Llywodraeth Cymru
Welsh Government

Agricultural Soil Policy Statement

Stakeholder Engagement Findings and Response

2025

Contents

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Mae'r ddogfen hon ar gael yn Gymraeg hefyd / This document is also available in Welsh
Rydym yn croesawu gohebiaeth a galwadau ffôn yn Gymraeg / We welcome correspondence and telephone calls in Welsh

01

Introduction

The Agricultural Soil Policy Statement (ASPS) addresses a gap in agricultural soils policy and provides a coherent vision and broad ambitions for the sustainable management of agricultural soils in Wales[1].

The statement has been developed through multiple stages. A review of evidence on the risks and threats to agricultural soils in Wales set out the issues and shaped the objectives of the first draft of the ASPS[2]. Following this, several engagement events were conducted with key stakeholders to gather feedback on the draft ASPS which informed the next stage of the statement development.

This document summarises the issues more commonly raised during engagement with stakeholders and sets out how the feedback has been considered by Welsh Government.

1 ASPS
2 Evidence Review

02

Engagement events

Farmers

Five online workshops were conducted, involving 31 farmers from a range of farm types that broadly covered different farming activities across Wales. These included sheep, beef, dairy, arable, horticulture, poultry, and pig farming. Each workshop was originally designed to focus on specific agricultural sectors to increase representativeness, however the mixed nature of many farms limited the practicality of this. The Welsh Government commissioned ADAS to organise and lead the workshops. They were structured to explore farmers' experiences and current practices of soil management, share the draft soil policy statement, and gather feedback on it. For more detail on these workshops and research findings see the Farmer Engagement Research Report[3].

Other stakeholders

Sixteen external organisations were invited to an online engagement workshop. Of those sixteen, three representatives from the NFU Cymru, The Wales Federation of Young Farmers Club (YFC) and Sustainable Soils Alliance (SSA) attended. The workshop was led by ADAS and included a summary presentation of the draft ASPS, followed by a discussion and opportunity for verbal feedback. Further written feedback was given from YFC and SSA. External stakeholders unable to attend the workshop were also given the opportunity to provide feedback on the draft ASPS: written feedback was provided by Farmers Union of Wales (FUW) and National Trust Cymru.

All engagement events were recorded, transcribed and anonymised. Within this report, views have not been attributed to the organisation that provided them and have been reported more broadly to avoid identifiability where possible.

Natural Resources Wales

Natural Resources Wales (NRW) (land use, water and regulations) were consulted throughout the development of the statement including two workshops. Facilitated by ADAS, the workshops were conducted to allow WG to better understand and work through feedback provided by NRW on the draft ASPS.

3 Availabe at www.gov.wales/agricultural-soil-policy-statement

03
How the feedback has been considered

This document summarises the feedback received from engagement with all stakeholders and describes how this has shaped the final ASPS. It also explains the reasons why some feedback did not fall within the scope of the ASPS but has been considered here.

The following considerations were used to determine which feedback was incorporated into the ASPS:

— Agricultural soils (see definition below). Issues related to other soil uses are outside the scope of the ASPS.

— Policy ambition. The statement encompasses policy ambitions and vision. Specific delivery of these ambitions, which will sit across multiple policy areas, was outside the scope of the ASPS.

— Sufficient evidence. Emerging issues currently without enough evidence linked to Welsh agricultural soils, were considered outside the scope of the ASPS.

For the purpose of the statement, agricultural soils are defined as 'soils under agricultural management for crops, grassland and semi-natural habitats.'[4] This definition includes all grasslands; semi-natural habitats (including peat soil under restoration and peat under intensive agriculture); arable, bioenergy and fodder crops; horticulture; agroforestry; silvopasture; paddocks; all nature conservation designated sites (e.g. SSSI, SAC) under agricultural management; and, all areas under agri-environment scheme agreements.

Alongside the ASPS WG have developed an annotated figure of the Policy Landscape, relevant to soil, that highlights specific delivery mechanisms for the objectives of the statement through existing regulations and schemes, as well as any potential conflicts to delivering the objectives. It highlights where the ASPS sits with current Welsh Government policies and how it links to key policy drivers such as the Well-being of Future Generations (Wales) Act 2015[5] and the Environment (Wales) Act 2016[6].

4 Review of Welsh soil evidence | GOV.WALES
5 wbfga
6 Environment Act

04

Follow up with engagement participants

Follow up workshops were conducted with the farmers who participated in the original workshops, relevant Internal Welsh Government policy teams and NRW to share how their feedback had been incorporated into the ASPS. These workshops were also an opportunity for any final comments before the ASPS and accompanying documents were published. The Farming Unions and NGOs were also thanked for their feedback and given a draft copy of the ASPS.

