a positive effect on those from low-income households by providing increased stability of income.

Our Economic Wellbeing and Rural Proofing Impact Assessments consider potential economic effects of the SFS in further detail.

**Households in deprived areas**

The Welsh Index of Multiple Deprivation (WIMD)[158] includes the quality of an area's physical environment as one of the indicators of deprivation. This physical environment component consists of air quality, flood risk and access to green space.

The SFS will support farmers to achieve reduced emissions, reduced flood risk through nature-based solutions (e.g., agroforestry, improved soil health) and increased access to the countryside. The SFS should therefore positively influence the physical environment and improve the physical environment indicator in the WIMD measure. The effect of the SFS on the environment is considered further in the Biodiversity Impact Assessment, and Section 5 of this document, which relates to Environmental Wellbeing.

**What if any, barriers do people who share protected characteristics face? Can these barriers be reduced, removed, mitigated?**

We do not expect the SFS to create barriers for those who share protected characteristics. As we continue to communicate with farmers concerning the SFS, we will consider how we can ensure there are no barriers to participation for those within protected groups. In addition, we will consider whether there is a need for targeted initiatives alongside the SFS, under the power of support in the Agriculture (Wales) Act 2023, to support groups who are underrepresented in agriculture, such as women and those belonging to ethnic minority groups. We will take steps to ensure all advice and guidance related to the SFS will be communicated in accessible ways.

**Monitoring of the proposals**

As well as providing the powers for the SFS, the Agriculture (Wales) Act 2023 provides the relevant monitoring and evaluation powers, both for future support and for SLM as a whole. Further detail of the monitoring and evaluation strategy will be set out at a later date.

This monitoring and evaluation strategy will set out how the SFS will be judged in terms of value for money and the outcomes it has delivered for Wales. The strategy will recognise the long-term nature of the outcomes sought and report identify interim measures which can demonstrate progress.

158 https://gov.wales/welsh-index-multiple-deprivation-full-index-update-ranks-2019

| Protected characteristic or group | What are the positive or negative impacts of the proposal? | Reasons for your decision (including evidence) | How will you mitigate Impacts? |
|---|---|---|---|
| Age (think about different age groups) | Older people may particularly benefit from the delivery of the SFS, as it will lead to outcomes which support general public health, such as cleaner air. | Older people are particularly vulnerable to air pollution, the actions in the SFS will improve air quality. | This is a positive impact, no mitigation needed. |
| | There may be a negative impact on some older farmers if communication about the SFS, and its implementation, is only conducted through digital means. | The Public Health Wales *Supporting farming communities at times of uncertainty* 2019 report, cites digitalisation as a challenge particularly for older farmers. | Publication of advice and guidance will need to be available in a variety of formats and as part of the SFS consultation, roadshows and workshops will aim to reach farmers across Wales in person. |
| | The movement from an area-based support scheme to the SFS, which requires farmers to undertake specific actions has the potential to impact new entrants, who may also be younger people. | Young, and new, entrants to the farming industry currently face a number of challenges including access to land and finance and gaining the knowledge/skills needed to run a successful business. | We will be considering how to build on the current advisory offer for younger people and new entrants to the industry as part of wider farm support. |

| | | | |
|---|---|---|---|
| Disability (think about different types of disability) | The environmental outcomes delivered by the SFS are expected to positively impact the health outcomes of the population generally, including people with disabilities. Improvements to access routes under the Optional and Collaborative Layers may have a positive impact for those with accessibility needs. | | This is a positive impact, no mitigation needed. |
| Gender Reassignment (the act of transitioning and Transgender people) | No specific positive or negative impacts have been identified. | | At this stage, no mitigation shall be necessary, but we will continue to monitor this. |
| Pregnancy and maternity | Reduced livestock disease will lower the risk to pregnant women and their unborn babies from zoonotic diseases (transferrable to humans). Environmental outcomes delivered from the SFS are expected to positively impact the health outcomes of the population generally, including pregnant women. | | This is a positive impact, no mitigation needed. |
| Race (include different ethnic minorities, Gypsies and Travellers and Migrants, | Farmers primarily belong to the White ethnic group so direct impacts of the SFS will mainly concern this group. | | At this stage, no mitigation shall be necessary, but we will continue to monitor this. |

| | | | |
|---|---|---|---|
| Asylum seekers and Refugees) | There are no aspects of the SFS that are expected to negatively impact Gypsies and Travellers (such as changes to land rights or access to education).<br><br>Supporting a thriving rural economy will continue to provide opportunities for migrant workers. | | |
| Religion, belief and non-belief | No specific positive or negative impacts have been identified. | | At this stage, no mitigation shall be necessary, but we will continue to monitor this as. |
| Sex / Gender | Farm managers and sole holders are predominantly male, which could have a negative impact on gender equality in access to financial support. | | We will be considering how we can build on initiatives such as Farming Connect's Women in Agriculture programme as part of the wider support offer alongside the SFS. |
| Sexual orientation | No specific positive or negative impacts have been identified. | | At this stage, no mitigation shall be necessary, but we will continue to monitor this. |
| Marriage and civil partnership | No specific positive or negative impacts have been identified. | | At this stage, no mitigation shall be necessary, but we will continue to monitor this. |
| Children and young people up to the age of 18 | Children and young people are expected to benefit from the delivery of the SFS, as it will lead to outcomes which support general public | Children are particularly vulnerable to air pollution. | This is a positive impact, no mitigation needed. |

| | | | |
|---|---|---|---|
| | health, such as cleaner air. | | |
| | The movement from an area-based support scheme to one based on the requirement to deliver a suite of sustainable farming actions has the potential to have economic impacts, this may impact on children, particularly in rural areas. | | We have published independent economic analysis alongside the consultation and ongoing analysis of the costs and benefits of the SFS will inform the final ministerial decision on the SFS. |
| Marriage and civil partnership | No specific positive or negative impacts have been identified. | | At this stage, no mitigation shall be necessary, but we will continue to monitor this. |
| Low-income households | The movement from an area-based support scheme to one based on the requirement to deliver a suite of sustainable farming actions has the potential to have economic, and this may impact on low-income farm households. | | We have published independent economic analysis alongside the consultation and ongoing analysis of the costs and benefits of the SFS will inform the final ministerial decision on the SFS. |

**Human Rights and UN Conventions**

Do you think that this policy will have a positive or negative impact on people's human rights? (*Please refer to point 1.4 of the EIA Guidance for further information about Human Rights and the UN Conventions).*

| Human Rights | What are the positive or negative impacts of the proposal? | Reasons for your decision (including evidence) | How will you mitigate negative Impacts? |
|---|---|---|---|
| **Article 8: The right to respect for private and family life and correspondence** | As with previous agricultural schemes, the SFS will require some data collection and processing to facilitate scheme participation.<br><br>Data collection and processing undertaken for the SFS under the Agriculture (Wales) Act 2023 should not have a negative impact on the right to respect for private and family life. | The processing of personal information carries a risk of impinging on the right to privacy. | The purposes and legal basis for data collection and processing will be made clear to SFS participants. This will help mitigate the risk of non-proportionate data processing/sharing.<br><br>Please refer to the Data Protection Impact Assessment for further details. |

**EU/EEA and Swiss Citizens' Rights**

We do not expect the SFS to have specific impacts on the rights of EU/EEA and Swiss Citizens. With regards to EU/EEA or Swiss Citizens who reside and farm in Wales, the SFS will be available to all farmers in Wales who meet the eligibility criteria, regardless of nationality.

The SFS aims to support a sustainable and resilient agricultural sector in Wales. For EU/EEA and Swiss Citizens who rely on seasonal agricultural work, the SFS should mean any requirement for seasonal work is maintained as farms are resilient for the future. However, the nature of Welsh farmland means the types of farms relying on seasonal work are more prevalent in England.

## C. RURAL PROOFING IMPACT ASSESSMENT

**1. Describe and explain the impact of the proposal on rural people, businesses and communities.**

### How will the proposal affect the lives of rural people, positively and negatively? For example, as service users, workers and consumers.

#### Rural communities and agriculture

Estimates for 2021 show the total number of people working on agricultural holdings in Wales is 50,401.[159] Of this total, there are 37,953 principal farmers, directors, business partners and their spouses.[160] The total also includes 12,448 regular full-time, regular part-time and seasonal/casual farm workers.[161] The figure does not include self-employed people or contractors who may also work on the farm.

The contribution of agriculture to rural communities is not purely economic. As outlined by Dwyer, 'whilst hardly visible in basic statistics, agriculture remains a major driver of economic and community viability in the many remote areas of Wales'.[162] The centrality and interdependence of the social and economic contributions of agriculture to rural communities was also reflected in the responses to our consultation, *Sustainable Farming and Our Land* (2019).

Farms in Wales make a significant contribution to the social capital embedded in rural communities. As NFU Cymru emphasise,

> many farmers or individuals involved with the agricultural industry undertake leadership and voluntary roles in rural communities which contribute to community cohesion. There will often be members of the agricultural industry sitting on Community Councils, PTAs or on the board of school governors. They also often assist with the smooth running of the community.[163]

The introduction of the Sustainable Land Management (SLM) framework and the Sustainable Farming Scheme (SFS) represent a significant change in how farmers will receive financial support. Given the multi-faceted contribution of agriculture in many rural areas, these changes can be expected to impact rural communities.

[159] June Survey of Agriculture and Horticulture (2021).

[160] Ibid.

[161] Ibid.

[162] Dwyer, J., (2018) The implications of Brexit for agriculture, rural areas and land use in Wales.
[163] NFU Cymru, (2017) Farming – Bringing Wales Together.

The SFS will be the main mechanism for fulfilling SLM objectives and providing agricultural support in Wales. SLM objectives set out the need for food to be produced in a sustainable manner, which requires the resilience of agricultural businesses. The SFS is designed to support farmers in line with the purposes set out in The Agriculture (Wales) Act 2023 and is expected to positively impact rural communities through increasing resilience.

Specifically, SLM purposes to be delivered through the SFS include improving the resilience of agricultural businesses, helping rural communities thrive, and strengthening the links between agricultural businesses and their communities.

Rewarding farmers for delivering the outcomes the Welsh Government is seeking through the SFS will increase the ecological resilience of the land they manage, the economic resilience of their businesses, and the social resilience of rural communities through the continued presence of agriculture. Improving the efficiency of the farm business model within the natural capacity of the land will enable current and future generations to continue farming, offering long-term resilience to the communities they are embedded in.

The SFS will also offer a revenue stream separately to income generated from the farm, which will be unaffected by volatility in trading conditions. This income stream should also support resilient rural communities.

Improving farm viability and the resilience of rural communities can have a positive impact in providing opportunities for young people. This could contribute towards addressing issues such as high levels of outward migration from rural Wales by young people and help existing farmers in succession planning.

There are also expected to be positive well-being benefits to rural communities through maintenance and enhancement of habitats and landscapes, alongside improvements in air and water quality. Our Health Impact Assessment in Section 2 details the positive impacts on physical and mental well-being from the proposed future scheme, and our Biodiversity Impact Assessment and Environmental Wellbeing section (Section 5) outline the expected environmental benefits.

With regard to tree planting on farmland, the SFS is designed to support farmers to increase tree cover in appropriate locations – both for the environment and the farm business – alongside other actions which will deliver the Welsh Government's desired outcomes. The SFS will support farmers in the delivery of SLM and will specify actions that will be supported in line with the definitions of agriculture and agricultural activities as set out in the Act.

The SFS is designed to keep Welsh farms active and resilient, providing a stable income stream, which will enable farmers to remain on their land and allow them to pass on resilient farm businesses to future generations.

The SFS is also designed to work towards tackling the climate emergency and nature emergency in a way that is beneficial for farms and rural communities. This is in line with the Welsh Government's existing commitments, as laid out in the Well-being of Future Generations (Wales) Act 2015,[164] and our Carbon Budget, which states that the transition to Net Zero should be 'fair and

[164] https://www.futuregenerations.wales/wp-content/uploads/2017/02/150623-guide-to-the-fg-act-en.pdf

prosperous'.[165] The Welsh Government's approach through the SFS is to promote land sharing practices which support and enable the sustainable production of food alongside delivery of the other outcomes we are seeking.

### Will access be an issue for rural people? If yes, what will be done to overcome barriers to access?

We do not consider access to be an issue for rural people with regards to the SFS, as farms are predominantly in rural areas and will be its principal target.

### How has the proposal taken account of the needs of rural people e.g. older population, lack of affordable housing, language requirements?

The SFS will be open to farmers in Wales regardless of age or any other personal or household characteristics. With regards to people in rural communities more generally, including discussion on the Welsh language, further details can be found in our Equality Impact Assessment, Welsh Language Impact Assessment, and Socio-economic Duty Impact Assessment.

### Will the proposal lead to new services being opened or existing services being closed? How will you maximise positive impacts and mitigate negative impacts?

The SFS is not expected to directly impact the provision of services to rural areas. Rather, it is expected to support a thriving, sustainable rural economy, which should make living in rural areas a more attractive and viable option for individuals of all ages and professions, including those whose work provides vital services to local people.

### Does the policy require the purchase or use of land? Have you considered rural factors such as land value, availability or restrictive designations?

The Welsh Government will not require the purchase of land to implement the SFS.

The SFS will pay participating farmers to manage their land to meet the SLM objectives set out in the Agricultural (Wales) Act 2023. The SFS has been designed to be available to all farmers over 3ha or 550 hours of activity.

The use of restrictive covenants between Welsh Government and the landowner is not part of the Scheme.

[165] https://gov.wales/sites/default/files/publications/2021-10/net-zero-wales-carbon-budget-2-2021-25.pdf

There is limited evidence on the impact of agricultural policy support on land prices. A 2013 study from Sweden[166] reported:

- Accessibility to population presumed to reflect urbanity is shown to be the strongest explanatory factor, regardless of the location of the land.
- Direct income support to farmers in the form of the single farm payment has a positive impact on agricultural land prices.
- These effects are most influential in municipalities with relatively low land prices.
- Environmental payments that are conditional upon preservation and maintenance of biological values, have a consistent and negative coefficient across the estimations. The consistent negative coefficient reflects that municipalities that receive a lot of support for agri-environmental protection have a sensitive agri-environment, which reduces the productive value of the land. Thus, agri-environmental payments appear not to have the sufficient size nor the type of design that result in inflated land prices.

A review[167] commissioned by Welsh Government considered the capitalisation of public support for agriculture into land prices and concluded:

- Both empirical and theoretical findings have suggested that agricultural subsidies increase land prices and rent and thus generate impacts beyond the primary recipient of the public investment (the active farmer).
- There is limited consensus on the magnitude of the actual capitalisation effects of subsidies, as this depends on a number of factors such as the type of support, imperfections in factor markets, the structure of competition in the food supply chain and transaction costs.
- Interactions between location effects and land market regulations are often a far more important driver for price and rent than public sector subsidy.
    - Land price increases due to subsidies reduce the overall impact of public sector payments on agricultural income.
    - Increases in the price of land or the rent required to manage it have a negative effect on land mobility and a subsequent indirect negative effect on farm restructuring.
    - The degree of transparency of a subsidy has a direct impact upon the extent of capitalisation. This information asymmetry is mainly associated with Pillar 2 payments, where, for example, landowners are not aware of the total value of agri-environment payments their tenants receive, nor the additional costs of participation, so are less able to reflect any profit element in the rental price.

Overall, it is too soon to say whether the SFS will have a material impact on the price of agricultural land in Wales.

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[166] Nilsson, P., Johansson, S. (2013) Location determinants of agricultural land prices. Jahrbuch für Regional Wissenschaft, 33(1): 1-21

[167] ADFAS (2021) Analysis of the potential economic effects of the Sustainable Farming Scheme on the agricultural sector in Wales – literature review

**Will the proposal work in difficult terrain e.g. narrow roads and steep mountains? If no, how will you overcome barriers?**

We do not anticipate any barriers due to difficult terrain. Welsh Government has previous experience delivering support schemes and advisory services to farmers, who are often located on difficult terrain, and this will be used to inform delivery.

**Is the proposal relevant to SMEs or micro-enterprises? If yes, how have you taken their situation into account? Does the proposal expect businesses to be able to access support? (This may be in the form of advice, training, finance etc.) If yes, what barriers will rural businesses face and how will they be overcome?**

The majority of farms in Wales are small businesses and contribute to the resilience of rural communities. Data from 2019 shows 87% of Welsh farms are classed as 'Small' or 'Very Small' based on their turnover.[168] With an average of 2.14 workers per farm in 2020,[169] it is highly likely that the vast majority of Welsh farms would be classed as 'micro-entities' (having fewer than 10 employees in addition to meeting criteria relating to turnover). In 2017, almost two-thirds of farms had the equivalent of one or less full-time employees.[170]

Evidence on the importance of small businesses to the resilience of communities in Scotland concluded rural businesses contribute to building the resilience of rural Scotland in both direct and indirect ways.[171] The evidence found there is a 'clear link between the activities of rural businesses and the resilience of rural communities' in relation to employment creation and service/product delivery.[172] It also found that growing and diversifying the private business sector can:

- Help to maintain the working-age population in a local area, contributing to the 'demographic balance' and thus support local (public, private and third sector) service provision.
- Utilise and develop existing resources, increasing the quality of life and well-being of rural residents, increasing the attractiveness of a place as a tourism destination, and improving community cohesion.

A review from the West Midlands notes the importance of small businesses contributing to the economic resilience of local communities.[173] It states,

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[168] https://gov.wales/sites/default/files/statistics-and-research/2021-08/farming-facts-and-figures-2021-695.pdf

[169] Ibid.

[170] https://statswales.gov.wales/Catalogue/Agriculture/Agricultural-Survey/Intra-Survey-Comparisons/annual-fte-labour-proxy-on-a-farm

[171] Steiner, A. & Atterton, J. (2014). The contribution of rural businesses to community resilience. Local Economy, 29:3. pp. 228-244.

[172] Ibid.

[173] Leach, K. (2013). Community economic development: Localisation, the key to a resilient and inclusive local economy? *Local Economy*, *28*(7-8), 927-931.

> local economies with higher levels of small businesses and local ownership perform better in terms of economic success, job creation (especially in disadvantaged and peripheral areas), local multiplier effect, social inclusion, income redistribution, health, well-being and civic engagement, than economies more dependent on centralised economic actors. Such economies also support local distinctiveness and diversity, which can be seen as being advantageous because these factors contribute to economic resilience.[174]

Research into the impacts of transitioning away from BPS in the South-West of England examines the wider implications of farm business ceasing to trade, observing 'there is a wider impact, like the ripples in the water when a stone hits, across the rural economy'.[175] It acknowledges the interconnectivity between agriculture and industries such as tourism and food and drink, and highlights that while 'the revenue coming into farming is at least partly spent in the rural economy', it is extremely challenging to model the exact impact the changes to farming support might have.[176]

Evidence from the responses to our consultation, *Sustainable Farming and our Land* (2019),[177] demonstrates Welsh farms also play this key economic role within their local economies and communities. Our published summary of responses notes,

> [respondents] often made impassioned statements concerning the important role that agriculture plays in ensuring the vibrancy of rural communities. From these perspectives, the health of the agricultural sector is closely linked to the broader economic fortunes of the rural communities in which they live. Moreover, respondents saw agriculture to be closely intertwined in the social, linguistic and cultural fabric of rural life.[178]

The SFS will have impacts for all farm businesses in Wales, including farm SMEs and micro-entities. It is designed to support all types of eligible farms across Wales to deliver SLM and will provide advice and support in order to assist them in this transition. Given the role smaller businesses often play in supporting rural resilience, it is expected that providing support for farms to deliver SLM will have positive effects for the communities they are embedded in. The SLM objectives reflect the fact that the resilience of agricultural businesses within the communities and local economies in which they operate is an important factor in ensuring food is produced in a sustainable manner.

The SFS will provide support for the wider industry and the supply chain outside the farm gate for activity that meets the definition of ancillary activities and the strategic objectives of the Agriculture (Wales) Act 2023. This would have a positive impact for rural businesses and the wider rural community.

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[174] Ibid.

[175] https://heartofswlep.co.uk/wp-content/uploads/2022/05/GSW-agricultural-tranistion-report.pdf

[176] Ibid.

[177] Welsh Government (2019). Sustainable Farming and our Land: Summary of Responses.
https://gov.wales/sites/default/files/consultations/2020-05/sustainable-farms-summary-of-responses_0.pdf

[178] Ibid.

**Does the proposal depend on infrastructure such as good road/rail connections or fast broadband or good mobile connectivity? If yes, what provision will be made for communities/businesses in more isolated rural areas?**

As the SFS is concerned with agriculture, there is no specific provision relating to infrastructure or for enhancing rural broadband.

However, Rural Payment Wales has experience in reaching customers in more isolated rural areas, and the SFS will incorporate this experience and help overcome any barriers resulting from poor connectivity.

**Although the root causes of poverty in rural areas are the same as in urban areas, the experience of deprivation may be different in rural areas. Some of the main issues contributing to poverty in rural areas are fuel poverty (including both heating and transport fuel), in-work poverty, access to services and digital exclusion. How does your proposal help to tackle poverty in rural areas?**

The SFS is designed to support thriving and resilient rural communities through enabling Ministers to provide support to farmers for the delivery of SLM. The SFS intends to provide farmers with a meaningful, stable income stream. Data from 2017/18 shows that without payments from the Basic Payment Scheme (BPS), only 41% of farms in Wales made a profit[179]. Further assessment of the potential impacts of the SFS with regard to causes of deprivation can be found in the Socio-Economic Duty Impact Assessment.

The 'digital divide' is more prevalent in Wales than other UK nations, with 7% of the population (an estimated 180,000 people) unable to access or use the internet.[180] Populations within Wales who are particularly vulnerable to digital exclusion include people in rural communities, older adults, and first-language Welsh speakers.[181] As such, digital exclusion is an issue affecting some farmers in Wales due to such contributing factors as lack of access to broadband services, the prevalence of first-language Welsh speakers within this industry, and the fact that older farmers may be less likely to use the internet more generally due to lack of digital skills and/or motivation. This could mean that digitally excluded farmers are unable to access the SFS, simply through not being aware of it, if the primary means of promotion are digital. We have planned varied communications programme prior to the introduction of the SFS to reach as many farmers as possible, allowing them to make an informed choice about whether to enter the scheme.

**What contact have you had with rural stakeholders? Please briefly describe any events targeted at rural stakeholders or any consultation engagement you have had with rural stakeholders. Did any other issues come up as a result of the engagement**

[179] https://gov.wales/sites/default/files/publications/2021-03/agriculture-in-wales-evidence.pdf
[180] Digital inclusion in Wales (gov.wales)
[181] Ibid.

**with stakeholders or any consultation around this proposal? If yes, what were they and how have you modified your proposal to take them into account?**

Prior to *The Sustainable Farming Scheme Consultation*, we have published three consultations on our proposals for the future of agricultural support in Wales. The first of these, *Brexit and our Land,*[182] was published in July 2018. We published a full, independent summary of the responses to the consultation (12,203 responses, of which 1,036 were substantive and a further 11,160 were submitted from seven distinct campaigns),[183] and our response to the consultation responses was also published.[184]

In light of the consultation exercise, we made a number of changes to our policy proposals which were set out in our second consultation, *Sustainable Farming and our Land* (2019).[185] An independent summary of the responses to that consultation was also published (3,322 responses, of which 508 were substantive and 2,816 were submitted from three distinct campaigns).[186]

Our third consultation asked for views on the proposals for the Agriculture (Wales) Bill[187] (which has since become an Act) and our draft assessment of potential impacts. In light of the responses to the consultation (1,119 responses, of which 232 were substantive and 887 were submitted from a campaign),[188] a number of changes were made to the content of the Bill.[189]

Alongside these consultations we have engaged directly with farmers and other rural stakeholders at regional agricultural shows and a range of dedicated events to further explain and discuss our proposals. We continue to engage regularly with a range of stakeholders and are currently planning further in-person engagement alongside the present SFS consultation.

We have conducted a programme of co-design, which has allowed stakeholders to work collaboratively with the Welsh Government in shaping policy and the SFS. The engagement events for the first phase of co-design took place between March and October 2020, and insights from this programme are now publicly available.[190] In total, over 1,900 stakeholders engaged with the co-design programme, the vast majority of whom were farmers.

Our second phase of co-design, where farmers and other stakeholders were invited to provide feedback on the Outline Proposals for the SFS, was undertaken in 2022; insights from this programme are also now publicly available.[191] A total of 1,445 stakeholders, who were predominately farmers, engaged with the co-design process.[192]

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[182] Welsh Government (2018). Brexit and our Land consultation.
[183] Welsh Government (2018). Brexit and our Land: Summary of Responses. https://gov.wales/support-welsh-farming-after-brexit
[184] Welsh Government (2018). Brexit and our Land: Our Response https://gov.wales/brexit-and-our-land-our-response
[185] Welsh Government (2019). Sustainable Farming and our Land consultation.
[186] Welsh Government (2019). Sustainable Farming and our Land: Summary of Responses. https://gov.wales/sites/default/files/consultations/2020-05/sustainable-farms-summary-of-responses_0.pdf

[187] https://gov.wales/sites/default/files/consultations/2020-12/agriculture-wales-bill-white-paper.pdf
[188] https://gov.wales/sites/default/files/consultations/2021-09/agriculture-wales-bill-summary-of-responses.pdf
[189] https://gov.wales/sites/default/files/consultations/2021-09/agriculture-wales-bill-our-response-forward-plan.pdf
[190] https://gov.wales/sites/default/files/publications/2021-09/sustainable-farming-scheme-co-design-future-farming_0.pdf
[191] https://www.gov.wales/sites/default/files/publications/2023-07/sustainable-farming-scheme-co-design-final-report.pdf
[192] Ibid.

### What evidence have you used to inform your assessment, including evidence from rural people or their representatives?

The assessment of the impacts of the SFS has been informed by the responses to the consultations carried out during the development of the Agriculture (Wales) Act 2023 and the co-design process for the SFS (set out above), as well as other evidence sources which are referenced in the footnotes to this impact assessment.

### What other evidence would inform the assessment?

Although the design for the SFS is being presented for consultation, the gathering of supporting evidence is currently ongoing to inform the final decision by Ministers. In particular, the Environment and Rural Affairs Monitoring and Modelling Programme (ERAMMP) will inform the assessment of the final scheme.

This model allows us to estimate the impacts of the SFS' actions on land use, agriculture and environmental outcomes based on data drawn from full-time farms across Wales. This will help identify potential impacts across Wales.

## D. DATA PROTECTION IMPACT ASSESSMENT SCREENING

| |
|---|
| Title of proposal: **Sustainable Farming Scheme** |
| Name of Information Asset Owner: **Hugh Morgan** |
| PIA reference number: **SFS_PIA_0.1** |
| Please describe your proposal:<br><br>(i) If this is a change to an existing system/ project/ process/ policy then please outline the present arrangements (and how personal data is currently processed) and then outline the changes, including whether personal data will now be shared with third parties.<br><br>(ii) If this is a new system/ project/ process/ policy then please detail how the new system/ project/ process/ policy will work, including how the personal data will be processed and whether the personal data will be shared with 3rd parties.<br><br>(iii) IMPORTANT - Will the proposal involve the development of new legislation/measures that will require the processing of personal data by Welsh Government or any other parties?<br><br>**This is a new Wales domestic funded agricultural support scheme, but the personal data collection and use and sharing will be similar to the legacy European Common Agricultural Policy Subsidy Schemes it replaces.**<br><br>**The scheme will comply with the legal duties set out in the new Agriculture (Wales) Act.** |
| Has data protection impact screening or assessment already been carried out?<br><br>• **No** |
| Does the proposal involve the processing of personal data by Welsh Government or any other parties?<br><br>**• Yes, by Welsh Government and delivery partners. Under the proposed new support scheme the Welsh Government Farming Connect Service (delivered by external partners) will play a prominent role in the delivery of the scheme.** |

Please tick the personal data items that will be processed (this list is not exhaustive):

**Personal**

| | |
|---|---|
| **Name** | **Telephone numbers** |
| **Name address** | **Date of birth** |
| **Business address** | ~~Driving licence number~~ |
| **Postcode** | ~~Passport / ID card number~~ |
| **Email address** | ~~Photographs / images (which could be used to identify an individual)~~ |
| | Other (please specify) |

**Special Category**

| | |
|---|---|
| ~~Racial / ethnic origin~~ | ~~Biometric data e.g. DNA, finger-prints~~ |
| ~~Political opinions~~ | |
| ~~Religious / philosophical beliefs~~ | |
| ~~Trade union membership~~ | |
| ~~Physical / mental health conditions~~ | |
| ~~Sexual life~~ | |
| ~~Sexual orientation~~ | |
| ~~Criminal & court records (inc. alleged offences)~~ | |

If special category personal data is being processed, is this data being collected mandatorily (i.e. without the data subjects having an option to not provide it)?

- **Not applicable**

Do any of the data subjects whose personal data will be processed fall into the following categories? **No**

~~Children (under the age of 12)~~

~~Patients~~

~~Asylum Seekers~~

| | |
|---|---|
| ~~Welsh Government employees~~ | |
| Please give an indication of the scale of the processing (e.g. pan-Wales; targeted group)<br><br>Details<br>**Pan Wales, targeted group is farmers and agricultural land owners (potentially up to 25,000 farming businesses in Wales)** | |
| For the personal data being processed, please indicate | |
| Who the data controller is? | Details: **Welsh Government** |
| Any data processors? | Details: **Farming Connect, Natural Resources Wales** |
| Will the data be shared? | Details: **Data may be shared with delivery Partners (where required and justified):**<br><br>◆ **Animal and Plant Health Agency**<br>◆ **Natural Resources Wales**<br>◆ **Veterinary Medicine Directorate**<br>◆ **Welsh Local Authorities**<br>◆ **Food Standards Agency Wales**<br>◆ **Farming Connect**<br>◆ **EID Cymru**<br>◆ **BCMS**<br>◆ **Regulatory authorities, such as HM Revenue and Customs and the Police**<br>◆ **DEFRA** |
| What is the statutory basis for processing the data? NB – GDPR itself does <u>not</u> provide a statutory legal basis to process personal data.<br><br>**Agriculture (Wales) Act 2023 (see Sections 8 to 10, Section 12 and Part 3 Chapter 1)** | |
| Have legal Services confirmed that the basis outlined above provides the necessary statutory gateway for processing (including any proposed sharing)?<br><br>• **Yes** | |
| Will the proposal involve new or significantly changed processing of personal data about each individual? | |

- **No, SFS will be delivered using existing Welsh Government Systems**

Will the personal data be consolidated, linked or matched with data from other sources?

- **Yes with data held by OneLogin, Farming Connect and potentially EID Cymru**

Will the personal data be used for automated decision making?

- **No**

Will the personal data result in systematic monitoring of data subjects?

- **No**

Does the proposal involve new or changed data collection, retention or sharing policies/practices for personal data?

- **Yes, under the new proposal personal data will be shared with Farming Connect and One Login**

Do you have a clear retention policy and what practical things are in place for you to ensure that your Retention Policy is applied?

- **Yes, scheme will adhere to Welsh Government retention policies. The data controller has established disposal routines to meet retention requirements.**

Will the proposal involve the introduction of privacy-intrusive technologies such as

- ~~Smart cards~~
- ~~RFID tags~~
- ~~Biometrics~~
- ~~Visual surveillance (e.g. CCTV)~~
- **Digital image and video recording – Aerial Photography and Satellite imagery of Land Parcels for Farming businesses – personal information not included**
- ~~Profiling, data mining or logging electronic traffic~~
- **Locator technologies (e.g. GPS, mobile phone tracking) – Geo-tagged photos of project works submitted as evidence – personal information not included**
- ~~Other (please provide details)~~

Will the proposal involve new or changed identity management or authentication processes?

- **Yes -The data controller will be changing authentication processes from Government gateway to Gov.Uk One Login**

Will the proposal have the effect of enabling identification of individuals who were previously anonymous?

- **No**

For completion by Information Rights Unit

Is a Data Protection Impact Assessment (DPIA) required for this proposal?

- Yes

**Article 35(1)** of the UK GDPR states that a DPIA is required when processing is "likely to result in a high risk". The Article 29 Working Party (WP29) has set out nine criteria that should be considered and meeting two or more of these would require a DPIA to be carried out. This proposal meets the following WP29 criteria:

5. **Data processed on a large scale.** Met due to the potential number of individuals engaged, the duration of the processing and the geographical extent of the processing.

6. **Matching or combining datasets.** Met due to the data being linked to data held by OneLogin, Farming Connect and potentially EID Cymru.

**Article 35(4)** requires the ICO to publish a list of processing operations that are likely to be high risk and require a DPIA. The ICO's list includes 10 types of processing that automatically require a DPIA, one of which is:

- **Match data or combine datasets from different sources.**

This will be met due to the data being linked to data held by OneLogin, Farming Connect and potentially EID Cymru.

Please see below for the DPIA.

Has advice on UK General Data Protection Regulation (UK GDPR) compliance been provided?

- Yes (as below):

- Does the proposal require a Privacy Notice to be drafted? Yes. To inform data subjects accessing the scheme of how their personal data will be processed.

- Does the proposal require consultation with the ICO under UK GDPR Art 36(4)? No. However, the ICO will need to be consulted if, after completing the DPIA and having mitigating measures in place, it identifies high risk.

- Does the proposal require a contract between Welsh Government as data controller and a third party processor? Yes. With external partners who have a role in delivery of the scheme and who will be processing personal data on behalf of the Welsh Government.

- Does the proposal require a data sharing agreement to be drafted? Yes. With delivery partners the Welsh Government will be sharing personal data with, in order that those delivery partners to undertake their legal duties. Upon receipt of personal data, the delivery partners will become controllers and need to ensure their processing is complaint with the UK GDPR.

## Data Protection Impact Assessment (DPIA)

**Article 35(1)** of the UK GDPR states that a DPIA is required when processing is "likely to result in a high risk". The Article 29 Working Party (WP29) has set out nine criteria that should be considered and meeting two or more of these would require a DPIA to be carried out. This proposal meets the following WP29 criteria:

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**Article 35(4)** requires the ICO to publish a list of processing operations that are likely to be high risk and require a DPIA. The ICO's list includes 10 types of processing that automatically require a DPIA, one of which is:

- **Match data or combine datasets from different sources.**

This will be met due to the data being linked to data held by OneLogin, Farming Connect and potentially EID Cymru.

**How will the information be collected or transferred to Welsh Government?**

Information will be submitted to Welsh Government by data subjects via their RPW online accounts. Account security and verification for RPW online will be provided by the OneLogin Multi-Factor Authentication service.

An RPW Application Programme Interface (API) is also being developed to allow system integrations, but the data requirements for this are yet to be defined.

**Who will have access the information?**
Welsh Government (please see sharing proposals below).

**Where will the information be held?**
Welsh Government secure cloud-based computing system.

**What will the information be used for?**
To determine eligibility for Sustainable Farming Scheme payments and provide farm based and anonymised industry-based data for benchmarking.

**How long will the information be retained?**
Information will be retained for 10 years following the latest payment.

**How will it be destroyed/deleted**
All personal information/correspondence connected to the account will be deleted from WG systems.

**Who will be the owner of the information?**
Welsh Government is the data owner.

**Will the information be shared with anyone? If yes, who?**
APIs have been developed to share/link information with Welsh Government EID and Farming Connect services. Accounts will be linked via a unique reference number (CRN).
Information will also be shared, upon request and where necessary to fulfil their statutory functions, with UK enforcement bodes, such as HMRC, NRW, Local Authorities and the Police Services.

**Identify the key privacy risks and the associated compliance and corporate risks. Larger-scale PIAs might record this information on a more formal risk register.**

| Privacy Issue | Corporate Risk | Compliance Risk | Organisational Risk |
|---|---|---|---|
| • Inadequate disclosure controls that increase the likelihood of information being shared inappropriately.<br>• The context in which information is used or disclosed can change over time, leading to it being used for different purposes without people's knowledge.<br>• The sharing and merging of datasets can allow organisations to collect a much wider set of information than individuals might expect. | • Non-compliance with the data protection legislation can lead to sanctions, fines and reputational damage.<br>• Information is inconsistent between services leading to ineffective or inefficient services | • Non-compliance with the Privacy and Electronic Communications Regulations (PECR).<br>• Non-compliance with the GDPR. | • Information which is collected and stored unnecessarily, or is not properly managed so that duplicate records are created, is less useful to the business.<br>• Data losses which damage individuals could lead to claims for compensation |

## Privacy solutions

Steps that will be taken in order to reduce a privacy risk may include:

- Deciding not to collect or store particular types of personal data.
- Devising retention periods which only keep information for as long as necessary and planning secure destruction of information.
- Implementing appropriate technological security measures.
- Ensuring that staff are properly trained and are aware of potential privacy risks.
- Developing ways to safely anonymise the information when it is possible to do so.

- Producing guidance for staff on how to use new systems and how to share data if appropriate.
- Using systems which allow individuals to access their information more easily and make it simpler to respond to subject access requests.
- Taking steps to ensure that individuals are fully aware of how their information is used and can contact the organisation for assistance if necessary.
- Selecting data processors who will provide a greater degree of security and ensuring that agreements are in place to protect the information which is processed on an organisation's behalf.
- Producing data sharing agreements which make clear what information will be shared, how it will be shared and who it will be shared with.
- Consulting with any affected parties both internally and externally. Consultation can be used at any stage of the PIA process.

**Have the risks been eliminated, reduced or accepted? Who has approved the privacy risks involved in the project? What solutions need to be implemented?**

| Risk | Agreed Solution |
|---|---|
| • Inadequate disclosure controls that increase the likelihood of information being shared inappropriately.<br><br>• The context in which information is used or disclosed can change over time, leading to it being used for different purposes without people's knowledge.<br><br>• The sharing and merging of datasets can allow organisations to collect a much wider set of information than individuals might expect.<br><br>• Non-compliance with the data protection legislation can lead to sanctions, fines and reputational damage.<br><br>• Information is inconsistent between services leading to ineffective or inefficient services<br><br>• Non-compliance with the Privacy and Electronic Communications Regulations (PECR).<br><br>• Non-compliance with the GDPR.<br><br>• Information which is collected and stored unnecessarily, or is not properly managed so that duplicate records are created, is less useful to the business.<br><br>• Data losses which damage individuals could lead to claims for compensation | *Proposed*<br><br>• Secure systems to share data. Robust staff training. Robust agreements with 3rd parties.<br><br>• Clearly articulated, well thought out privacy notices, and strict adherence to the conditions disclosed at collection.<br><br>• Clearly articulated and agreed usage terms for information collected for SFS, fully reflected in privacy notices.<br><br>• Fully adhere to WG corporate processes to ensure that DP legislative requirements are met.<br><br>• Reuse information across services to ensure consistency.<br><br>• Ensure technical solution fully addresses PECR requirements.<br><br>• Ensure that GDPR requirements fully integrated into the system and data collection design.<br>• Ensure that the design solution collects and stores information once, reducing administrative burden for customers and administrators.<br>• Follow WG Corporate information security rules and ensure 3rd parties sign up to the same terms. |

**Who is responsible for integrating the PIA outcomes back into the project plan and updating any project management paperwork?**

**Who is responsible for implementing the solutions that have been approved? Who is the contact for any privacy concerns which may arise in the future?**

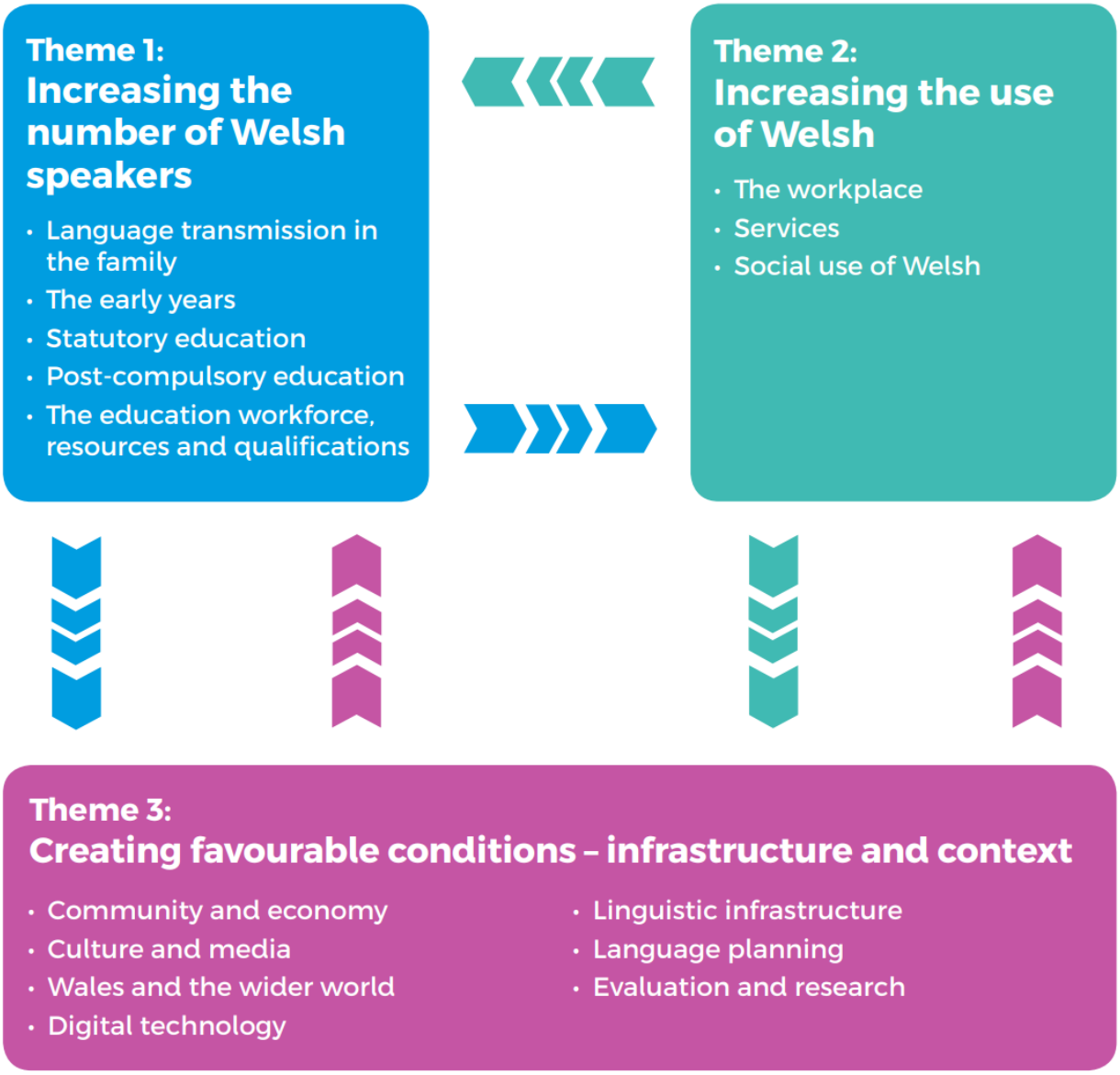
This will be determined following the consultation on the SFS.

## E. WELSH LANGUAGE IMPACT ASSESSMENT

*Cymraeg 2050* is our national strategy for increasing the number of Welsh speakers to a million by 2050.

The Welsh Government is fully committed to the new strategy, with the target of a million speakers included in its Programme for Government. A thriving Welsh language is also included in one of the 7 well-being goals in the Well-being of Future Generations (Wales) Act 2015.