Stakeholder engagement has allowed farmers, along with groups and organisations representing farming and wider agricultural soil management, to help shape the ASPS, ensuring the statement is fit for purpose and a shared vision for soil policy in Wales. The Welsh Government received feedback that these sessions were appreciated by farmers and other stakeholders.

05

Stakeholder Feedback incorporated into the statement

Findings from stakeholder feedback have been grouped into common themes which are set out below.

1. Language and framing of the statement

Feedback

Farmers and some stakeholder organisations commented that the language and framing of the statement should more accurately reflect the current condition of Welsh soils. Most farmers, and external stakeholders reported that soils in Wales were generally in good condition, which was also reflected in the Soil Evidence Review[7] but that phrases in the statement like 'reduce soil degradation' (in the original title of Objective 3) suggested that this was not the case. Many stakeholders suggested framing the statement in a way that better acknowledges the current generally positive baseline and frames ambitions for the future around maintaining and improving this.

Our Response

Changes have been made to the language and framing of the statement to better reflect the current situation, for example by adding *'Agricultural soils in Wales are distinctive and are generally in good condition... To prevent future degradation of our soils we need to develop knowledge and start taking action now to build resilience'*. Ambitions for the future have been framed in a more positive way by shifting the emphasis from 'reducing' and 'minimising' negative impacts to 'protecting, maintaining and enhancing' soils, soil functions and services, and encouraging positive impacts.

2. Climate change

Feedback

Some farmers and external stakeholders stated there should be greater consideration of climate change throughout the statement as a threat to protecting, maintaining, and enhancing soils. The diversity of stakeholders meant that groups had slightly different concerns and priorities related to climate change but, overall, there was agreement that it had not been adequately highlighted in the first draft of the statement.

7 Evidence Review

Our Response

Additions have been made to the statement to give greater prominence to climate change as a major threat to agricultural soils, such as adding the text box below which highlights climate change impacts on soils now and in the future.

Clearer links have also been made between the priority areas in Objective 3[8] and climate change impacts, highlighting how issues like erosion might interact with a changing climate. For example, *'The predicted rise in frequency and severity of extreme weather events under climate change is expected to increase the risk of soil erosion'*.

Climate change is mentioned under all five priorities identified under objective 3, illustrating the far-reaching impacts climate change will have on agricultural soils.

Climate Change

Climate has a direct influence on processes of soil formation and affects soil properties and functions. Climate change is already impacting soils through extreme events like floods, fires and droughts, and is anticipated to have a greater impact on the functionality and agricultural potential of Welsh soils in the future. Changing climate is expected to cause changes to soil wetness, soil organic matter and carbon stocks, the structure and function of soil biological communities, and nutrient cycling. These changes are expected to drive shifts in agricultural management (e.g. increasing viability of arable farming). Management of soils should aim to protect and maintain soils' function of climate regulation and enhance soils' capacity to adapt to pressures under a changing climate.

8 Protect, maintain and enhance soils, soil functions and services

3. Interconnected view of soils

Feedback

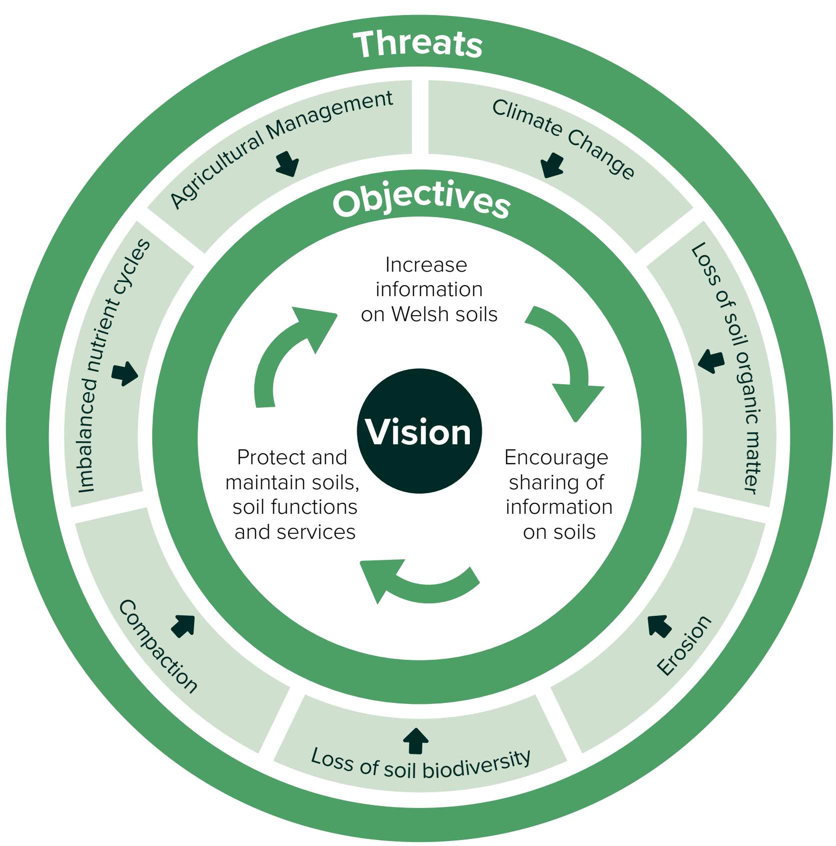
One external stakeholder and some farmers highlighted that the first draft of the statement appeared focused on single issues, which diverted attention from the interconnectedness of soil health, soil ecosystem services and functions. These stakeholders identified that soil health involves the interaction of biological, chemical and physical components of soil, but the draft statement did not make this clear. It was suggested that the goal of reducing soil degradation would not be achieved without a holistic approach to soils.