The Cymraeg 2050 strategy has three interrelated themes:



1. Does the proposal demonstrate a clear link with the Welsh Government's strategy for the Welsh language? – Cymraeg 2050 A million Welsh speakers and the related Work Programme for 2021-2026? Cymraeg 2050 work programme 2021-2026

**Context**

The most recently available Census data from 2021 shows 17.8% of people in Wales[193] aged 3 and over are able to speak Welsh. There are Welsh speakers in all parts of Wales, but the numbers and proportion of the population vary. The local authorities with the highest proportion of Welsh speakers are Gwynedd (64.4%), Isle of Anglesey (55.8%), Ceredigion (45.3%) and Carmarthenshire (39.9%). These local authorities are all largely rural in nature. The local authority with the highest number of Welsh speakers is Gwynedd (73,600), followed by Carmarthenshire (72,800).

Cymraeg 2050 identifies areas with a high density of Welsh speakers as central to the Welsh Government vision for increasing the number of Welsh speakers because they are likely to create favourable conditions for the use of Welsh, as well as supporting the Welsh language across the whole of Wales. The higher the number and proportion of Welsh speakers in an area, the higher the chances of being able to use Welsh in daily life.

The percentage of people aged 3 and over able to speak Welsh decreased in the hundred years up to the 2021 Census, from 37.1% of the population in 1921 to 17.8% in 2021. Across age groups, the percentage able to speak Welsh is highest amongst 5 to 15 year-olds.

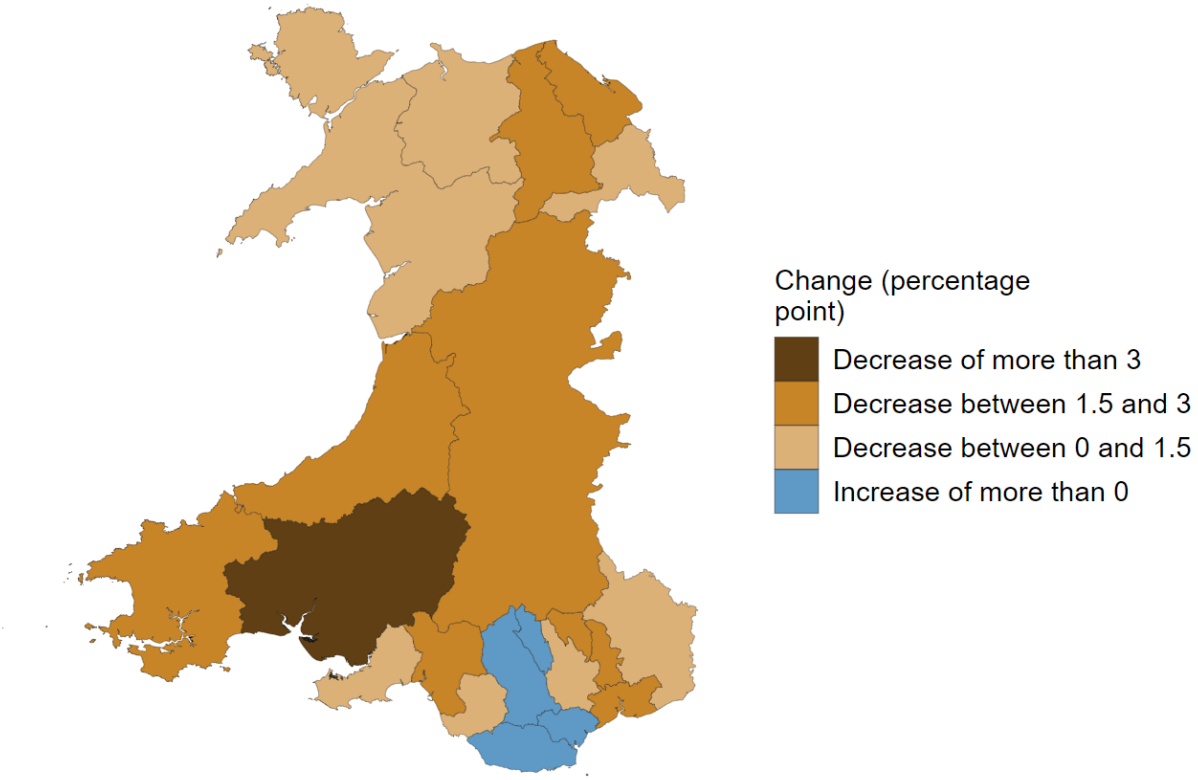
Regionally, Carmarthenshire saw the largest drop in the percentage able to speak Welsh – from 43.9% in 2011 to 39.9% in 2021. In addition, Powys, Denbighshire, Pembrokeshire and Ceredigion all saw a decrease of two or more percentage points in the proportion of Welsh speakers. Increases in the proportion of Welsh speakers were seen in Cardiff, Vale of Glamorgan, Merthyr Tydfil and Rhondda Cynon Taf. Figure 1a shows the change in the proportion of people aged three and over able to speak Welsh between 2011 and 2021 at the local authority level, and Figure 1b shows the change in the proportion of people aged three and over able to speak Welsh between 2011 and 2021 at the Lower Layer Super Output Area (LSOA) level.

It is important to note changes in the proportion of Welsh speakers can be caused by both an increase/decrease in the number of Welsh speakers and an increase/decrease in the number of non-Welsh speakers.

For all local authorities that saw a decrease in the proportion of Welsh speakers, there was also a decrease in the total number of speakers.

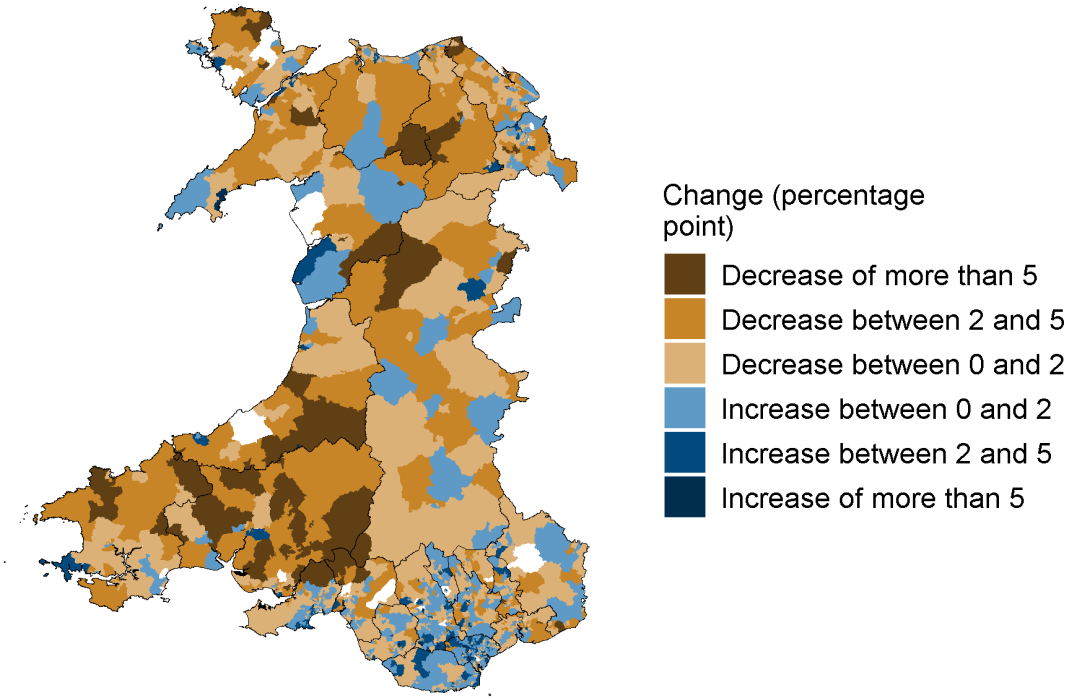
[193] The Census does not ask those living in England about their Welsh language ability.

**Figure 1a. Change in proportion able to speak Welsh, by Local Authority, 2011 and 2021**




Source: Census of population, 2011 and 2021

**Figure 1b. Change in proportion able to speak Welsh, by Lower Layer Super Output Area (LSOA), 2011 and 2021**




Source: Census of population, 2011 and 2021

**Other data sources:**

The Welsh Government publishes a range of other statistics about Welsh language ability from various data sources, from both surveys and administrative data sources. For example:

- The Welsh Government's National Survey for Wales (NSW)[194] provides statistics about the Welsh language ability of adults aged 16 years or older on an annual basis. It also includes statistics about how often Welsh speakers speak the language, and how fluent they consider themselves to be.
- The ONS' Annual Population Survey (APS)[195] provides statistics about the Welsh language ability of people aged three years or older. It also includes statistics about how often Welsh speakers speak the language. These statistics are available every three months.

[194] https://www.gov.wales/national-survey-wales

[195] https://www.gov.wales/welsh-language-data-annual-population-survey

While these data sources should not be compared directly with Census data due to differences in the way that the information is collected for example, they are used to monitor trends in Welsh language ability between Censuses. They also include data on self-reported level of ability and frequency of use. The Census remains the official data source regarding the number of Welsh speakers in Wales.

NSW data[196] for 2021-22 estimates that 36% of the Welsh population aged 16 and over can speak some Welsh. Of those reporting Welsh language ability, 32% were fluent in Welsh, 14% spoke "a fair amount" of Welsh, 32% could speak "a little" Welsh, and 22% could say "just a few words"[197].

APS data for the year ending December 2022 estimates that the number of people aged three and over in Wales able to speak Welsh was 900,600 (29.5% of the population)[198]. The APS also estimated that 20.6% of the population use Welsh at least weekly[199].

Information about Welsh language skills in the Census is based on a person's self-assessment of their ability. In some cases, especially for children, Welsh language ability was reported by another person, for example, a parent or guardian.

Census 2021 was held during the coronavirus (COVID-19) pandemic, on 21 March 2021. This followed periods of lockdown, remote learning for children and many people were working from home. It is not known how the pandemic may have impacted peoples' reported Welsh language ability (or perception of the Welsh language ability of others).

Differences in the estimates of Welsh language ability between the census and household surveys such as the APS are longstanding, and both the ONS[200] and the Welsh Government[201] have explored possible reasons for some of these differences in the past.

While household surveys typically provide us with higher estimates of Welsh-speaking ability, this is the first time that the Census has estimated declining numbers of Welsh speakers and the APS has estimated increasing numbers of Welsh speakers.

Following the publication of Census 2021, we are prioritising work to examine the differences between these data sources in more detail, including the exploration of

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[196] https://www.gov.wales/national-survey-wales-results-viewer

[197] For the population (16 and over) as a whole, this equates to 11% being fluent in Welsh, 5% speaking "a fair amount" of Welsh, 11% speaking "a little" Welsh, and 8% able to say "just a few words". Percentages may not sum due to rounding.

[198] https://statswales.gov.wales/Catalogue/Welsh-Language/Annual-Population-Survey-Welsh-Language/annualpopulationsurveyestimatesofpersonsaged3andoverwhosaytheycanspeakwelsh-by-localauthority-measure

[199] https://statswales.gov.wales/Catalogue/Welsh-Language/Annual-Population-Survey-Welsh-Language/welshfrequency-by-la-year

[200] http:/www.ons.gov.uk/ons/guide-method/census/census-2001/data-and-products/data-and-product-catalogue/reports/report-on-the-welsh-language/differences-in-estimates-of-welsh-language-skills.p

[201] https://www.gov.wales/welsh-language-data-annual-population-survey-2001-2018

innovative approaches such as data linking, to ensure we have a coherent evidence base which can be used for decision making.

We have published a workplan[202] which outlines the work that the ONS and the Welsh Government are planning to undertake during 2023-24 and beyond to improve our understanding of the main survey and administrative data sources used to produce statistics about the Welsh language.

**Agriculture and the Welsh Language**

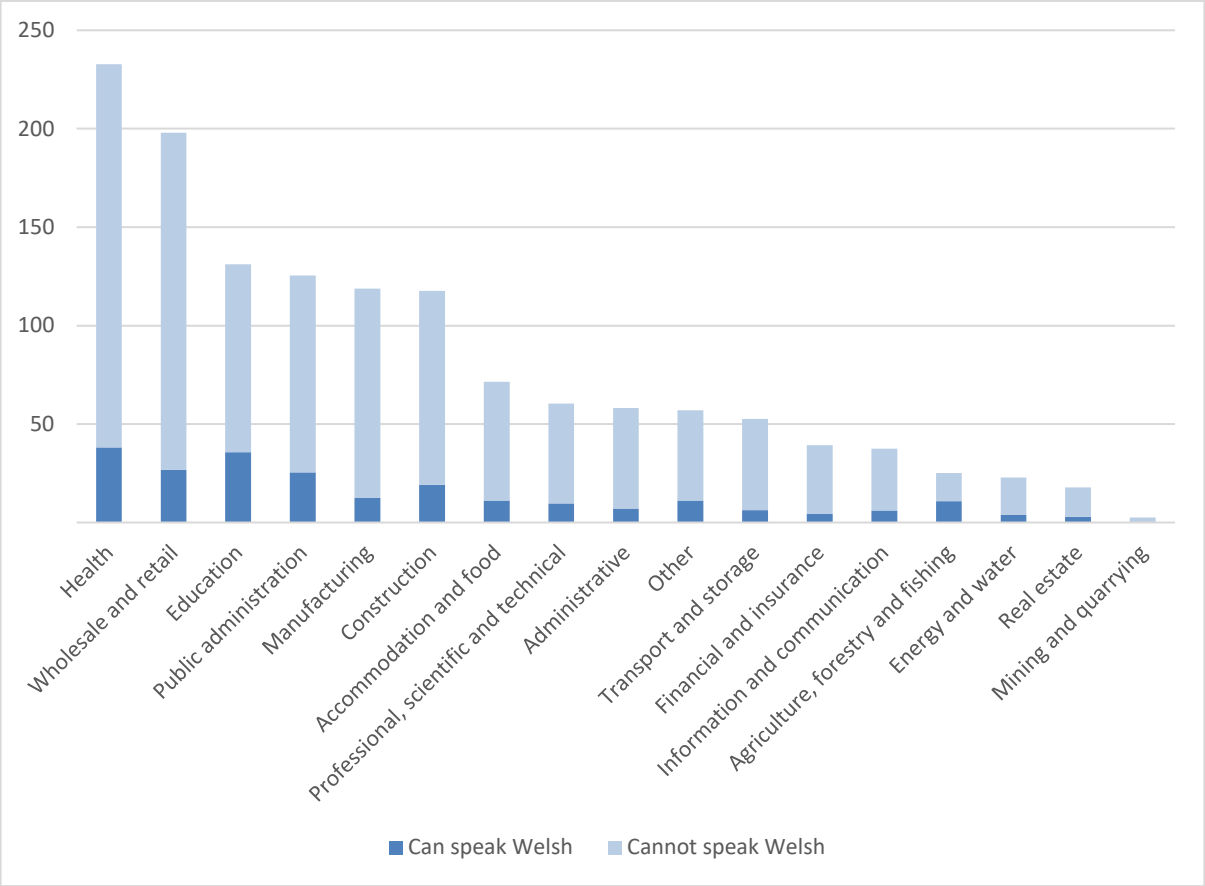
Census 2021 data[203] shows that despite the small size of the agricultural sector, 2% of all workers in Wales, agriculture accounts for a relatively larger share of all Welsh speakers (5% of all speakers).

The agriculture sector (including fishing and forestry) has the highest share of Welsh speaking workers in Wales at 43% (Figures 3a and 3b). This is in comparison with the average for workers across all sectors at 17%.

[202] https://www.gov.wales/office-national-statistics-ons-and-welsh-government-joint-work-plan-coherence-welsh-language-statistics

[203] Welsh Government analysis of data obtained from the “Create a custom data set” service provided by the Office for National Statistics (Create a custom dataset - Office for National Statistics (ons.gov.uk))

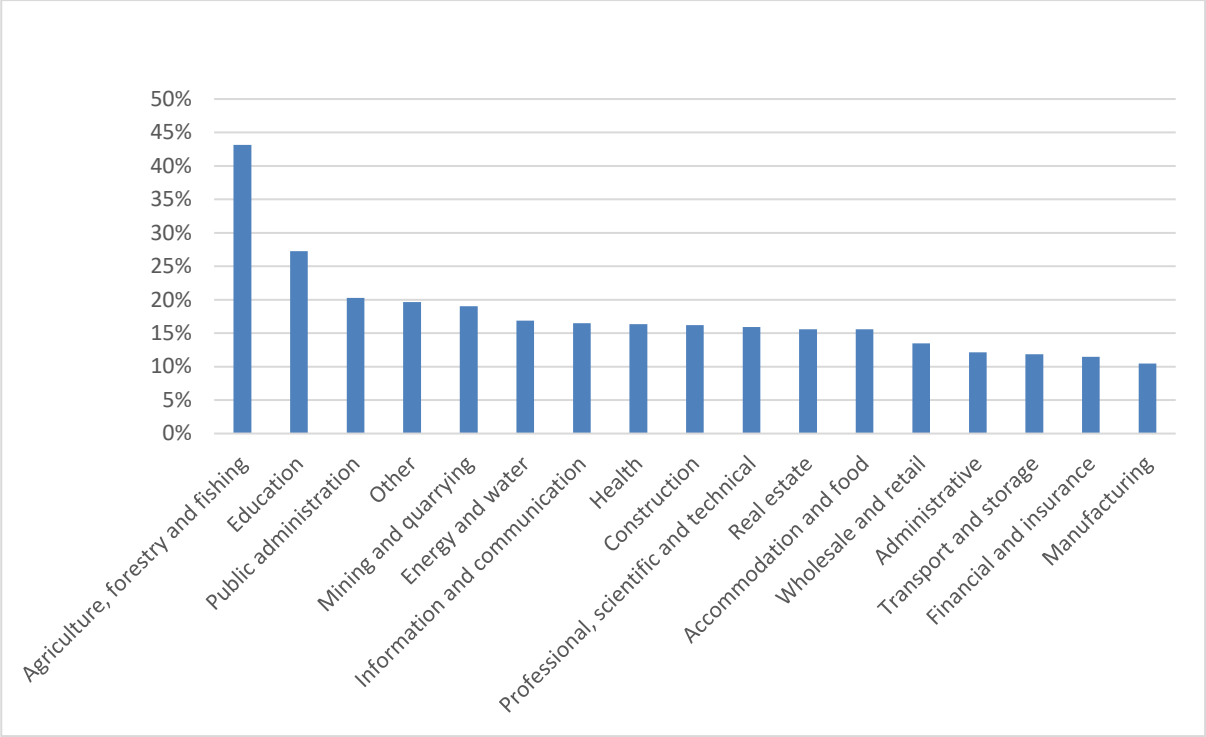
**Figure 3a. Number of workers who speak Welsh by industry (thousands)**




Source: Census 2021

'Other' includes Arts, entertainment and recreation, Other service activities, Activities of households as employers, and Activities of extraterritorial organisations and bodies

**Figure 3b. Percentage of workers who can speak Welsh by industry**

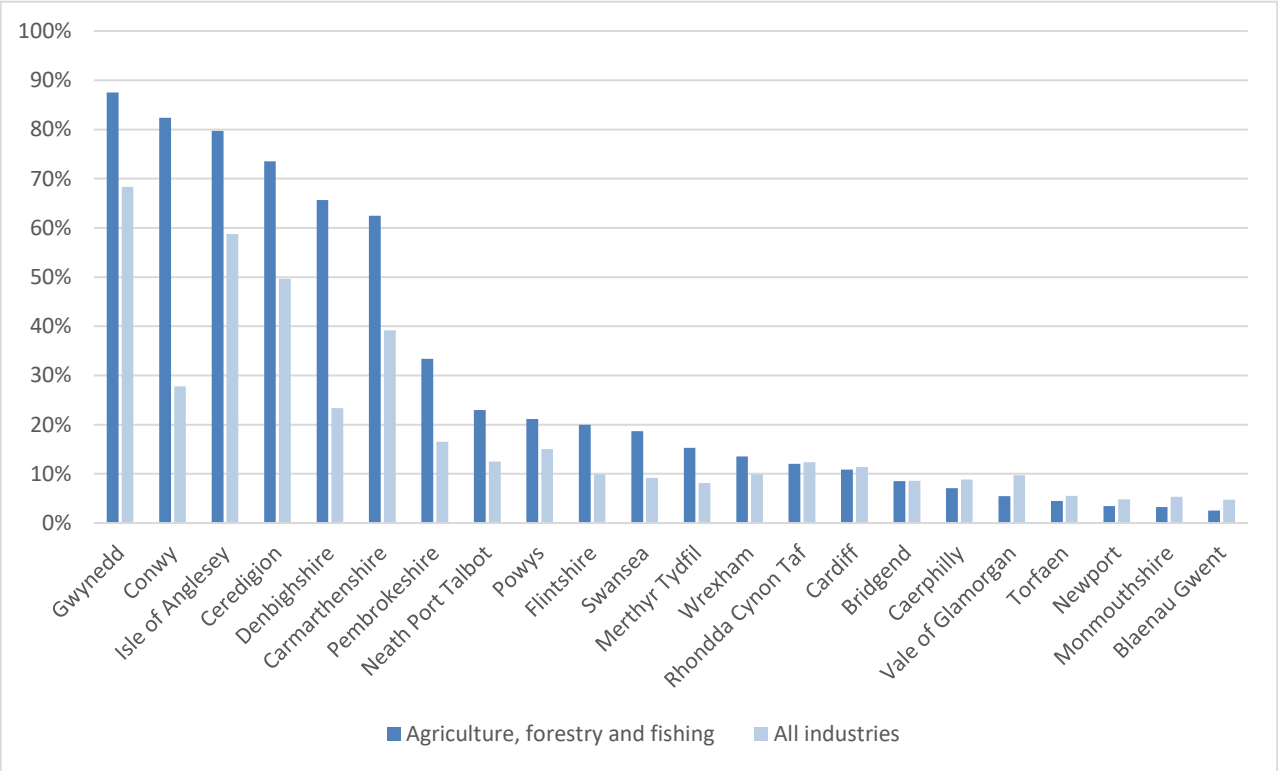



Source: Census 2021
'Other' includes Arts, entertainment and recreation, Other service activities, Activities of households as employers, and Activities of extraterritorial organisations and bodies

Looking across all local authorities, 88% of agriculture, forestry and fishing industry workers in Gwynedd speak Welsh, which is higher than the average across all industries in the county (68%). In Blaenau Gwent the proportion of Welsh speakers for agriculture, forestry and fishing is 3%, compared with an average of 5% speaking Welsh across all industries (Figure 4). There is also variation amongst more rural local authorities where agriculture is a prominent industry. For example, 21% of agriculture, forestry and fishing workers in Powys speak Welsh compared with 73% in Ceredigion. These more rural local authorities are, in many cases, the same areas which saw larger decreases in the general proportion of Welsh speakers between the 2011 and 2021 censuses (Figure 1a).

Higher shares of Welsh speakers within the agriculture, forestry and fishing industry are often found in rural local authorities that also have higher shares of Welsh speakers across the whole work force (Figure 4). However, there is a trend for the share of Welsh speakers within agriculture, forestry and fishing to be higher than the share for all workers in these local authorities. For example, Anglesey has a high share of the total workforce speaking Welsh (59%) but the share of agriculture, forestry and fishing industry workers speaking Welsh in the local authority is higher (80%). The difference is most pronounced in Conwy and Denbighshire, suggesting a higher relative importance of the industry for the Welsh language in these Local Authorities.

**Figure 4. Percentage of workers in Agriculture, forestry and fishing who can speak Welsh compared with All Industries, by Local Authority**




Source: Census 2021

The three themes of *Cymraeg 2050* are linked, and agriculture already has a high proportion of Welsh speakers relative to other industries. There is the potential, therefore, for greater use of Welsh in agriculture in an environment that has greater potential to provide favourable conditions for the language, compared with other industries. Conversely, any potential negative impacts of changes to the industry generally, such as the displacement of agricultural workers following farm business loss, could lead to negative impacts on the Welsh language through dispersal of Welsh speakers, reduced proportion of speakers in rural areas, a reduction in the everyday opportunities to use Welsh, or a combination of these factors.

**Favourable conditions for the use of Welsh**

Having Welsh language ability does not necessarily translate to using the language in the workplace, for a variety of reasons. The Welsh Government Report 'Welsh Language Needs on Eight Sectors'[204] examined the relationship between language ability, use, and employer needs across 8 sectors in Wales. It found:

[204] The Welsh Government, (2014) Welsh language needs skills in eight sectors. Project Number: 47/2014.

- 68% of agri-food businesses[205] (including agriculture) had staff with Welsh language skills compared with 66% of all businesses; the highest was childcare at 94%;
- 34% of agri-food staff in the surveyed businesses were reported to have Welsh language skills, compared with 24% of staff across all businesses; the highest was childcare at 66%;
- Advanced level ability was most likely to be reported for staff in agri-food and creative businesses, and agri-food staff had a high level of ability across all domains (reading, writing, speaking, understanding);
- In agri-food businesses, staff were using Welsh; 19% of businesses reported that staff had Welsh language ability but didn't use it, whereas across all businesses it was 31%;
- Where agri-food businesses were using Welsh, they used it for informal and formal purposes, both written and spoken. These businesses were also using Welsh to conduct business with external partners (clients, customers etc.). This was not so common in other sectors and suggests Welsh is being used normatively in many agri-food businesses with Welsh speaking staff.

These results provide evidence that agri-food businesses, including agriculture, in Wales are providing more favourable conditions for use of the Welsh language compared with other industries, and that this extends beyond interactions occurring within the business. For farms, interactions occurring outside of the business will include trade of animals, fodder, machinery etc. and a variety of other activities. For the 43% of farms[206] in Wales that have diversified into other areas (e.g. tourism), these business interactions may also be occurring in a wider range of businesses.

**Welsh, agriculture and the local community**

Results from the National Survey for Wales 2018-19[207] suggest Welsh speakers often feel they are part of strong communities; people who agreed that they felt a sense of belonging to their community were more likely to speak Welsh in everyday life compared with those that disagreed. A feeling of belonging is also likely to be associated with interactions with other members of the community, and these interactions may occur in Welsh.

In their report, *Farming – Bringing Wales Together*, National Farmers' Union (NFU) Cymru conclude that "*Welsh farmers are key promoters and protectors of Welsh culture, heritage and language*", given the high proportion of Welsh speakers in agriculture and the extent to which farmers contribute to their communities. The report emphasises that "…*many farmers or individuals involved with the agricultural industry undertake leadership and voluntary roles in rural communities which contribute to community cohesion*". Involvement in formal community networks and activities can be related to agriculture (e.g. technical groups, Young Farmers Clubs (YFCs), agricultural shows), or be unrelated (e.g. local council, church/chapel, sports clubs, community support groups, music and drama groups), while other networks will be less formal (friendships,

[205] Defined using Standard Industry Classification codes and includes production and manufacturing but excludes retail. Please refer to page 151 of the report for the list of codes.

[206] Welsh Government, (2019) Farm incomes in Wales, April 2018 to March 2019.

[207] Welsh Government, (2020) What factors are linked to people speaking the Welsh language? Social Research Number 27/2020.

chatting with neighbours). Through involvement in these networks, Welsh speaking agricultural workers and their families will be supporting the use of Welsh in a variety of settings.

**Welsh language and the Sustainable Farming Scheme**

Following the passing of the Agriculture (Wales) Act 2023 (the Act), Sustainable Land Management (SLM) is now the policy framework for agriculture in Wales. The Act also provides the necessary powers for a Sustainable Farming Scheme (SFS), within which farmers will be supported to deliver SLM. The SFS has been designed to support farmers in implementing actions which will deliver the Welsh Government's desired outcomes, which includes the sustainable production of food alongside environmental and social outcomes. The SFS is not intended to encourage large-scale land use change of whole farms, rather we aim to support SLM practice holistically, delivering all four of the SLM objectives within the Act, such that agricultural land is retained within the industry. It is a key principle of the SFS that farmers should be kept on the land. The SFS will provide a stable income stream for participating farms. In turn, a sustainable agricultural sector will provide employment opportunities for future generations and provide support to enable young people to remain in their communities.

Given the high proportion of Welsh speakers within the agriculture industry, changes to the structure of the agricultural sector have the potential to alter the contribution the sector has on the resilience of the Welsh language. This is particularly relevant if there is a change to the outward migration of Welsh speakers from rural areas as a result of the SFS, or the inward migration of non-Welsh speakers. These factors will depend, in part, on the economic impacts of the support provided through the SFS. The SFS will provide the principal mechanism through which the Welsh Government will give financial support to the agricultural sector. We have commissioned economic analysis and modelling to provide evidence as to how the proposed changes will impact different farm types and sizes across Wales. Further detail on the economic impact assessment can be found in Section 4.

The SFS is designed to support farmers to take action in tackling the climate and nature emergency in a way that is both beneficial for farm businesses and rural communities. This is in line with the Welsh Government's existing commitments, as laid out in the Well-being of Future Generations (Wales) Act 2015[208], which places a duty to consider both present and future generations, and our Carbon Budget, which states that the transition to net zero should be "fair and prosperous"[209]. Supporting and enabling farmers to produce food in a sustainable manner through the SFS will contribute to the aim of keeping farmers on their land in Wales and sustaining the Welsh language as a thriving language within the sector.

The SFS does not contain specific actions pertaining to the Welsh language within the Universal Layer, however, supporting the Welsh language within an agricultural context, both directly and indirectly, is set as an objective in the Agriculture (Wales) Act 2023. There is also an explicit purpose for support in the Act to sustain the Welsh language and promote and facilitate its use. As such, there may be scope to include actions within the Optional and Collaborative Layers of the

[208] https://www.futuregenerations.wales/wp-content/uploads/2017/02/150623-guide-to-the-fg-act-en.pdf

[209] https://gov.wales/sites/default/files/publications/2021-10/net-zero-wales-carbon-budget-2-2021-25.pdf

SFS that directly contribute to the health and vitality of the language within the agricultural industry, alongside those actions which do so indirectly.

Theme 3 of the *Cymraeg 2050* strategy places an emphasis on creating favourable conditions to protect the Welsh language and enable it to thrive, specifically with the aim of 'Supporting the socioeconomic infrastructure of Welsh-speaking communities'. Many areas with a high density of Welsh speakers are those with a higher proportion of the population employed in agriculture, the public sector and tourism. *Cymraeg 2050* notes that it is important to sustain and grow communities with a high density of Welsh speakers.

The SFS can therefore support and contribute towards *Cymraeg 2050* in a number of ways.

First, the SFS will reward farmers for undertaking actions in line with SLM, which will create a stable income stream for participating farms in rural communities. This income stream will be unaffected by changes in wider commodity markets and the trading environment and therefore help to create resilience for both farm businesses, including for agricultural tenants, and the wider community.

Resilient agricultural businesses contribute in creating employment for younger Welsh speakers both now and in the future, on-farm and in local businesses, therefore supporting the agricultural industry and wider rural communities. This well help retain people in Welsh speaking communities and reduce the need for young people to seek employment elsewhere, helping to address the issue of outward migration in relation to the health of the Welsh Language.

Second, the SFS will, through the framework of SLM, support farmers to manage their farms in a way that maintains and enhances the capability of agricultural land to support the needs of future generations. This will help to support the long-term resilience of rural, Welsh-speaking communities by ensuring that the land can continue to be farmed in the future.

Third, the SFS will see the continued provision of an advisory service to support farmers in regulatory compliance and scheme participation. This service could comprise of a mixture of delivery mechanisms, including on-farm visits by an advisor and peer-to-peer knowledge sharing opportunities. This advisory service will be provided bilingually, in line with the Welsh Language Standards and in support of *Cymraeg 2050.* This will give Welsh speakers the opportunity to use Welsh in the workplace, and more informally with peers, helping the use of Welsh to be part of everyday life.

In addition, the SFS will contain a Collaborative Layer which will encourage and provide opportunities for farmers to work together over larger areas. Getting involved in collaboration will provide opportunities for Welsh speaking farmers to work together, give new speakers the opportunity to work alongside native speakers and practice their language skills, and give non-Welsh speaking farmers exposure to the language in their day-to-day work. Applicants for previous and existing collaborative project funding are asked to demonstrate how their proposals will support and encourage use of the Welsh language, and we anticipate that SFS participants would be encouraged to do the same.

2. **Describe and explain the impact of the proposal on the Welsh language, and explain how you will address these impacts in order to improve outcomes for the Welsh language.**

## How will the proposal affect the sustainability of Welsh speaking communities (both positive and/or adverse effects)?

The primary impacts on Welsh speaking communities will come through the general provision of support to the agriculture industry, which has a particularly high proportion of Welsh speakers.

Research[210] on 'Small'[211] and 'Very Small'[212] farms in Wales provides some understanding of the role of Welsh farms in their communities. Between them, these Small and Very Small farms account for 87% of all farms in Wales.

Very Small farms account for 59% of Welsh farms, but a proportionally lower amount of standard output (5%) and land (15%). Small farms (28% of Welsh Farms) account for 22% of output and 45% of farmland.

The report describes the differences between Small and Very Small farms, with Small farms more likely to resemble a 'traditional' family farm and Very Small farms more likely to be considered a 'lifestyle farm'.

The research found that farmers on Small farms were more likely than those on Very Small farms to:

- Have previous experience of farming*
- Have inherited or taken over the family farm
- Be generating income from the farm to make a living*
- Be reliant on trade surplus and Basic Payment Scheme (BPS) payments for their living
- Be participating in an agri-environment or conservation scheme*
- Be able to speak Welsh fluently*
- Speak Welsh daily
- Speak Welsh in the home*
- Be involved in 'many' social or farming organisations
- Engage, collaborate and socialise with other farmers*
- Report feeling part of the farming and rural communities

*Indicates that the finding is statistically significant.[213]

Farmers on Very Small farms were more likely to have purchased their farm (a statistically significant finding), be involved in a 'few' social or farming organisations, and were twice as likely to be educated to degree level.

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[210] https://gov.wales/sites/default/files/publications/2021-08/understanding-farmer-motivations-very-small-small-farms-full-report.pdf

[211] Defined as farms with a standard output between €25,000 to €125,000

[212] Defined as farms with a standard output below €25,000

[213] The survey received 419 usable completed responses following initial contact with 1,916 individuals yielding a response rate of 21.9%.

The report also looks specifically at the difference between Welsh-speaking and non-Welsh-speaking farmers and found that Welsh speakers were more likely to feel part of the rural community and reported higher levels of involvement in social and farming organisations than those who did not speak Welsh. Welsh speakers were also more likely to have inherited their farm, with non-Welsh speakers more likely to have purchased it.

These findings make a valuable contribution to the evidence base on the position of Welsh farmers in their communities. They suggest that the farmers who are farming to make a living, and are more likely to be engaging with government support schemes, are also those who are more likely to be Welsh speakers, part of well-established farming families, and have higher levels of participation in their local communities. It is important to note that the study does not consider the characteristics of Medium, Large, or Very Large farms[214]. Given that these Small farms are more likely to be in receipt of BPS, then it follows that they will be more likely to be impacted by any changes to the support system, either positively or negatively. If farms are unable to continue trading, then there could be subsequent impacts for the local farming community, the local rural community, and the Welsh language, depending on what happens to the farm and the farming family in those circumstances.

A study on social capital in hill farming in Cumbria[215] noted that having fewer large farms in an area is substantially different to having lots of small farms, in terms of social capital and scope for collaborative efforts. It also noted the strong bonds of trust and casual agreements that have developed and been in place over many years and multiple generations (e.g. for collaboration and commons grazing arrangements). The evidence from Cumbria suggests that changes in the number and structure of farms can lead to the weakening of social capital and community cohesion; in Wales, this could also impact on the Welsh language and the sustainability of Welsh speaking communities.

The Welsh Government will promote the sustainability of farms through the SFS, supporting them to become more resilient to the challenges presented by climate change and changes in the trading environment. In addition, by producing food and managing their land in a sustainable way, farmers will help safeguard the future viability of farming in Wales, thus supporting the resilience of Welsh speaking communities.

In their report on the triple challenges of Brexit, Covid-19 and Climate Change, Public Health Wales[216] highlight that farmers, agricultural workers and those in rural communities may be disproportionately impacted by climate change through factors such as lost employment, reduced economic output and worsening working conditions due to extreme weather events. The SFS is designed to support farmers to take necessary action in the face of the climate emergency and build resilience to mitigate against the effects of climate change. This should, in turn, help support the sustainability of Welsh speaking rural communities.

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[214] Defined as farms with a standard output between €125,000 to €250,000, €250,000 to €500,000 and more than €500,000 respectively.

[215] https://www.researchgate.net/publication/312474569_Social_Capital_in_Hill_Farming

[216] https://phw.nhs.wales/publications/publications1/rising-to-the-triple-challenge-of-brexit-covid-19-and-climate-change-for-health-well-being-and-equity-in-wales/

The SFS is has been designed on the principle it should be available to different types of farm, including tenant farms. We are considering how we can structure payments, e.g. through capping, to ensure fair distribution in funding. There will also be a period of transition between the current system of support and the proposed SFS to allow farms to adjust and to ensure no farmer experiences a sudden cessation of their current Basic Payment Scheme payments, regardless of whether or not they choose to join the SFS.

### How will the proposal affect Welsh medium education and Welsh learners of all ages, including adults (both positive and/or adverse effects)?

There are no direct impacts on education arising from the SFS. The SFS will support continued professional development, by setting a minimum number of hours as a specific Universal Action.

Also, by maintaining a thriving agricultural industry, it provides opportunities for Welsh learners of all ages to use the language and develop their Welsh language skills within an industry where Welsh is used in many areas as the main language of communication. This contributes toward the *Cymraeg 2050* goal of creating favourable conditions for the Welsh language; a benefit to fluent speakers and learners alike.

As is currently the case through Farming Connect (the current Welsh Government Knowledge Transfer and Innovation Programme) there will be a variety of training opportunities available within and alongside the SFS to those working in agriculture, which will be delivered bilingually, in line with the Welsh Language Standards. Bilingual courses and learning material will provide opportunities for learners to immerse themselves in the Welsh language, and become familiar with industry-specific terminology, which may encourage them to use Welsh more frequently in the course of their work.

3. Describe and explain the impact of the proposal on the Welsh language, and explain how you will address these impacts in order to improve outcomes for the Welsh language.

### How will the proposal affect services available in Welsh (both positive and/or adverse effects)? (e.g. health and social services, transport, housing, digital, youth, infrastructure, environment, local government etc.)

The SFS will include provision of an advisory service, tailored to supporting the delivery of Sustainable Land Management. This service will be delivered bilingually, in line with the Welsh Language Standards.

Farming Connect is in regular contact with a large proportion of Welsh farmers through its newsletters, knowledge transfer events and face to face support. The service provided via Farming Connect already hosts events and activities delivered in Welsh as the predominant language, which will continue to be a feature of the advisory service in the SFS.

### How will you ensure that people know about services that are available in Welsh and are able to access and use them as easily as they can in English? What evidence / data have you used to inform your assessment, including evidence from Welsh speakers or Welsh language interest groups?

All details in relation to SFS will be available bilingually. In dealing with farmers through Rural Payments Wales online, 7.51% of contacts have requested communications in Welsh, however this does not reflect the level of engagement in Welsh; with many who have requested correspondence in English reverting to Welsh when having face to face or telephone conversations.

In their response to our previous consultation, *Sustainable Farming and Our Land*, the Welsh Language Commissioner reported hearing anecdotal evidence that written material in Welsh is not as accessible as equivalent material in English. It may also be the case that a lack of Welsh language options in the past has resulted in farmers having grown accustomed to conducting the paperwork aspect of their business in English, and simply requesting English correspondence by default. As we continue to develop the administrative aspects of delivering the SFS and associated support services, we will consider what can be done to ensure that Welsh language material is written in a style that reflects everyday speech and vocabulary. Encouraging Welsh speakers (and learners who feel able) to take up Welsh language correspondence options would contribute towards *Cymraeg 2050* by increasing the number of people using Welsh in their everyday lives.

### What other evidence would help you to conduct a better assessment?

To date, three consultations (*Brexit and our Land, Sustainable Farming and our Land*, and the Agriculture (Wales) White Paper) have been completed on the future of agricultural support in Wales. Respondents were asked to consider the impact of our proposals on the Welsh Language.

*Brexit and our Land* (2018) received 12,203 responses, 1,043 of which were substantive. Of these responses, a dominant view was that without a thriving agricultural sector rural communities would struggle to sustain themselves and that the Welsh language would suffer considerably. Respondents also emphasised that the *Cymraeg 2050* vision would only be achieved with a thriving rural economy.

*Sustainable Farming and our Land* (2019) received 3,322 responses, of which 508 were substantive. As with *Brexit and our Land*, respondents were clear that a strong rural economy was vital for the Welsh language, and that agriculture is a crucial part of rural communities. Concern was noted therefore that anything which alters the structure of the agriculture sector has the potential to impact on the Welsh language.

In total, 1,119 responses were received over the course of the Agriculture (Wales) White Paper consultation, which also asked respondents to comment on the first draft of the Integrated Impact Assessments. This included 232 responses from individuals and organisations, and a further 887 submitted through a campaign organised by the League Against Cruel Sports. Respondents expressed similar sentiments to the previous two consolations with regard to the Welsh Language, and some offered suggestions on how the proposals could support Welsh language usage, including through encouraging greater bilingualism and the importance of using Welsh more routinely in Welsh Government and across departments.

The Farming Connect report *Iaith y Pridd (The Language of the Land)*[217] asked members of the farming community 'How can agriculture contribute to the aim of reaching a target of a million Welsh speakers by 2050?'. Six themes were raised, of which two are directly relevant to the Agriculture (Wales) Act 2023 and our subsequent proposals for the SFS:

- The subsidies system – respondents emphasised that payments supporting the family farm enable families to stay in rural areas, which in turn supports the Welsh language;
- Supporting activity on the land – the view was expressed that a move away from active agricultural management of the land would reduce activity in the wider rural economy which in turn lead to a decline in of the Welsh language.

The Sustainable Farming Scheme will reward active management of the land. This will help to support farm businesses, the wider economy and helping to sustain resilient Welsh speaking rural communities. In addition, it is a key principle of the SFS that farmers should be kept on the land as reflected in the strategic objectives of the Act.

We have engaged in a programme of co-design with farmers and other land managers in our consideration SFS. This has helped us to understand potential unintended consequences with regard to the Welsh language. All co-design work was undertaken bilingually, and participants were able to engage in Welsh if they preferred.[218] In the first phase of co-design, participants were asked to provide feedback on the scheme's potential impact on the Welsh language and a summary of the responses can be found in section 8.5 of the report[219]. Responses were mainly focussed on the potential impacts on smaller farms, and respondents expressed both optimism around positive opportunities within the SFS and concern in relation to potential negative consequences. The second phase of co-design was centred on the specific actions proposed for the SFS[220]. A stakeholder feedback form was available for organisations and other individuals to contribute their views on the outline scheme proposals, and a desire for greater detail regarding practical support for Welsh speakers in the SFS was raised through this mechanism[221].

Analytical work is continually being carried out to estimate the economic impact of the SFS at the farm business, sector and regional levels. The results of this work will inform the assessment of the potential positive and negative impacts of the proposed SFS on rural communities, and therefore the Welsh language. It will allow us to identify any potential negative impacts and take action to

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[217] Farming Connect (2020). Iaith y Pridd Report. https://businesswales.gov.wales/farmingconnect/news-and-events/reports/iaith-y-pridd-report-22092020

[218] In the both phases of co-design, participants were able to complete the surveys and participate in one-to-one discussions in either English or Welsh, a proportion of the group sessions were conducted in Welsh with the remainder undertaken in English but including Welsh speakers. This equated to 8 workshops out of 28 in Phase 1 and 4 workshops out of 17 in Phase 2.

[219] https://www.gov.wales/sites/default/files/publications/2021-09/sustainable-farming-scheme-co-design-future-farming_0.pdf

[220] https://www.gov.wales/sites/default/files/publications/2023-07/sustainable-farming-scheme-co-design-final-report.pdf

[221] https://www.gov.wales/sites/default/files/publications/2023-07/sustainable-farming-scheme-analysis-of-feedback-to-the-outline-scheme.pdf

mitigate them where necessary. We have published economic analysis of the SFS Universal Actions, using illustrative payments, alongside the consultation.

This impact assessment is kept under active review as our policy proposals for the SFS, and the underpinning evidence, is developed.

## How will you know if your policy is a success?

As is currently the case with agricultural schemes, the SFS will be subject to formal monitoring and evaluation to help Welsh Government establish the impact of the scheme and guide any changes that may need to be made in the future.

Early evaluation of the SFS will focus on topics such as scheme uptake and participation, and allow us to explore potential barriers, including those related to language.

# F. BIODIVERSITY IMPACT ASSESSMENT

The terrestrial habitats of Wales are rich in biodiversity and home to several native species not found anywhere else in the UK or, in some instances, the rest of the world.

As the Wales Biodiversity Partnership (WBP) contends, biodiversity 'underpins our lives and livelihoods and supports the functioning and resilience of ecosystems in oceans, wetlands, lakes, rivers, mountains, forests and agricultural landscapes'.[222] Furthermore, 'our economy, health and well-being depends on healthy, resilient ecosystems, which provide us with our food, clean water and air, the raw materials and energy for our industries and protect us against hazards, such as flooding and climate change.[223]

However, as with the other UK nations, biodiversity in Wales is in a state of decline and degradation. The latest *State of Nature: Wales* report contends that the Nation's downward trend of biodiversity loss and decline makes it 'one of the most nature-depleted countries on Earth.'[224]

Some of the key pressures that lead to habitat and species loss, identified by the UK National Ecosystems Assessment[225] and the State of Nature Report 2023,[226] have been attributed to:

- Unsustainable agricultural land management
- Urbanisation
- Pollution
- Climate change
- Invasive non-native species

As approximately 90% of Welsh land is agricultural, the farming sector can play a central role to help reverse the decline of, and enhance, the country's biodiversity.

The Welsh Government is committed to improving the biodiversity of Wales. Recent policies and acts reflect this goal, together with our commitment to tackling the nature and climate emergencies. For instance:

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[222] Wales Biodiversity Partnership, (2023) Biodiversity in Wales, [online] available at: https://www.biodiversitywales.org.uk/Biodiversity-in-Wales

[223] Ibid.

[224] State of Nature, (2023) *State of Nature: Wales*, available at: https://stateofnature.org.uk/wp-content/uploads/2023/09/TP26053-SoN-Wales-summary-report-v10.pdf

[225] UK National Ecosystem Assessment (2011) The UK National Ecosystem Assessment: Synthesis of the Key Findings. UNEP-WCMC, Cambridge, available at: http://uknea.unep-wcmc.org/Home/tabid/38/Default.aspx

[226] State of Nature, (2023) *State of Nature*, available at: https://stateofnature.org.uk/wp-content/uploads/2023/09/TP25999-State-of-Nature-main-report_2023_FULL-DOC-v12.pdf

- The Well-being of Future Generations (Wales) Act 2015 contains the 'Resilient Wales' goal, which aims for Wales to be 'A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change).'[227]

- The Welsh Government's Nature Recovery Action Plan states our ambition to reverse the decline in biodiversity. It sets out how the Welsh Government will deliver the commitments of the UN Convention on Biological Diversity's (CBD) Strategic Plan for Biodiversity and the associated Aichi Biodiversity Targets,[228] to halt the decline in our biodiversity by 2020 and then reverse that decline.

- The 2021 Programme for Government committed to 'embed our response to the climate and nature emergency in everything we do.'[229]

- The Welsh Government has committed to meet the UN's CBD target to restore 30% of land, freshwater, and sea by 2030 (the '30 by 30' initiative).[230] Given the amount of land the agriculture industry manages, a significant opportunity exists for farming to contribute towards delivering this target.

- The Agriculture (Wales) Act 2023 has set the objective to maintain and enhance the resilience of ecosystems and the benefits they provide, as one of the Sustainable Land Management (SLM) objectives.

These acts, plans, and policies have prepared the ground for the Sustainable Farming Scheme (SFS), which is intended to support several positive environmental outcomes under the SLM objectives. In relation to biodiversity, the SFS intends to deliver against the SLM objective of 'increasing the resilience of ecosystems', but in many cases other actions and outcomes within the SFS are expected to also positively impact biodiversity, e.g., improving air and water quality, and reducing green-house gas (GHG) emissions.

The SFS has been designed to align with the Welsh Government's commitments to maintain and enhance biodiversity in the exercise of functions in relation to Wales, as set out in the Environment (Wales) Act 2016.

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[227] Welsh Government, (2015) *The Well-being of Future Generations (Wales) Act 2015: The Essentials,* [online] available at: https://www.gov.wales/sites/default/files/pdf-versions/2023/7/2/1688462036/well-being-future-generations-act-essentials.pdf

228 The Convention of Biological Diversity (CBD) and the associated Aichi Biodiversity Targets, for the 2011-2020 period, provides an overarching framework on biodiversity for countries part of the United Nations.

[229] Welsh Government (2022) *Programme for government: Update,* available at: https://gov.wales/sites/default/files/publications/2022-01/programme-for-government-update-december-2021.pdf

[230] '30 by 30' refers to protecting and effectively managing at least 30% of our land, freshwater, and sea for nature by 2030. It is one of a number of targets which form part of a Global Biodiversity Framework (GBF) agreed at COP15.

## Embedding Biodiversity

### 1. How will your proposal integrate biodiversity into decision making?

The Agriculture (Wales) Act 2023 (the Act) explicitly addresses the need to maintain and enhance levels of ecosystem resilience, of which biodiversity is a fundamental component. Ecosystem resilience consists of:

- Diversity: both within and between species, and within and between ecosystems
- Extent: areas large enough to sustain populations, support ecological processes and cope with pressures such as predation and the risks associated with climate change.
- Condition: impacts and pressures managed so the environment can support a range of organisms and healthy populations.
- Connectivity: organisms and populations able to move within and between ecosystems.
- Adaptability: ability of ecosystems to adapt to change.

The Act requires Ministers to provide support and regulate for agriculture in a way they consider best contributes to achieving the SLM objectives, which includes the objective to maintain and enhance ecosystem resilience. This will embed biodiversity into Government decision making.

The SFS has been designed to deliver SLM outcomes, which includes 'increasing the resilience of ecosystems.' Biodiversity has therefore been a foundational component of the SFS design from its early stages. The SFS Actions, in all layers of the scheme, which aim to deliver other SLM outcomes will also, in many cases, positively impact biodiversity, and vice versa. The SFS positive outcomes can be expected to have cascading environmental benefits, because of the interdependence of habitats and ecosystems.

For example, mitigating flood and drought risk could be achieved through the UA of creating new woodland habitats, which would be able to slow the flow of water. Likewise, establishing a riparian area (e.g., shrubs and trees along watercourses) to improve water quality will also enhance woodland habitat and protect aquatic habitat.

### 2. Have you considered the impacts and positive opportunities for action for biodiversity at the early stages of thinking or project design?

The SFS aims to integrate positive action for biodiversity at the farm business level. The SFS will enable funding, training, and advisory support to be provided to farms to deliver the outcomes we are seeking, including the maintenance and enhancement of ecosystem resilience alongside sustainable food production.

The requirements for the SFS Universal Layer will necessitate all participating farms to manage 10% of their land to benefit biodiversity. Farmers will be supported to undertake a Level 1 Habitat Baseline Review (HBR1) process (an environmental assessment), which will help them identify and capture all habitat types that should be managed to improve biodiversity. It will also identify the need for additional temporary habitat, where the required 10% threshold has not been met. .

Additionally, a voluntary HBR Level 2 (HBR2) is also being proposed to support the adoption of Optional Actions (OAs) on participating farms. Such OAs would be more complex, targeted, and tailored to each individual holding, and would be supported by technical advisors, and may include actions that could:

- Enhance the condition and quality of semi-natural habitat.
- Identify suitable areas for either creating, or reverting to, habitat.
- Identify species poor marginal areas where woodland creation would be most suitable.
- Act as a signposting and decision-making advisory service to guide and support the farmer in the design and delivery of wider actions tailored to their farms' characteristics and business circumstances.

### 3. What impacts will procurement have on biodiversity, including global biodiversity?

Entrants to the SFS will be financially rewarded for the Universal and Optional Actions suitable to undertake on their particular holding. As many of these actions would deliver outcomes which would directly benefit biodiversity, we can expect the delivery of the SFS to have positive impacts on biodiversity in Wales.

It is also recognised that Wales is internationally important for global biodiversity, particularly for its seabird colonies off Pembrokeshire, Anglesey, and the Llŷn Peninsula.[231] 11% of Wales's land area (including freshwater and coastal areas to high watermark) is also, taken together, designated as Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar sites and National Nature Reserves (NNRs).[232] Whilst the SFS can be expected to deliver the greatest positive impacts for terrestrial habitats, which will include improvements to, and conservation of such areas, it may be argued that all positive environmental outcomes will have benefits for all our country's native and migratory species.

For all participants, the SFS will provide payment for actions that will contribute towards the maintenance and enhancement of the resilience of ecosystems, which will in the long-term directly deliver benefits for biodiversity, species, and habitats.

Such actions will deliver the SLM objective of enhancing the resilience of ecosystems, which in turn will contribute to the additional objectives of mitigating and adapting to climate change, as well as conserving and enhancing the countryside and cultural resources, and the sustainable production of food. These outcomes of the SFS are interdependent and can be expected to have cascading positive impacts for the environment and biodiversity.

### 4. Are products sourced sustainably?

[231] State of Nature, (2023) *State of Nature: Wales*, p.9.

[232] Ibid., p.30.

The SFS is underpinned by the principle of Sustainable Land Management. Part of this is supporting farms to become more resilient, enabling them to farm within a competitive and changing world whilst operating within the natural capacity of their land. In turn this will ensure the sustainable production of food, now and over the longer term.

The SFS will also support farmers to enhance and manage their woodlands. Woodland management can provide a number of positive environmental benefits such as enhancing habitats, but it can also directly benefit the farm business, providing shade and shelter for livestock and protecting crops from extreme weather. Moreover, woodlands can offer the opportunity for growing timber to sequester carbon. A significant economic benefit of managing woodland would be the production of sustainable and responsibly produced timber and wood fuel.

## 5. Does your project include the use of materials or practices harmful to biodiversity?

The SFS is designed to support the sustainable management of resources in a way which retains and enhances biodiversity. The initial HBR process and UAs are intended to raise the environmental baseline across Wales by supporting farmers to consider and adopt practices of benefit to biodiversity and appropriate to their farm business.

However, the UA in relation to tree cover and planting could have the potential to harm certain habitats if not managed correctly. For example, a link has been identified between the decline of curlews and the loss of habitat in relation to agricultural intensification and woodland creation and expansion.[233] The curlew is currently in a state of rapid decline across Wales, the UK, and the EU (see figure, below).

[233] For more information, see: Wilson, J.D., et al., (2014) 'Modelling edge effects of mature forest plantations on peatland waders informs landscape-scale conservation', *Journal of Applied Ecology*, 51:204-213; Franks, S.E., et al., (2017). Environmental correlates of breeding abundance and population change of Eurasian Curlew *Numenius arquata* in Britain. *Bird Study*, 64**:**393-409; Pálsdóttir, A.E., et al., (2022) 'Subarctic afforestation: Effects of forest plantations on ground-nesting birds in lowland Iceland', *Journal of Applied Ecology*.

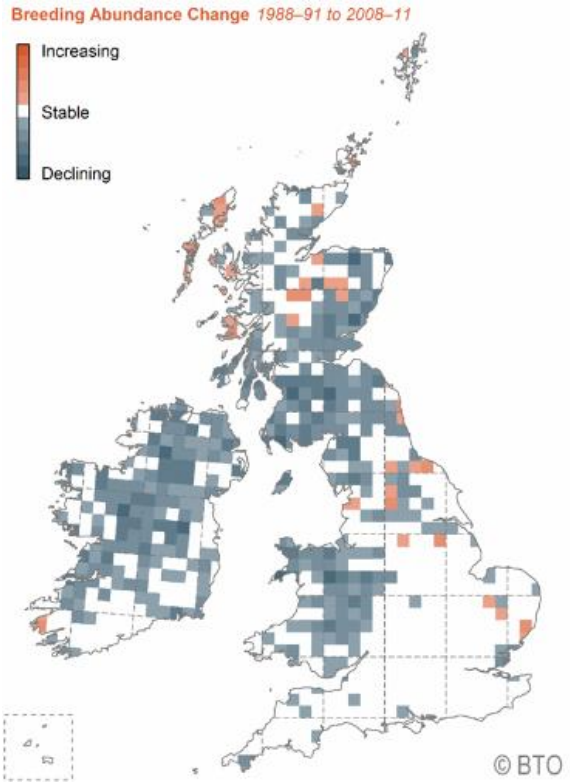


**Figure 1: Map from the latest BTO Bird Atlas showing change in abundance of breeding curlew across the UK.[234]**

As curlew are ground-nesting birds, they depend on specially selected habitat for nesting, incubating, rearing chicks, and avoiding predators.[235] If afforestation occurs in, or near, open landscapes where there were previously little or no trees, changes in habitat can make it unsuitable for them.[236] Moreover, curlew are typically site-faithful, which means that breeding pairs will usually return to the same nesting areas every spring; as such, long-term habitat management is a crucially important factor to halt or reverse their decline.[237]

Consequently, changes to habitat such as afforestation through the SFS will need to be carefully managed and considered through the HBR process and will have certain exclusions such as where

[234] Balmer, D., et al., (2013) *Bird Atlas 2007–11: the breeding and wintering birds of Britain and Ireland*. British Trust for Ornithology (BTO) Books. Thetford, UK.

[235] Brown, D., (2015) *International Single Species Action Plan for the Conservation of the Eurasian Curlew. AEWA Technical Series No. 58*, Bonn: Germany.

[236] Douglas, D.J.T., et al., (2014) 'Upland land use predicts population decline in a globally near-threatened wader', *Journal of Applied Ecology*, 51:194–203**.**

[237] Brewin, J., (2017) *Conserving the Curlew*, Game & Wildlife Conservation Trust, Fordingbridge: Hampshire.

there are priority habitats (see section 7 of the Environment [Wales] Act 2017). One of these exclusions will include the potential habitat for open-ground dependent birds, such as the curlew.

Furthermore, any tree planting and maintenance will require eligible land to be managed in line with the UK forestry standard.

## 6. Does it require partners and beneficiaries to consider the impacts and opportunities for positive action for biodiversity at the early stages of thinking and project design?

As noted above, the requirements to enter the SFS Universal layer include the management of 10% of land for the benefit of biodiversity. From day one of the SFS, therefore, all participants will be required to not only consider, but directly work towards creating positive impacts and action for biodiversity.

As previously discussed, all participating farms will be required to undertake a HBR process, which will identify and capture all semi-natural habitat, tree and woodland cover, historic features, and potential eligible hedges, etc., present on day one of the SFS. This will facilitate the calculation of likely payment through the Universal layer and direct farmers towards the actions they will need to take to improve habitat and biodiversity.

The mandatory (Level 1) remote HBR would essentially form part of the initial administrative application process, which would assess entrants' eligibility, payment calculation, and their required land management UAs. However, an Optional (Level 2) HBR would include more complex land management actions, tailored to each particular holding, supported by on-farm technical adviser assistance. The review will be carried out by individual advisers who:

- Can competently carry out grassland ecology habitat surveying.
- Possess sufficient understanding of agriculture, its operations, and motivations.
- Can advise, guide, and motivate the farmer to make appropriate decisions for the business and environment's benefit.

The HBR1 review would therefore act as the basis for considering specific Optional layer habitat management actions which could be delivered to enhance the condition and quality of existing semi-natural habitat, as well as identifying optimum areas suitable for creating/reverting to habitat. Furthermore, it could also assist (where appropriate) in the identification of species poor marginal areas where woodland creation would be most suitable and appropriate to deliver an integrated approach. Moreover, it could act as a signposting and decision-making advisory service to guide and support the farmer in the design and delivery of wider actions tailored to their farms' characteristics and business circumstances which should result in the desired outcomes at all levels.

## 7. Is the consideration of biodiversity a requirement of funding applications and project specifications?

The consideration of biodiversity is an essential requirement of the SFS. Part of the baseline requirements for entering the SFS determine that all habitat is to be retained and maintained as part of the Universal Layer of the SFS, which all farms must meet in order to receive any funding.

As outlined in the previous section, the HBR1 will need to be undertaken by all prospective participants as part of the SFS application process. This will determine the UAs, and potential OAs, that participating farms either need, or can voluntarily choose, to undertake in order to be financially rewarded for land management practices that will directly benefit habitat and biodiversity.

**8. Does your evaluation of these seek to ensure that biodiversity is maintained and enhanced?**

The SFS has been designed to provide support for agriculture in a way that best contributes to achieving SLM objectives, including the objective to 'maintain and enhance ecosystem resilience.' This has embedded biodiversity into the Government support mechanism within the SFS.

As previously discussed, farmers will need to actively manage at least 10% of their land to maintain and enhance semi-natural habitats.

This will be achieved primarily through the retention and maintenance of existing semi-natural grassland habitats, but where insufficient to meet the 10% threshold, this can be supplemented with existing broadleaved woodland and/or hedgerows in good condition. However, where there is still insufficient semi-natural habitat available, farmers will need to select actions to create temporary habitat features on other agricultural land.

Farmers with more than 10% semi-natural grassland habitat will be required to bring it all into management to retain and maintain it under the Universal layer and be financially rewarded for doing so.

This is also reflected in the woodland requirements of all farmers must have at least 10% tree cover on eligible land on their farm and must bring it all into management to retain and maintain it under the universal layer.

Furthermore, farmers will also be incentivised and rewarded for restoring and managing existing wildlife ponds and/or establishing a number of temporary ponds (scrapes) as appropriate on their farm. The area utilised/committed through this universal action will be eligible to contribute towards the 10% minimum area managed to benefit biodiversity requirement.

**9. Has your proposal ensured biodiversity is accounted for in business decisions?**

The SFS has been designed for integration at farm business level. This will enable farms to access funding, training, and advisory support to deliver SLM outcomes, which include the maintenance and enhancement of ecosystem resilience alongside sustainable food production.

From the outset, farmers will be able to assess the likely level of financial incentives and support available through joining the SFS, and review against independent options they may otherwise consider. The SFS will financially reward participating farms to take actions that would directly benefit the maintenance, management, and enhancement of biodiversity.

For instance, farms would be rewarded under the Universal layer of the SFS to bring existing trees and farm woodlands on their holdings, into management. Crucially, this means farmers will be paid to manage existing woodland. Furthermore, they would also be supported to integrate more trees into their farming system and manage existing woodland to benefit their farm, the environment, and wider society. Some of these benefits would include:

- Support to protect our irreplaceable ancient and veteran woodlands, which are important for biodiversity and our heritage.
- Improving air quality by capturing ammonia emissions from livestock housing and slurry stores or buffering sensitive sites such as ancient woodlands from ammonia.
- Enhancing and protecting biodiversity by creating and linking up habitats.
- Improving animal welfare by offering shade and shelter for livestock and biosecurity by thickening farm boundaries with wider hedges and tree planting.
- Lowering the risk of flooding by slowing the flow of water.
- Improving water quality by breaking up surface run-of, improving soil stability and lowering nutrient pollution.
- Offering recreation opportunities by allowing the public to access them.

Participating farms may also be supported, through the SFS Optional and Collaborative layers, to undertake and be financially rewarded for actions that would benefit biodiversity, habitat management, and sustainable production. For instance, these potential support options may include the management of woodland habitat to grow timber to sequester carbon or produce sustainable and responsibly produced timber and wood fuel; and/or further collaborative projects in which farm businesses could manage their woodland collectively for potential actions that would benefit habitat, sustainability, and biodiversity.

Furthermore, at the farm business level, many of the SFS actions could deliver cost savings to the farm business (e.g., nutrient management planning leading to a reduction in inputs) as well as biodiversity benefits. For those actions which may not achieve direct cost savings, the ability to provide financial support for them to be undertaken will further support action for biodiversity. In combination, this will support farms to build biodiversity into business planning.

**10. Has it considered whole of life costs which include the value of biodiversity and natural resources within the cost benefit analysis, even if this is an informal process?**

Outputs from the Environment and Rural Affairs Monitoring & Modelling Programme (ERAMMP) Integrated Modelling Platform (IMP) have informed design of the SFS. The IMP considers long-term environmental outcomes arising from policy interventions. An overview of the economic impacts of the SFS is provided in Section 4, and in advance of a final decision being made with respect the SFS, we intend to conduct a more detailed analysis of the costs and benefits, with

consideration given to the value of environmental outcomes where possible.

**11. Have you thought about how enhancing biodiversity can help deliver across WG's activities for example, to support active recreation, education, flood prevention, and local food growing. (For example, green roofs help to provide wildlife habitats, reduce energy consumption and improve drainage systems.)**

The resilience elements of the SFS can support biodiversity, whilst simultaneously delivering other SLM outcomes. For example, as outlined above, the creation of new woodland habitats would benefit biodiversity, and also mitigate against flood and drought risk, improve water and air quality, improve animal welfare, and may in some instances also offer recreation possibilities for the public through improved access to nature. Similarly, establishing a riparian area (e.g., shrubs and trees along watercourses) to improve water quality will also enhance woodland and protect aquatic habitats.

Farmers will be signposted to implement suitable woodland management plans in order to manage their woodlands in line with the SFS UA requirements. This will encourage them to actively manage their woodlands through a targeted approach to deliver against any objectives the farmer may be able to achieve through management.

Information and signposting will also be available on Farming Connect for those looking to diversify into timber production, carbon storage, recreation etc. For instance, opportunities to enhance woodland to become part of the National Forest network can offer enhanced environments for community well-being recreation and the other multilevel benefits it offers.

**12. Has it considered the long-term costs of degradation of biodiversity and natural resources, and the potential for savings for health and well-being, flood risk etc?**

The SFS requires entrants to meet legal regulatory standards and to deliver against the UAs within the SFS. Together these set a baseline designed to, at a minimum, retain and maintain the current/existing habitat/biodiversity level.

The UAs are designed to financially recompense and incentivise farmers within the SFS to manage existing, and potentially develop new, habitat types on their holdings and ensure the degradation of biodiversity and natural resources does not occur.

Some farms may also contain habitats that include protected designated sites, which require special conservation. Such sites play a vital role in reversing biodiversity decline, and when well managed can deliver many of the desired SLM outcomes and ecosystem services that are crucial to achieve our policy commitments and ambitions.

One of these protected habitats includes peatlands, which are amongst the most carbon-rich ecosystems on Earth. In a natural condition, peatlands have a net cooling effect on climate, reduce flood risk, and support biodiversity. Healthy peatlands can reduce flood risk by slowing the flow of water from the uplands, and by providing floodplain storage in the lowlands. They also provide important nesting and feeding grounds for many wading birds, as well as important habitats for rare

insects and plants. Due to the unique flora and fauna they support, and their global rarity, blanket bogs have sometimes been referred to as the 'rainforests' of the UK.

Wales holds approximately 82,000 ha of peatland, but only 10% are deemed to be in a favourable condition.[238] The most up-to-date rate of restoration of peatland within Wales, is at 760 ha, between 2020 to 2022.[239] This restoration has so far been accomplished through the Wales National Peatland Action Programme (NPAP); however, the SFS has also been designed to assist with this and aims to have peatland and other special designated sites under the management of participating farms by 2030.

Management of special designated sites through the Universal and Optional layers of the SFS has the potential to improve biodiversity, mitigate climate change, and reverse habitat degradation.

**13. Can it encourage partners and beneficiaries to take these costs and savings into account?**

At the farm business level, actions within the SFS are targeted at delivering SLM, which can simultaneously deliver cost savings to the farm business (e.g., nutrient management planning leading to a reduction in inputs, healthier livestock, improved soil health and higher yields, etc.) whilst simultaneously delivering biodiversity benefits. For those actions which may not achieve direct cost savings, the SFS will offer direct financial support for actions to be undertaken further supporting action for biodiversity.

As already outlined, entry into the SFS will require undertaking an HBR, which will consider elements such as habitat assessment and woodland review. This information will help give farmers a whole site baseline for their farms on entry into the SFS, allowing for individual costs and savings to be considered at the outset and at the end of the contract period.

Farms participating in the SFS will also be required to undertake, as a minimum, self-assessment once a year against a standard set of Key Performance Indicators (KPIs). By regularly measuring their performance, farms would be able to compare themselves against their own past performance and the performance of their peers. This would allow them to identify where improvements can be made to lower their costs and become more sustainable by making better use of their resources. It is expected that the adoption of basic benchmarking using KPIs could lead to a step change in farm performance, increasing a farms' ability to adapt to change and improve their impact on the environment, leading to a more prosperous and resilient industry. Some of the key benefits of benchmarking through KPIs, are expected to include:

- A better understanding of how farm business is performing, allowing them to drill down further if they want to and go on to improve their performance.

[238] State of Nature, (2023) *State of Nature: Wales*, p.34.

[239] Ibid.

- Allow farmers to understand, and evidence, the impacts of the changes they are making on the ground.
- Enable farmers to make more sustainable decisions and lower their carbon footprint, linking to other SFS actions like animal health improvements or making better use of grass.

## How does your proposal improve understanding and raise awareness of the importance of biodiversity, encouraging others to act?

### 14. Can you work with partners and beneficiaries to promote understanding of biodiversity?

Setting 'maintaining and enhancing the resilience of ecosystems' as one of the SLM outcomes in the Agriculture (Wales) Act 2023, has enabled Welsh Government to directly fund initiatives supporting biodiversity in line with the Nature Recovery Action Plan. This includes the ability to support specialist training and Continued Professional Development (CPD) on biodiversity for farm businesses.

The HBR will support farmers to identify and review the farm's current land use practices and on-site habitats and recommend actions to ensure habitats are retained and maintained as well as potentially offering suggestions for areas where improvements can be made.

### 15. Can you promote the benefits of access to biodiversity through the delivery of public goods and services such as social care, community development, health and recreation?

The intention of the SFS is to provide benefits to biodiversity and ecosystems in Wales by supporting farms to undertake actions which deliver SLM outcomes. This is a significant shift from the former Basic Payment Scheme (BPS). Through the expected outcomes of the SFS, improvements in soil, water, animal welfare, and air quality will support the sustainable production of food together with the general health of communities.

Tree planting and woodland management through the SFS, will also support Wales meeting the UK Climate Change Committee target to create 43,000ha of new woodland by 2030 to help mitigate climate change. Inasmuch as agricultural land comprises 90% of all land in Wales, farmers will be in a critical position to play a significant role in helping Wales contribute to the global fight against climate change.

One of the intended outcomes of SLM is 'Maintaining and enhancing public access to, and engagement with, the countryside and the historic environment'. The SFS will offer Optional level support actions to enhance public access. Over two thirds of public rights of way in Wales are on farmland and therefore are a crucial source of access to biodiversity, the natural environment, and our landscapes. OAs within the SFS include offering support to upgrade and enhance footpaths and establish new opportunities for public access. By supporting and enhancing permissive access

to farmland, the public can be given better opportunity to enjoy the outdoors and further their understanding of the biodiversity of Wales.

However, depending on use and public behaviour, improved access may also represent a risk to biodiversity. The onset of the Covid-19 pandemic saw people seeking access to open spaces and the natural environment and, in some cases, brought concerns about impacts on biodiversity.

For instance, findings from a survey conducted by the Snowdonia National Park Authority[240] demonstrated some of the negative impacts that over-use of the countryside may have, with findings relating to bird species, litter, erosion, and fly camping. Moreover, the most recent Sheep Worrying by Dogs survey by the National Sheep Association have shown that farmers are still experiencing the same high incidence of sheep worrying attacks by dogs that reached a high at the start of the Covid-19 pandemic in 2020, as dog ownership and countryside access increased.[241]

To mitigate the potential negative risks of increased access, new measures to tackle livestock worrying were introduced in England and Wales in 2021. Additionally, the Countryside Code has since been updated[242] to reflect the way in which people are now accessing the countryside and aims to minimise the risk of negative impacts.

Additional Continued Professional Development (CPD) Optional Actions would also support farms to host educational and care farm visits to the public should offer an opportunity to educate members of the public who may have limited exposure with the countryside. This should help to promote understanding and awareness of biodiversity and minimise the potential for negative impacts from improved access.

Supporting children to learn about the sustainable production of food could also have a number of positive impacts on biodiversity. Experiences with the natural environment are not only beneficial for children's cognitive development but also allow the development of 'nature connectedness'[243]. Educational visits to farms would therefore allow children to learn about the sustainable production of food, raise awareness of the natural environment and could encourage environmental stewardship which would in turn help support biodiversity in the future.

**16. Can you provide, or source, specialist training where necessary?**

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[240] Snowdonia National Park Authority, (2022) 'An assessment of the wildlife response to Covid-19 lockdown in north-west Wales: summary of findings from three-year study', available [online] at: https://snowdonia.gov.wales/protect/conservation-work/wildlife-in-lockdown/

[241] National Sheep Association, (2023) NSA Sheep Worrying by Dogs Survey, available at: PowerPoint Presentation (nationalsheep.org.uk)

[242] https://naturalresources.wales/about-us/news-and-events/news/new-countryside-code-guidance-to-support-farmers-and-land-managers/?lang=en

[243] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6401598/

There will be a requirement for the registered farm business partner/s to undertake a core mandatory programme of Continued Professional Development (CPD) which will consist of six online modules directly linked to the SFS characteristics plus a Health and Safety module, to be completed on an annual basis.

These modules will together form the CPD UA which will establish a baseline level of CPD learning all farmers within the SFS, by providing an overview across a range of key development areas including health and safety.

It will be the responsibility of the registered farm business partner/s to complete and pass all of the modules and disseminate the information appropriately to all farm employees, farm visitors and farm family members. All individuals with a Farming Connect account will have the option of completing some or all of the modules on a voluntary basis.

These CPD modules will be classed as introductory modules to SFS. There will also be an Optional Action within CPD, where you will be supported to complete more complex or higher level CPD and be rewarded for supporting knowledge transfer to other farmers.

In addition, there will be a broader SFS CPD programme developed to support specific Universal, Optional and Collaborative Actions across all subject areas. Participants who wish to undertake these will also be rewarded for supporting knowledge transfer to other farmers. Examples may include:

- Hosting educational farm visits.
- Mentoring opportunities.
- Research and innovation opportunities.
- Opportunities to participate in case studies.
- Funding for relevant conferences where you are presenting.
- Peer to peer learning.

**17. Can you link to other communications strategies and initiatives for biodiversity, for example award schemes, local events?**

The SFS Universal layer will require farmers to actively manage at least 10% of their land to benefit biodiversity. The HBR1 will support farmers to identify the broad habitat types present against which there will be specific management actions and outcomes a farmer needs to complete and achieve.

The 10% biodiversity target will be achieved primarily through the management of existing semi-natural habitats. This is envisioned to be similar to that already employed in Glastir, so there is an opportunity to build on existing Glastir communications channels to advertise and present communications concerning the SFS.

Farming Connect will also signpost farmers to timber market information and advice if they wish to expand their woodlands beyond the universal requirement, or if they want to diversify into the timber market.

The SFS will also be able to incorporate the priorities set out in Rights of Way Improvement Plans and of Local Access Forums into decision making. This will help ensure funding supports a place-based approach and will help place public access to nature at the heart of communities.

## Improving our evidence, understanding and monitoring

### 18. Have you used the best available evidence of biodiversity to inform your proposal and this assessment?

Throughout the development of the Agriculture (Wales) Act 2023, and the consultation and co-design development of the SFS, the best available and up-to-date evidence of biodiversity has been used to inform the SFS and this impact assessment.

*State of Nature: Wales, 2023*[244]

The most recent *State of Nature: Wales*[245] reported the following key findings:

- 18% of species are threatened with extinction from Wales[246]
- There is an average 20% decline in species abundance (since data available in 1994)[247]
- There are variable patterns of change in the distributions of invertebrate species[248]
- The flora of Wales is greatly changing[249]

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[244] State of Nature (2023) *State of Nature: Wales,* available at: TP26053-SoN-Wales-summary-report-v10.pdf.pagespeed.ce.UcI3aoHAY6.pdf (stateofnature.org.uk)

[245] Ibid.

[246] Of 3,897 species that have been assessed using Red List criteria, 18% (663 species) are threatened with extinction from Wales.

[247] The abundance of 380 terrestrial and freshwater species has on average fallen by 20% across Wales since 1994. Within this general trend, 140 species have declined in abundance (37%) and 107 species have increased (28%). Moth species on average showed the strongest decline: 43%. Separate data shows that Atlantic Salmon (Salmo salar) abundance has 20% Variable patterns of change in the distributions of invertebrate species The distributions of 3,036 invertebrate species in Wales showed contrasting trends: the distributions of 993 species declined (33%) and the distributions of 953 species increased (31%). 33% Seabird stronghold The abundance of seven regularly monitored species of seabird has showed little change on average since 1986, in contrast to average declines in some other parts of the UK. However, there is variation within this average trend, and these figures pre-date the current outbreak of Highly Pathogenic Avian Influenza. The flora of Wales is greatly changing Since 1970, the distributions of 42% of flowering plant species and 44% of bryophytes 42% declined markedly across Wales in the past decade, and in 2021 all river stocks were assessed as ‘at risk’ (91%) or ‘probably at risk’ (9%).

[248] The distributions of 3,036 invertebrate species in Wales showed contrasting trends: the distributions of 993 species declined (33%) and the distributions of 953 species increased (31%).

[249] As with the uneven distribution of invertebrates, above, since 1970, the distributions of 42% of flowering plant species and 44% of bryophytes 42% declined markedly across Wales in the past decade, and in 2021 all river stocks were assessed as ‘at risk’ (91%) or ‘probably at risk’ (9%). Mosses and liverworts have decreased across Wales, compared to 40% and 46% of flowering plant and bryophyte species respectively that have increased in distribution.

The report has been particularly useful for this impact assessment as a means of comparing the SFS design with the report's recommendations.

*SoNaRR*

*The Second State of Natural Resources Report (SoNaRR): Assessment of Biodiversity*[250] identifies the following opportunities to support ecosystem resilience on enclosed farmland, in particular:

- 'Create resilient ecological networks by restoring and creating habitats within and around production systems.
- Agroforestry and hedgerow expansion. Increase the numbers of trees and hedges to sequester carbon and increase ecosystem services while maintaining the primary purpose of food production.
- Promote nature-friendly land management with horse owners. Approximately 6% of Enclosed Farmland is managed for equines. Currently this land is not considered in land use policy and is often poorly managed.
- Sustainable use and management of nutrients. Use soil analysis, nutrient planning and precise application methods to minimise artificial inputs and meet crop requirements.
- Promote interventions to prevent ammonia release to the air including covering slurry stores, restricting urea-based fertilisers and injecting slurry.'

*Glastir Monitoring and Evaluation Programme (GMEP)*

The GMEP programme[251] monitored ten high level outcome biodiversity indicators which cover the countryside as a whole and for Priority Species and Habitats. These results inform assessment of future Glastir impacts and long-term national trends. The baseline assessment found in particular:

- Changes in habitat condition as a result of management can take a long time to be realised, highlighting the importance of consistency in approach.
- Areas which have been targeted for improvement over a number of years, e.g. Blanket Bog and Purple Moor Grass and Rush Pasture, have seen an improvement in condition.
- An increase in hedgerows being managed but a decline in woody species richness.
- Positive trends over the last ten years for the presence of plant species indicating good condition for habitat and improved land. No change for woodland and arable.

*Local Environment Record Centres*

[250] Natural Resources Wales, (2021) *The Second State of Natural Resources Report (SoNaRR2020) Assessment of Biodiversity*, available at: https://cdn.cyfoethnaturiol.cymru/media/693305/sonarr2020-theme-biodiversity.pdf

[251] https://gmep.wales/sites/default/files/GMEP-Final-Report-2017.pdf

Our ERAMMP evidence review has included A Review of the Contribution of Species Records held by Local Environmental Record Centres in Wales.[252]

The ongoing modelling and monitoring programme includes the National Field Survey which enables reporting of long-term trends and has informed our priorities. Biodiversity monitoring is a significant component of this work and provides an important evidence base from which to develop future support.

**Evidence considered to support the Universal Actions within the SFS:**

The Environment and Rural Affairs Monitoring & Modelling Programme (ERAMMP), has provided evidence in relation to the SLM of the Welsh agricultural landscape through collaboration with a large consortium of partners, bringing the best of their expertise and ongoing activities across the monitoring and modelling community.

The programme aims to provide business-critical evidence and expertise through the three interrelated components of **Monitoring** (the National Field Survey), **Modelling** (the Integrated Modelling Platform) and the provision of **Evidence** and expert advice.

We have commissioned, and continue to commission, a range of evidence reviews from ERAMMP[253] to inform our proposals for the SFS, including on the following issues relevant to biodiversity:

- Soil nutrient management.
- Sward management.
- Ecosystem resilience.
- Flood risk management.
- Systems approach to greenhouse gas emission reductions.
- Improving air quality.

These evidence reviews were part of a wider evidence pack produced by a community of reviewers across disciplines. This ensured a consensus was established and a rigorous, up to date evidence base was provided for policy development. Together, some 849 peer-reviewed research papers were drawn upon.

**Species and habitats of principal importance published under Section 7 of the Environment (Wales) Act**

Habitat management actions within the SFS are intended to have a refined list of management actions and measurable outcomes, and a consolidated/grouped number of habitat types and

[252] Smart, S.M, et al. (2019) ERAMMP Report 22: LERCs. Report to Welsh Government (Contract C210/2016/2017)(CEH NEC06297).

[253] ERAMMP Evidence Reviews can be accessed at https://erammp.wales/en/r-sfs-evidence-pack

communities, based on the list of Section 7 Priority Habitats within the Environment (Wales) Act 2017, to reduce the size and complexity of habitat options available (a similar approach to Glastir).

**Glastir Monitoring and Evaluation Programme (GMEP)**

The GMEP programme[254] monitored ten high level outcome biodiversity indicators which cover the countryside as a whole and for Priority Species and Habitats. These results inform assessment of future Glastir impacts and long-term national trends. The baseline assessment found:

- Changes in habitat condition as a result of management can take a long time to be realised, highlighting the importance of consistency in approach.
- Areas which have been targeted for improvement over a number of years, e.g. Blanket Bog and Purple Moor Grass and Rush Pasture, have seen an improvement in condition.
- An increase in hedgerows being managed but a decline in woody species richness.
- Positive trends over the last ten years for the presence of plant species indicating good condition for habitat and improved land. No change for woodland and arable.

A habitat management action review group made up of WG officials and NRW specialists has examined and considered each habitat management action proposal to determine:

- The make-up of habitat types and their groupings to be operationalised under the SFS.
- Which elements of each habitat management action and their outcomes should form part of delivery and under which layer.
- The verifiability and evidence need of actions.
- NRW has been tasked with reviewing the permissions and consents to review the application and consenting process with a view to ensure consistency of approach pan Wales.
- A comprehensive habitat list, their related management actions, evidence & verification requirements, consents etc. will be presented in tabular form/matrix to illustrate and capture all of the above.

**19. Have you used up to date knowledge of the key impacts on biodiversity to make evidence-based decisions?**

The evidence cited in question 18, above, provides an overview of some of the key information and sources used to make policy decisions to date on the SFS.

As already discussed, all entrants to the SFS will undertake a Habitat Baseline Review Level 1 (HBR1) process in order to capture all habitat types within their holdings. This review will help determine which actions a participant may need to take as part of the SFS, for the duration of the

[254] https://gmep.wales/sites/default/files/GMEP-Final-Report-2017.pdf

contract. As outlined, above, such actions have been based on up-to-date knowledge of the key impacts on biodiversity.

**20. Do you know what the drivers of change and key negative factors are which could arise from your proposal?**

The ERAMMP evidence reviews, described above, assessed the logic chain and causal links to outcomes for a range of potential interventions. This work also considered the trade-offs and co-benefits for each intervention[255]. Interventions were found to rarely affect only single outcomes indicating opportunity for delivery of multiple benefits but also that trade-offs need to be considered in order to avoid the delivery of one outcome to the detriment of others.

The reviews also highlighted that some potential actions to deliver outcomes had a spatial element related to whether the benefits would be realised or added value could be gained. This was also found for biodiversity actions. For example, undertaking an action across a number of connected farms or at catchment scale can offer the opportunity for added value. This has been addressed by offering voluntary collaborative funding options within the SFS.

**21. Are you satisfied that these do not apply or have been avoided?**

The SLM framework intends to avoid negative trade-offs by requiring the SFS to consider how SLM objectives can best be achieved. This helps to ensure that drivers of change, and potential negative factors, are considered holistically. Ultimately, due to the SFS voluntary nature, farms will be able to consider independently whether or not to participate in it.

**22. Can your proposal contribute to our body of knowledge for biodiversity?**

The Agriculture (Wales) Act 2023 introduced the requirement to monitor and report on the delivery of SLM outcomes, which will be achieved through the SFS. The SFS will be subject to robust monitoring and evaluation and the findings will be made publicly available.

**23. Can it support citizen-science initiatives, and monitoring schemes?**

There is no plan for the SFS to actively contribute to citizen-science initiatives or monitoring schemes at present.

**24. Have you ensured that any biodiversity data collected is made publicly available?**

[255] Emmett, B.A. et al. (2019). Report-10A: Integrated Analysis. ERAMMP Report to Welsh Government (Contract C210/2016/2017) (CEH NEC06297)

The data captured as part of the separate actions within a farm sustainability review (FSR) will be used by Welsh Government to provide collective data on the industry's sustainability credentials, providing the evidence to support promotional campaigns highlighting Wales's sustainable farming sector, as well as providing a baseline to enable the monitoring of progress with SLM outcomes.

The Welsh Government will report annually about how the farms in the SFS are progressing and use the evidence we have gathered from SFS reporting to show how sustainable they are.
The FSR data can also be used by the farmer to positively demonstrate to consumers and retailers the sustainability credentials of their farm.

## Governance and support for delivery of biodiversity action

### 25. Can your proposal support biodiversity action in any way?

The SFS has been designed to deliver SLM outcomes through supporting the sustainability of the agricultural sector. Many Scheme actions will directly deliver against the SLM outcome for 'maintaining and enhancing the resilience of ecosystems'; however, many of its other actions (and their anticipated positive environmental impacts) are also expected to benefit biodiversity.

The SFS UAs that will directly support biodiversity, include:

- Habitat restoration, management, and creation by supporting farmers to manage at least 10% of their land as semi-natural habitat.
- Where a holding has less than 10% existing semi-natural habitat, it will be necessary to create temporary improved land in-field margins or plots.
- 10% tree cover on farm, managed in line with the UK Forestry Standard.
- The management of new and existing hedgerows in line with the hedgerow management cycle.
- The management and restoration of peatland.
- The restoration and management of existing permanent wildlife ponds and/or creation of a number of temporary ponds (scrapes).
- The requirement to have a developed and agreed management plan in place ready for implementation for protected sites under the farmer's sole control.

Voluntary Optional Actions that would support biodiversity, may include:

- Management or enhancement of habitats above the 10% minimum including more bespoke site-specific actions.
- Make the best use of grassland through alternative approaches to grazing, introducing multispecies leys and mixed grazing.
- Management of existing trees and woodland, including ancient woodland, in line with the UK Forestry Standard (beyond the 10% Universal Action).
- Farmers wishing to plant more trees than the minimum 10% coverage can receive further support to plant more individual trees, hedges, groups of trees, shelter belts and riparian strips.
- Increase the width of hedgerows on boundaries between farms to 3 metres (unless they're separated by woodlands, roads, walls etc).

- Farms will have the opportunity to take up actions concerned with the restoration and management of peatland (characterised by raised and blanket bogs, wet heaths, mires and fen vegetation types). These include actions such as grip and ditch blocking, installation of leaky dams, peat hag re-profiling and vegetation establishment though we recognise that peat restorations can take many years.
- Farmers will be supported to establish a buffer strip alongside watercourses. This must be at least 6 metres wide and can include a mix of grasses, shrubs and trees.
- Farmers will be rewarded for introducing additional ponds and scrapes where it is appropriate to do so.
- Support will be given for the conservation and retainment of water. Farmers will be supported to:
    - Create new reservoirs and irrigation ponds.
    - Install water harvesting reuse equipment.
    - Install clean and dirty water separation infrastructure.
- Natural flood management actions such as water harvesting.
- Farmers will be supported to deliver more for protected landscapes. These actions will be bespoke to the farm and surrounding area and will align with the special qualities of Areas of Outstanding Natural Beauty or a National Park.

Voluntary Collaborative Actions that would benefit biodiversity, may also include:

- Support collaboration to create interconnected habitats across landscapes through joining up habitat land, taking into account any local or national species recovery priorities.
- Support for projects to manage and create joined up woodlands at a scale larger than the individual farm to benefit the farm, environment, and wider society.
- Support for projects to restore and manage peatland shared by multiple farmers.
- Support for collaborative management of protected sites to deliver SLM outcomes.
- Farmers will be encouraged to collaborate across a catchment to lower the risk of flooding. They will be rewarded for taking up actions collectively including practices such as introducing leaky barriers, offline storage areas or floodplain woodland.
- The SFS will support landscape-based collaborative projects which enhance the historic environment and designated landscape across multiple farms.

**26. Can staff get involved in practical action?**

Work to operationalise the SFS is ongoing.

**27. Can you fund action directly, or indirectly?**

The SFS will be a direct funding opportunity for participants.

**28. Can you support partnerships and/or collaboration for local and community-based biodiversity action?**

As noted above, there are options within the SFS to work collaboratively on enhanced biodiversity and habitat outcomes, which will trigger additional financial support through the SFS.

## Can your proposal help to build capacity for biodiversity action?

### 29. Can you support skills acquisition and training?

We want to ensure our agricultural industry has the right knowledge of innovation available to be able to improve productivity and resilience and deliver the outcomes we are seeking, including the maintenance and enhancement of ecosystem resilience.

Building skills for biodiversity action has been developed as part of the support offer within SFS. This will be offered through a range of channels including:

- CPD requirements.
- Specialist advice.
- Knowledge transfer exercises.
- Farm demonstration events.

We also want to ensure skills training, innovation and capital support are fully joined up to enable farmers and foresters to adopt the right technology and techniques to improve their business resilience.

The HBR1 process will help the farmer to understand the holistic potential of their land. Whilst carrying out the review, applicants will have access to relevant data sets, crib sheets, online support and guidance to assist in considering where and how UAs can be applied on farm.

Under the Optional layer, habitat-management on semi-natural land would involve a more complex, costly, targeted, tailored, narrow and deep approach to their management. Farmers who wish to enter this layer would be supported by specialist on-site surveyors to carry out some of the advanced assessments. The farmer, or individual with operational responsibility for the land, will need to be present to engage and assist the adviser in any advanced habitat mapping process and answer questions in relation to the day-to-day management of areas of interest. This optional level should enable farmers to further advance their specialist knowledge and capability around identifying and managing some of the more nuanced biodiversity opportunities on their land.

Furthermore, where a relevant designated site is identified, a process will be established to administer the instigation of farmer liaison and subsequent site visit to take forward development of the management plan. A suitably competent assessor, with the required balance of technical, administrative and inter-personal skills, and any other specialist deemed necessary given the features of importance on the site, will visit the area. The farmer will work closely with the assessor and management control to ensure what is proposed is workable and deliverable, and to agree the basis for a management plan that can be converted into an active management agreement where the farmer is suitably compensated and rewarded. The plan development process will also act as a form of knowledge and skills training to a farmer in anticipation and readiness for implementation.

## Does your proposal ensure the appropriate level of qualifications of those involved in decision making regarding biodiversity?

### 30. Can your proposal fund capacity building for biodiversity action?

The UAs that would be carried out as part of a farm sustainability review (FSR) – particularly the Carbon Assessment and the Habitat Baseline Review Levels 1 and 2 – will require a level of expertise some farmers may not possess. To aid this, and ease farm's ability to enter the SFS when it is launched, farmers will be supported and advised in the years preceding the launch and from Day One of the SFS. Farmers will be supported (both financially and with advice and expertise) to complete a carbon calculator and a HBR1 as part of a Sustainability Review Preparedness Scheme.

As outlined above, the HBR has been spilt into two separate tiers. This split allows for a more generalised baseline review (HBR1) to meet the Universal Actions allowing for a more limited technical understanding, which will supported remotely. An Optional HBR2 will offer a more in-depth review where specialised resource will be available, in the form of advisers with the required balance of technical, administrative, and inter-personal skills to support and deliver against the more complex tasks available in the options above the Universal Level.

Furthermore, by requiring farmers to test their soils and follow a nutrient accounting process as UAs, they will further build the information and knowledge needed to make informed SLM decisions. These decisions may include choosing from the wider list of SFS OAs, which will help them improve their soil structure (e.g. minimum tillage) or to make the best use of their muck and fertiliser (e.g. precision application).

### 30. Have you recorded decisions and actions to maintain and enhance biodiversity?

The SFS has been developed in line with the duties placed on Welsh Ministers within Section 6 of the Environment (Wales) Act 2016.

The SFS entry requirement to carry out a HBR1 will ensure all actions and decisions made on the farm by participants will be evidenced to ensure biodiversity is retained and maintained as a minimum. OAs made available through HBR2 will, further, contribute towards the enhancement of biodiversity.

## Safeguarding species and habitats of principal importance

### 31. Is all legislation complied with to ensure protection of marine and terrestrial species and habitats?

Compliance with regulatory requirements will apply to all farmers in Wales, including those wishing to join the SFS. Confirming regulatory compliance therefore also forms part of eligibility for the

SFS. However, the SFS will offer payments to farmers across Wales for carrying out a set of UAs which go above and beyond what is required by legislation.

### 32. Has any requirement for licences, monitoring and/or enforcement been considered and actioned?

Any requirement for licenses, monitoring, and enforcement will be considered and actioned to ensure ongoing compliance with legislation.

### 33. Has any requirement for EIA/SEA/HRA been identified and actioned?

Conservation and protection of semi-natural habitats outside of designated sites is regulated by various Environmental Impact Assessment Regulations in Wales. In an agricultural context, it is covered by the Environmental Impact Assessment (EIA) (Agriculture) (Wales) Regulations 2017 (as amended), which prohibits agricultural improvement projects on semi-natural land without first applying to Welsh Government for a screening decision.

The methodology for delivering the HBR process will be based on and closely mirror that employed by the Welsh Government's EIA.

The presence of high biodiversity value (priority) grassland habitat is one of the key factors of significance considered by Welsh Government ecologists during the SFS screening process and would result in refusal of an agricultural improvement project.

Following the HBR1, farmers will need to actively manage at least 10% of their land to retain and maintain semi-natural habitats. Where there is insufficient semi-natural habitat available, farmers will need to select actions to create temporary habitat features on other agricultural land to reach 10%.

The habitat management actions to be carried out will be directly related to the habitat community/vegetation type/category present, or to be created, in a similar manner to Glastir and previous schemes such as Tir Gofal. The intention is to have a refined list of management actions and measurable outcomes and a consolidated/grouped number of habitat types based on the list of Section 7 Priority Habitats within the Environment (Wales) Act 2016.

### 34. Have any impacts or opportunities for positive action for Section 7 species and habitats been identified and actioned?

As part of the SFS, farmers are expected to have a fully developed and agreed management plan in place ready for implementation where protected sites are under the farmer's sole control.

## Does the proposal seek <u>first</u> to maintain and enhance biodiversity?

### 35. Have you selected the option which avoids loss and/or damage to biodiversity, and promotes the resilience of ecosystems?

Through its aim of delivering SLM objectives, the SFS will address biodiversity loss and increase ecosystem resilience. Section 25, above, lists many of the proposed actions within the SFS which will directly maintain and enhance biodiversity.

### 36. Only where the balance of environmental, economic, social and cultural benefits[256] provided by your proposal is such that there may be some loss of habitat or species, have you sought to enhance biodiversity elsewhere on the site, or, where there is no other option, offsite?

The SFS has been designed to support the SLM objective of 'maintaining and enhancing ecosystem resilience'. Through the HBR process, existing semi-natural habitats will be maintained in-line with EIA related regulations, which includes any semi-natural habitat not contributing to the 10% needed to enter into the SFS. Optional Actions are also available in the SFS which would incentivise habitat management, creation, and enhancement. As such, the SFS will aim not only to retain and preserve already existing habitats, and the species that depend on them, but also enhance, and create new habitats and work towards the enrichment of biodiversity.

Moreover, where a holding has less than the 10% existing semi-natural habitat needed to meet the Universal habitat threshold requirement, it will be necessary to create temporary improved land in-field margins or plots. These are designed to act as wildlife corridors and pollinator friendly areas on improved grassland, arable land or land used within an arable rotation. The farmer must elect to make up the shortfall by selecting one or more from a variety of suitable management actions. The actions to choose from will include:

- Fallow crop margins.
- Unfertilised, unsprayed, and unharvested cereal and linseed headlands.
- Fixed rough grass margins on arable land.
- Rotational rough grass margins on arable land.
- Establishment of mixed leys on improved land (also referred to as multi-species or herbal leys).
- Establish a wildlife cover crop on improved land.

### 37. Does your proposal contribute to maintaining and enhancing biodiversity across Wales?

As outlined above, the SFS will require entrants to manage at least 10% of their land as semi-natural habitat. Where there is insufficient semi-natural habitat available to meet the 10%

[256] Taking proper account of the benefits and intrinsic value of natural resources, including biodiversity, and ecosystems

requirement, farmers will need to select actions to create permanent or temporary habitat features on other agricultural land in order to enhance the biodiversity on their land.

We have conducted a range of evidence reviews (Keenleyside et al.)[257] which have shown that for semi-improved grassland (which may be of significant value, for example, as habitat for a range of widespread but declining species, such as starling, yellow wagtail and lapwing), there is scope for relatively simple and important conservation gains (including connectivity) as a result of applying interventions appropriate for semi-natural land, without the need for intensive habitat restoration. Given that an estimated 20% of Wales is comprised of semi-natural grassland[258] and around 90% of land is agricultural,[259] the SFS offers the potential to deliver improvements in biodiversity across Wales.

## Increasing the resilience of our natural environment

### 38. Does your proposal contribute to building the resilience of our ecosystems?

Maintaining and enhancing ecosystem resilience is set as one of the four SLM objectives, and a key characteristic of the SFS. Ecosystem resilience is expected to be enhanced through building stronger networks of habitats and promoting connectivity. Evidence shows that the following actions included within the SFS,[260] consistent with SLM, would help promote habitat connectivity at a landscape scale:

- Improving site condition through good management to improve within-patch connectivity and fitness of populations.
- Increasing habitat patch size.
- Developing buffers around patches.
- Expanding habitat to join patches.
- Developing steppingstones between patches.
- Developing corridors.
- Improving the condition of land between habitat patches to increase permeability.
- Improving the extent and condition of landscape features such as hedgerows, field margins and water courses.
- Developing networks of habitats.
- Encouraging large continuous areas of habitat at a landscape scale.

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[257] Keenleyside, C.B., et al., (2019) Annex 4: Building ecosystem resilience. ERAMMP Report to Welsh Government (Contract C210/2016/2017) (CEH NEC06297).

[258] Countryside Survey, (2007) available at: https://countrysidesurvey.org.uk/sites/default/files/CS-Wales-Results2007-Chapter03.pdf

[259] Either through farmland or commons. See: https://gov.wales/sites/default/files/statistics-and-research/2020-12/survey-agriculture-and-horticulture-june-2020-932.pdf

[260] Latham J., Sherry J., and Rothwell J., (2013) *Ecological Connectivity and Biodiversity Prioritisation in the Terrestrial Environment of Wales*. CCW Staff Science Report No. 13/3/3.

### 39. Does it work with nature, and consider the use of nature-based solutions first and foremost?

As the SFS aims to deliver SLM outcomes, agricultural businesses will be supported through the SFS to farm in a sustainable way. As such, farms will be supported to work with nature, where possible, and use nature-based solutions, to improve the sustainability of the agricultural sector in Wales.

### 40. Are any nature-based solutions native and bio-diverse?

Several nature-based solutions in the SFS are native and bio-diverse. For instance, the SFS will support farmers to enhance their already existing woodland habitats. This UA can benefit the farm business whilst also delivering other social and environmental benefits, such as:

- Improving air quality by capturing ammonia emissions from livestock housing and slurry stores or buffering sensitive sites such as ancient woodlands from ammonia.
- Enhancing and protecting biodiversity by creating and linking up habitats.
- Improving animal welfare by offering shade and shelter for livestock and biosecurity by thickening farm boundaries with wider hedges and tree planting.
- Lowering the risk of flooding by slowing the flow of water.
- Improving water quality by breaking up surface run-off, improving soil stability and lowering nutrient pollution.
- Offering recreation opportunities by allowing the public to access them.

### 41. Can it restore or contribute to the restoration of degraded habitats?

Several actions within the SFS intend to restore, or contribute towards the restoration of, degraded habitats. In particular, the Universal and Optional Actions in relation to the protected designated sites network will aim to achieve this. According to NRW's 2020 baseline evaluation project,[261] which assessed around half of the features on Welsh Sites of Special Scientific Interest (SSSI), showed that:

- An estimated 20% of features are in favourable condition.
- Around 30% are in unfavourable condition.
- Around 50% are not in a desired state.
- Furthermore, most sites in Wales are not under any active management agreement.

Wales's SSSI, Special Protection Areas (SPA) and Special Areas of Conservation (SAC) are crucial for biodiversity and are an important part of the farmed landscape. As well as playing a vital role in reversing biodiversity decline, well-managed protected sites can deliver many of the desired SLM outcomes and ecosystem services that are crucial to achieve our policy commitments and ambitions.

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Our ambition is for all designated sites, or parts of designated sites under full and sole control of the applicant entering the SFS, to be under positive management by the end of 2030. As a minimum under the Universal Layer, participants will be required to draw up a management plan for such sites. Under the Optional layer, however, farmers will be able enter a management agreement and actively work towards the protection and restoration of such protected habitats.

**42. Can it contribute to building resilient ecological networks of habitats?**

Through the Collaborative layer of the SFS, farmers will be given the option to work together to link up, build, and manage ecological networks of habitats. For instance, the SFS will support Collaborative Action for:

- Projects to manage and create joined up woodlands at a scale larger than the individual farm to benefit the farm, environment, and wider society.
- The creation of interconnected habitats across landscapes through joining up habitat land, taking into account any local or national species recovery priorities.
- The collaborative management of protected sites to deliver SLM outcomes.
- Landscape-based collaborative projects which enhance the historic environment and designated landscape across multiple farms.

**43. Does the proposal improve site management to improve habitat or species condition at any scale? e.g. planting native species, providing wildflower areas for pollinators, leaving areas of unmown grass; and improving connectivity between valuable habitats**

The habitat management actions within the SFS will improve habitat or species condition across a range of scales, which will ultimately be determined by the mandatory requirements or voluntary actions of each participant and the particular environmental qualities of their holdings.

**44. Does your proposal contribute to the creation of new habitat?**

The SFS will enable the maintenance and creation of landscape features which provide important habitats for wildlife on all agricultural land across Wales and will safeguard protections for these habitats which may otherwise have been lost.

The evidence base that underpins the range of actions in the SFS (e.g. Keenleyside et al.)[262] suggests, to increase the resilience of habitat networks in Wales, the creation or restoration of habitat on both semi-improved and improved land is necessary. Restoration and creation are essential components of landscape-scale management of semi-natural habitats.

**45. Does your proposal support the creation of new habitats, such as local orchards, native hedges, wildflower meadows or other areas of native, bio-diverse green space?**

[262] Keenleyside, C.B., et al. (2019). Annex 4: Building ecosystem resilience. ERAMMP Report to Welsh Government (Contract C210/2016/2017) (CEH NEC06297).

The SFS will support the management, maintenance, enhancement, and creation of new habitat areas within agricultural land.

Under the Universal layer of the SFS, farmers will be required to actively manage at least 10% of their land to benefit biodiversity. This is expected to be achieved primarily through the retention and management of existing semi-natural habitats. Yet, where there is insufficient semi-natural habitat available, farmers will need to select actions to create temporary habitat features on other agricultural land to reach the 10% (e.g., fallow margins or rough grass margins can be created around arable fields, or wildlife cover crops and multi-species leys on other improved land). However, the SFS will also support the creation of new habitats.

We have lost a large number of ponds across our landscape. As well as the benefit to wildlife, additional ponds help hold extra water during wet weather helping to reduce the risk of downstream flooding. The SFS will support the creation of new wetland features such as ponds and scrapes.

Moreover, support will be provided for pastures to revert to flower rich meadows with the right management. New habitat features like these can be even more valuable where they are located to connect areas of existing habitat to allow wildlife to move around the landscape. The SFS will offer additional Optional and Collaborative funding opportunities to encourage the creation of interconnected habitats across landscapes, maximising environmental outcomes at a landscape scale through tailored collective actions.

### 46. Can habitat creation contribute to developing resilient ecological networks?

The voluntary, optional HBR2 will support the identification of suitable areas to enhance habitats and ecosystems. These include identifying opportunities for marginal semi-natural land, areas for tree planting, and opportunities to create more ponds and scrapes.

Other actions within the SFS Optional and Collaborative layers will offer opportunities for joined up approaches across different landowners and organisations to connect up and broaden wildlife and habitat networks, which will increase their resilience.

## Tackling key pressures on species and habitats

### 47. Will the proposal have any negative impacts on habitats or species through

*Change in land use*

One of the key outcomes of SLM is to encourage and create more resilient ecosystems on agricultural land. The intention of the SFS is to encourage small changes in land use in appropriate places to enhance biodiversity and protect habitats rather than attempt large scale land-use changes in localised areas, which could lead to unintended circumstances.

Where there are holdings located within or partly within designated sites, where the applicant has full and sole control and which enter the SFS, the applicant is required to have a management plan

drawn up and agreed between relevant parties. This should ensure any potential negative impacts are carefully considered and mitigated before any changes to the land are applied.

*Causing air, water, light, noise or vibration pollution?*

A number of direct funding opportunities within the SFS are intended to enhance habitats and species and deliver wider benefits such as improved air and water quality which also benefit biodiversity.

The HBR process will enable SFS applicants to consider any potential negative impacts and how these can be mitigated before applying for the additional funding available through its other tiers.

Any proposed changes in land use to achieve SLM (e.g., tree planting to increase carbon sequestration) would need approval through the EIA regulations on an individual project basis over five hectares in the usual way with due regard being given to biodiversity at the intended site.

As outlined above, increased access to the countryside has the potential to have negative impacts on local habitats and species if users of access are not aware of the Countryside Code and their responsibilities in the natural environment. The SFS will offer additional optional funding opportunities through the optional and collaborative layers to support educational and awareness raising activities for those who may be less familiar with the rural environment.

**48. Has all legislation regarding the pressures on species and habitats been complied with?**

This would include:

- Pollution control
- Invasive non-native species
- Sustainable Urban Drainage Systems
- Climate Change, etc.

Taking action to reduce pollution, control invasive non-native species and mitigate and adapt to climate change would all be consistent with the delivery of SLM. Entry to the SFS is also reliant on applicants meeting the regulatory requirements already in place in Wales. Farming Connect will offer advice, training, and guidance to support land users to understand and comply with regulatory requirements.

**49. How will any negative impacts be mitigated?**

*Have whole system approaches and native, bio-diverse nature-based solutions been used to reduce pollution and mitigate climate change?*

As the SFS has been designed to deliver SLM outcomes, it will encourage a whole system approach to maintaining and enhancing the environmental, social, and economic sustainability of agriculture in Wales. Supporting farmers in planning what action they can take to best deliver these objectives, which include mitigating against climate change, should reduce unintended negative impacts.

The funding support will allow direct action to be taken to reduce pollution and mitigate climate change in agriculture. Many of the outcomes we are seeking can be delivered through actions which deliver cascading co-benefits, further supporting a whole system-approach.

*Does your proposal employ best practice for the sustainable management of agriculture, fisheries, forestry and construction?*

The Actions and support within the SFS have been developed to consider how to support best practice for the sustainable management of agriculture across Wales. Broadly defined, below, participating farms will be supported to:

- **Reduce, reuse and recycle inputs, nutrients and waste:** The SFS will help farms use minimal inputs and make the best use of their resources to have fewer losses to the environment, improving air and water quality and making them more efficient and profitable. This will be achieved through supporting participants to:
    - Make best use of artificial fertiliser through nutrient management and soil testing.
    - Prioritise the use of manure and fertility building.
    - Make best use of supplements, antibiotics and medicines.
    - Minimise use of pesticides and herbicides through integrated pest management.
    - Make best use of grassland through alternative approaches to grazing, introducing multispecies leys and mixed grazing.
    - Lower the environmental impact of ammonia emissions.

- **Reduce on farm emissions and maximise carbon sequestration:** The SFS will help farms become more efficient, lower their greenhouse gas emissions, and enhance existing carbon stocks through sequestration. It will also help farms make use of renewable energy and produce food with a low carbon footprint. This will be achieved through supporting participants to:
    - Adopt energy efficiency practices and producing renewable energy on-farm.
    - Employ the Animal Health Improvement Cycle (AHIC).
    - Restore semi-natural peatland.
    - Create new and manage existing agro-forestry and woodland.

- **Protect and enhance the farm ecosystem:** The SFS will support farms to work well with their ecosystems, using nature-based solutions for healthy living soils and rich farm and nature diversity. This will be achieved through supporting participants to:
    - Protect soils from erosion and degradation.
    - Manage habitats and species, via:
        - Habitat maintenance and creation.
        - Benefit habitat on improved land.
        - Management of designated sites.
    - Ensure water is protected from pollution, via:

        - Lowering the risk of diffuse pollution.
        - Protected watercourse banks.
    - Conserve and retain water, via:
        - The restoration/management/creation of ponds and scrapes.
        - Water harvesting and storage.
    - Natural food management.

- **Benefit people, animals and places:** We will help farmers to proactively promote and improve their own wellbeing, as well as the wellbeing of their families, workforce, the wider community and their livestock. We will support farms to enhance the beauty of the natural environment and provide opportunities for people to interact with rural culture, landscapes and heritage. This will be achieved through supporting participants to:
    - Maintain and enhance the historic environment, heritage and beauty.
    - Enable people to engage with and access the natural environment.
    - Ensure livestock have a good quality of life.
    - Invest in people providing fair work and creating a valued workforce.
    - Be proficient to practice safely and efficiently.

*Does your proposal include action to support pollinators?*

Evidence[263] shows there has been growing concern regarding the population status of insect pollinators, and in turn the pollination service they provide. The main threats to pollinators include habitat loss, environmental pollution, climate change and the spread of alien species. A 2015 review in the context of the status of the UK's butterflies suggests climate change may pose more of a threat to UK species than had been previously realised.[264]

Tying the SFS direct funding opportunities to intended SLM objectives will address some of the challenges facing pollinators including habitat loss, environmental pollution, and climate change. Many actions consistent with SLM would also be beneficial for pollinators, such as:

- Reduction of artificial fertilisers.
- Reductions in pesticide use through integrated pest management.
- Agroforestry and hedgerow management and creation.
- The planting of species-rich grassland and meadows (both as permanent pasture and as part of a rotational system).
- The creation of in-field wildlife corridors, pollinator strips and beetle banks.

Universal, Optional, and Collaborative Actions to maintain and create habitat will also benefit pollinators. Such actions include, but are not limited to:

- Soil testing.

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[263] Potts, S.G., et al., (2010) 'Global pollinator declines: trends, impacts and drivers', *Trends in Ecology & Evolution*, 25(6), pp.345-353.

[264] Fox, R., et al., (2015) 'The State of the UK's Butterflies'.

- Integrated pest management assessments.
- Tree cover and hedgerow management schemes.
- Active management of 10% of land to maintain and enhance semi-natural habitats.
- The restoration and management of ponds and scrapes.

## G. SOCIO-ECONOMIC DUTY ASSESSMENT

**What evidence has been considered to understand how the proposal contributes to inequalities of outcome experience as a result of socio-economic disadvantage?**

Socio-economic disadvantage means living in less favourable social and economic circumstances than others in the same society and encompasses a variety of factors. These include income and wealth, but also deprivation in relation to factors such as work, health, and the physical environment.

**Farmers**

The National Statistics Socio-economic classification (NS-SEC) is a system which uses occupation and employment relations to group individuals into socio-economic groups. It uses the Standard Occupation Classification (SOC) codes and the following categories describing employment relations:

1. Employers – large organisations;
2. Employers – small organisations;
3. Self-employed – no employees;
4. Managers – large organisations;
5. Managers – small organisations;
6. Supervisors;
7. Other employees.

The resulting NS-SEC structure is as follows:

1. Higher managerial, administrative and professional occupations
   1.1. Large employers and higher managerial and administrative occupations
   1.2. Higher professional occupations
2. Lower managerial, administrative and professional occupations
3. Intermediate occupations
4. Small employers and own account workers
5. Lower supervisory and technical occupations
6. Semi-routine occupations
7. Routine occupations

8. Never worked and long-term unemployed

While the classification itself is reasonably simple and does not necessarily indicate socio-economic deprivation, it is useful in that NS-SEC has been shown to be indicative of peoples' life experiences, behaviours and outcomes. For example, data from the Office for National Statistics (ONS) shows that NS-SEC is a reasonable predictor of life expectancy[265], maternal age[266], marital status of new parents, and smoking prevalence[267]. Those in a higher socio-economic category typically live longer and are less likely to smoke, with women giving birth later into adulthood once married. Those in a lower socio-economic category are more likely to experience the reverse, with experiences, behaviours and outcomes that are considered to be less favourable and detrimental to overall health and wellbeing.

Furthermore, the NS-SEC is indicative of employment characteristics, such as *"…remuneration (hourly or weekly wages versus monthly or annual salaries, payments for overtime, whether on an incremental pay scheme), job prospects (opportunities for promotion and notice period) and work autonomy (deciding the pace, the timing and/or the planning of tasks)*."[268] Those in a lower socio-economic category are more likely to experience less favourable employment conditions, and there is evidence showing that this has health impacts as well as impacts on income and wealth.

Nonetheless, it is important to note that the NS-SEC does not contain information on level or nature of earnings, hours worked, contract type (if an employee) or education level.

Farmers in Wales are typically self-employed with no employees, or employ a small number of staff, and therefore fall into category 4 in the NS-SEC system. Other farm workers may be classed in categories 4, 5, 6, or 7 depending on their role.

There is, however, a wide variety of experience among farmers with regard to income and wealth, which will impact standard of living and outcomes. In the financial year 2020-21, average farm business income[269,270] for all farms in Wales was £34,300, but there was substantial variation by farm type. The average farm business income for dairy farms was £60,200, the

[265]https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/datasets/onslongitudinalstudylsbasedestimatesoflifeexpectancylebythenationalstatisticssocioeconomicclassificationnssecenglandandwales

[266] https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/datasets/birthsbyparentscharacteristics

[267]https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/drugusealcoholandsmoking/adhocs/005387smokingbynssec

[268] https://www.researchgate.net/publication/12406395_The_new_UK_National_Statistics_Socio-Economic_Classification_NS-SEC_Investigating_social_class_differences_in_self-reported_health_status

[269] https://www.gov.wales/sites/default/files/statistics-and-research/2022-03/farm-incomes-april-2020-march-2021-664_0.pdf

[270] Farm business income represents the financial return to all unpaid workers (such as farmers, their partners, other family workers etc.) and is comparable to net profit from agricultural activities. It includes income from basic payment schemes and agri-environment payment schemes.

average for cattle & sheep LFA (Less Favoured Areas) farms was £29,200, and the average for cattle & sheep (lowland) farms was £22,900. While dairy farms have experienced higher average farm business income than other farm types over the last decade, they also experience year-on-year volatility, which leads to uncertainty for farmers.

There is a considerable range of farm business income levels in Wales. Some farms have an income of over £75,000, whilst a little over 10% of Welsh farms have a negative farm business income. Dairy farms have the highest proportion of farms in the highest income bracket, yet around 19% also have a negative income (the third highest farm type in this category). However, SDA (Severely Disadvantaged Area) sheep/beef farms have the highest proportion of farms with a negative income, around 20%, closely followed by DA sheep/beef, just below 20%.

The majority (68%) of respondents to a 2021 survey of Small and Very Small farms in Wales[271] reported that at least one person in the household was engaged in off-farm employment or self-employment in order to supplement household income. In addition, almost half (47%) of respondents reported running other, non-agricultural activities from their holding. By far the most common activity was provision of tourism accommodation, such as holiday lets, bed and breakfast, camping, and glamping. Other sources of income included contracting work, production of renewable energy and equine activities. Many farming households in the study also reported that at present, direct payments from the Basic Payment Scheme were an essential part of their income, with Small farms being more likely to report this (69% compared with 45% for Very Small farms).

It is evident that despite being in the middle of the NS-SEC classification structure, some farmers face high levels of pressure on their farm business income, and in turn their household income, which may lead to material deprivation. This will inevitably have an impact on their quality of life. Public Health Wales also cite low levels of income and the uncertainty surrounding the financial viability of the farming sector as a key challenge in relation to the mental health of farmers[272].

The Agriculture Wales Act 2023 sets Sustainable Land Management (SLM) as the policy framework for agriculture in Wales.

The delivery of SLM objectives through the SFS is intended to positively impact the socio-economic circumstances of farms and rural communities. This is underpinned by the requirement that the objectives should be delivered in a way which:

a) meets the needs of the present without compromising the ability of future generations to meet their own needs, and

b) contributes to achieving the well-being goals in section 4 of the Well-being of Future Generations (Wales) Act 2015.

[271] https://gov.wales/sites/default/files/publications/2021-08/understanding-farmer-motivations-very-small-small-farms-full-report.pdf

[272] https://phw.nhs.wales/services-and-teams/knowledge-directorate/research-and-evaluation/publications/supporting-farming-communities-at-times-of-uncertainty/

The SFS is expected to impact farmers' socio-economic circumstances in the following key ways:

1. The SFS will provide support for the delivery of the SLM outcomes we are seeking. This can provide participating farmers with an income stream which is stable, and not affected by factors such as market volatility.

2. Specifically, support can be given under the purpose to improve the resilience of agricultural businesses as set out in the Act, in line with the SLM objectives. This contributes to reducing disadvantage in the short term and provides protection against future shocks or sources of disadvantage.

3. Many aspects of SLM can be achieved in ways which offer a financial benefit for the farm business. For example, nutrient management planning supports improved air and water quality but also reduces input costs through reduced fertiliser use. Improved energy efficiency can lead to cost savings, while the production of renewable energy may provide income for the farm if they are able to sell energy they don't use.

The change from the current support mechanisms to the SFS has the potential to have negative socio-economic effects. There will be a managed transition to the new system, to ensure there is no sudden cessation in funding for any farmer and mitigate potential negative impacts.

**Rural communities**

While the biggest impacts of the SFS will be felt by farmers, we recognise the key economic, social, and cultural role that agriculture plays in rural Wales, and as such, the SFS is expected to have an impact on rural communities more generally. Socio-economic disadvantage can lead to inequality of outcome in areas such as education, health, personal security and living standards. The Welsh Index of Multiple Deprivation (WIMD)[273] provides a suite of indicators relating to factors which are linked to deprivation. In general, the picture for households living in rural areas is mixed:

- **Income:** There is no clear trend with regard to Income deprivation in rural areas. Affluent areas in cities and towns tend have the lowest levels of deprivation while the least affluent areas in cities and towns tend to have the highest levels of deprivation. Rural areas fall in between these two extremes.

- **Employment:** Similarly to the Income domain, the extremes of Employment deprivation occur in cities and towns, while rural areas fall on a spectrum between the two.

- **Health:** Rural areas have moderate to good outcomes across all health indicators in the WIMD with no obvious pattern; the most severe health deprivation occurs in urban areas.

- **Education:** The picture for Education in rural areas is very similar to that of Health, with moderate to good outcomes across all Education indicators and no clear pattern.

[273] https://gov.wales/welsh-index-multiple-deprivation

- **Access to services:** This is the primary domain in which rural areas consistently show high levels of deprivation. For some residents, the distance to services may be manageable and accepted as a sacrifice worth making to obtain other lifestyle benefits associated with rural areas. For others, particularly those who are older or disabled, difficulty accessing services may be especially challenging and directly contribute to a poorer quality of life.

- **Housing:** Rural areas do not generally have high numbers of people living in housing that is overcrowded or in a state of disrepair, however, people in rural areas are more likely to live in housing that is of poor quality or contains serious hazards.

- **Physical Environment:** Rural areas tend to score poorly in relation to access to public green space but have high 'Ambient Green Space' scores due to the inherently green nature of the rural environment in Wales. This is in spite of the fact that the WIMD measure includes public rights of way in the countryside[274], although rural households may not have any of these within a sufficiently accessible distance[275]. Data from the ONS[276] shows that households in rural areas are, however, more likely to have a garden and that gardens in rural areas are, on average, much larger than those in urban areas. As such, it may be the case that a lack of access to a public green space is not as big of an issue as it would be for those in urban environments.
  Pollution levels are most problematic in urban environments rather than rural areas, while the flooding risk varies considerably based on other factors.

- **Community Safety:** Rural areas tend to have lower levels of crime and anti-social behaviour than more urban areas, however, it is important to note that the nature and impact of crime and anti-social behaviour in rural areas can be very different from urban areas.

One way in which the SFS could impact on the WIMD domains in rural areas is through enhancing access to the countryside. Under the SFS, the Welsh Government will be able to support on-farm action to maintain and enhance public access to and engagement with the countryside and historic environment. An Optional Action (OA) under the SFS includes a range of measures that farmers would be able to take to deliver this, which include upgrading and enhancing existing paths, establishing new access, and hosting educational visits. Moreover, Collaborative projects may also be supported under the SFS to improve access for local communities. Enhanced access to the countryside will be of benefit to those who live locally, but also to those who travel from further afield to enjoy the natural environment.

[274] For further details, please refer to the Welsh Index of Multiple Deprivation (WIMD) 2019 Technical Report (https://gov.wales/sites/default/files/statistics-and-research/2020-02/welsh-index-multiple-deprivation-2019-technical-report.pdf)

[275] 5 minute walk or 300m distance

[276] https://www.ons.gov.uk/economy/environmentalaccounts/articles/oneineightbritishhouseholdshasnogarden/2020-05-14

The domains of Health and Education could also see a positive impact as a result of the SFS; a number of the UAs will support outcomes such as cleaner air, cleaner water, and higher animal health, which will have a positive impact on human health.

The SFS is expected to positively impact rural economies, with potential for a positive impact on income and employment. In turn, sustainability of rural communities will contribute towards positive benefits in relation to social capital, culture, and the Welsh language.

*What information has been gained through engagement with those effected by the proposal/decision and specifically those who suffer socio-economic disadvantage?*

We have conducted three consultations so far, Brexit and our Land, Sustainable Farming and our Land and the Agriculture White Paper. We received many responses from individual farmers in Wales as well as numerous organisations that represent them. Brexit and our Land received 521 substantive responses from individuals and organisations in farming, Sustainable Farming and Our Land received 198 and the Agriculture White paper received 30; though it is worth noting that not all respondents provided information on industry background and these figures may be an undercount. We have undertaken two phases of co-design in order to allow farmers – those most affected by the SFS – to help shape the future of farming policy in Wales. The co-design project involved participants of different age, farm type, sector, tenure, and involvement with the Welsh Government schemes.

We have attended in-person events where possible, such as the Royal Welsh Agricultural Society Fairs. Roadshows and other in-person events will run throughout the SFS consultation period in order to reach as many farmers as possible across Wales.

*Have protected characteristics been considered?*

Please refer to the Equality Impact Assessment for more details on how the SFS will impact those with protected characteristics.

*Have communities of interest and places interest been considered.*

The primary communities of interest with regard to the SFS are the agricultural community and the Welsh language community. Given the SFS concerns the agricultural industry, the impacts on those in the agricultural community have been considered in detail throughout the impact assessment. Impacts on the Welsh language, those who speak it and those who are learning it, have been considered in the Welsh Language Impact Assessment.

In addition, the shift in agricultural policy towards SLM means that environmental organisations represent another substantial community of interest. Such organisations have been active in responding to our consultations; *Brexit and our Land* received 160 substantive responses from individuals and organisations with environmental interests, *Sustainable Farming and Our Land* received 32 and the Agriculture White paper received 27. The SFS is explicitly designed to generate positive outcomes for the mitigation of climate change and the decline in biodiversity. A full Biodiversity Impact Assessment can be found in Annex F, while Section 5 of this document deals with Environmental Wellbeing.

The primary communities of place are the rural communities of Wales more generally. The impacts on those living in Rural Areas are detailed in the Rural Proofing Impact Assessment,

with additional discussion in the Equality Impact Assessment, as demographics in rural communities tend to differ from those in urban environments.

*What information has been considered regarding future trends?*

The Welsh Government declared a climate emergency in 2019 and a nature emergency in 2021. The *Inequality in a Future Wales: Areas for action in work, climate and demographic change* report[277] emphasises the link between climate change and inequality, noting that the poorest and most marginalised populations are expected to be the most impacted by climate change. With this in mind, ensuring that legislation in Wales contributes towards addressing the Climate and Nature Emergencies will have an important positive impact on those experiencing socio-economic disadvantage in our society. Households experiencing deprivation are likely to find it more difficult to be resilient to the impacts of climate change in the future; for example, being unable to afford appropriate modifications to their home or move away from an area that is at risk of flooding. Individuals in health deprivation are most at risk from poor quality air.

In their report, *Rising to the Triple Challenge of Brexit, COVID-19 and Climate Change for health, well-being and equity in Wales*, Public Health Wales (PHW) note that farmers and agricultural workers are among those whose vocation will be most affected by climate change. It is therefore important to produce food and manage land in a way that contributes towards the mitigation of climate change to ensure the viability of farms for the farmers of the future, and the security of food for the nation. The report also identifies rural communities as being particularly vulnerable to the 'triple challenge', and the SFS is designed to support the sustainability of rural Wales for current and future generations.

The recently passed Agriculture (Wales) Act (2023) has four objectives which the actions of the SFS are designed to meet. Strategic objectives concerning the mitigation and adaptation of climate change, the maintenance and enhancement of ecosystems, and the conservation, enhancement and promotion of the countryside and cultural resources and sustaining, promoting, and facilitating the use of the Welsh language are to be achieved alongside the first strategic objective, which is the sustainable production of food and other goods. The Act is therefore designed to address the future trends of the climate and nature emergency and the SFS will allow for the targeting of specific issues such as air pollution, water pollution, and flood risk. For further details of how we expect the SFS to impact climate change and biodiversity please see the Environmental Wellbeing and Biodiversity Impact Assessments.

*What data has been considered (National and local)*

We have considered a wide variety of data sources and other sources of evidence throughout our impact assessments. These include data such as the Welsh Index of Multiple Deprivation, Census and survey data from the Office for National Statistics, academic literature, and research produced by organisations with an interest in agriculture. In combination, these different sources allow us to assess the potential impacts of the SFS in relation to multiple factors of relevance with regard to socio-economic status.

[277] https://www.futuregenerations.wales/wp-content/uploads/2021/11/FGCW_Equalities-Report_proof_08.pdf

**How could the proposal potentially further exacerbate inequality of outcome experienced as a result of socio-economic disadvantage?**

*Please provide detail regarding inequalities of outcome likely to be impacted and those people and communities likely to be impacted*

It is not expected that the SFS will impact anyone in a manner that exacerbates inequality of outcome due to socio-economic disadvantage.

Nonetheless, we recognise that the SFS represents a substantial change in agricultural policy in Wales, and this will need to be considered so as to minimise the risk of anyone being adversely affected, particularly with regard those who already experience socio-economic disadvantage. In order to mitigate against adverse impacts, there will be a transition period between the current Basic Payment Scheme and the SFS. This will mean that no farmer will experience a sudden cessation of the payments they receive, regardless of whether or not they choose to enter the SFS.

We will continue to explore whether mechanisms such as capping or tapering payments are suitable for the SFS to ensure that farmers at risk of inequality of outcome are not further disadvantaged.

For further detail on how we expect the SFS to impact on different demographic groups, including those with protected characteristics, please refer to the Equality Impact Assessment.

**How could the decision potentially improve outcomes for those who experience socio-economic disadvantage?**

*Please provide detail regarding outcomes that will be improved and for who.*

The legislative framework of the Agriculture (Wales) Act (2023), and the SFS, are designed to align with existing legislation and the Welsh Government's commitments in regard to the climate and nature emergency, and the wellbeing of future generations.

The first way in which the SFS will support improved outcomes for those who experience socio-economic disadvantage is improved health outcomes. Cleaner air and water in particular will reduce the risks to health, particularly among more vulnerable groups. In addition, enhanced access to the countryside will provide more opportunities for recreation and exercise, benefiting both physical and mental health. Further details on the health impacts of the SFS are provided in Section 2 of this document.

The second way that the SFS will support those experiencing socio-economic disadvantage is through reduced flood and drought risk. People experiencing deprivation typically have reduced agency to change their situation, for example, by moving to a different property if their home is in an area at high risk of flooding. As such, setting Sustainable Land Management as the future

framework for farming in Wales will be of particular benefit to those experiencing disadvantage due to the positive environmental outcomes the SFS is designed to enable.

More specifically there are a number of ways in which the SFS is designed to benefit farmers, improving outcomes for those who experience socio-economic disadvantage.

Participation in the SFS will provide farmers with a stable income stream, providing certainty in regard to their own financial situation and also their ability to employ workers and contractors. This stability will provide economic benefits, which in turn may have mental health benefits through the alleviation of uncertainty and financial stress. It is also expected to have positive social benefits through the continued membership of farmers and their families within their communities.

Sustainable Land Management is a holistic framework which is designed to be beneficial for both the environment and farmers. There are actions within the SFS which will help farmers to reduce their costs, having a positive impact on their incomes. SLM is also designed to improve resilience against the negative impacts of climate change as well to directly mitigate against it, which will help farm businesses to prepare for the future and to ensure that the farm remains viable for future generations.

**How will you monitor the impact of this decision? (Please consider wider outcomes)**

*Does new monitoring information need to be collected? If so, what?*

The Agriculture (Wales) Act (2023) provides the powers for monitoring and evaluation of Sustainable Land Management as a whole, and of the SFS. A future monitoring and evaluation strategy will detail how Welsh Government intends to assess the delivery of environmental, economic, social, and cultural outcomes.