One external stakeholder also suggested that linking soil services and functions more closely with the objectives and priority areas in the statement would help emphasize the importance of protecting Welsh soils and demonstrate the interconnectedness of soil.

Our Response

The statement has been adjusted to reflect a more interconnected understanding of soils and soil health. Further clarification has been included that each objective is important for protecting against current and emerging threats and achieving resilient agricultural soils, and a figure has been included highlighting this[9].

Figure 1:



Under Objective Three (Protect, maintain and enhance soils, soil functions and services) the priorities chosen are not the only ways to achieve the objective, but have been identified from the evidence review and stakeholder engagement as the most important based on current available evidence for Wales. The ambition of the statement is to be adaptive rather than fixed to respond to the challenges soil face now and in the future.

The statement has been updated to highlight that *'soils and soil functions are complex and interconnected and there may be overlaps or trade-offs between priorities'*. This acknowledges that protecting soils from erosion, for example, will also have benefits in terms of maintaining soil organic matter. On the other hand, examples from farmers demonstrated that in practice trade-offs can occur between priorities.

In response to one external stakeholders' request for clearer links between soil functions and the priorities a table has been included illustrating the positive benefits on soil functions that each of the identified priorities can achieve (see table below).

4. Soil nutrients

Feedback

One external stakeholder highlighted that a priority around soil nutrients had not featured in the draft statement, commenting that nutrient cycling is a key regulatory function of soils and nutrient pollution is a key environmental issue in Wales that should be addressed.

Findings from farmer engagement also indicated that managing soil fertility was perceived as both a key practice of 'good' soil management and a key challenge (especially with instability in fertiliser prices), with many farmers reporting it was their main priority.

Our Response

The diagram below, now included in the statement, illustrates the positive impacts on soil functions that each of the identified priorities in the ASPS can achieve.

To address the feedback on soil fertility and nutrient cycling an additional priority has been added to Objective Three, focused on balancing soil nutrient cycles. This priority states that *'Balanced nutrient cycling provides sufficient nutrients to deliver soil functions and maintain soil fertility whilst minimising losses to the environment'*. This highlights the key regulatory function of soils, acknowledges farmers' need for good soil fertility for productivity, and addresses the negative effects that can arise from nutrient loading, both on the soil itself and the wider environment.

Table 1:

Soil function benefited	Priority to protect, maintain and enhance soils				
	Maintain and enhance soil organic matter	Balance nutrient cycling	Protect soils from erosion	Maintain and improve soil structure	Protect and foster soil biodiversity
Food and biomass production	Strong benefit	Moderate or localised benefit	Moderate or localised benefit	Strong benefit	Moderate or localised benefit
Regulating environmental cycles	Strong benefit	Strong benefit	Slight benefit	Slight benefit	Strong benefit
Habitats and biodiversity	Strong benefit	Strong benefit	Moderate or localised benefit	Moderate or localised benefit	Strong benefit
Regulating water flow and quality	Strong benefit	Strong benefit	Strong benefit	Strong benefit	Slight benefit
Climate change mitigation and adaptation	Strong benefit	Strong benefit	Slight benefit	Moderate or localised benefit	Moderate or localised benefit
Cultural and Historical	Slight benefit	Slight benefit	Moderate or localised benefit	Slight benefit	Slight benefit

Strong benefit Moderate or localised benefit Slight benefit

5. Pollution as a threat to soils

Feedback

Many external stakeholders commented that there were very few references to pollution, as both a threat to soils and occurring via soils, in the statement. The feedback highlighted the link between compaction and pollution events, pollution from nutrient loading or organic matter build up, and soils being mediums to prevent pollution to air and water. The feedback also highlighted the emerging issues of microplastic and heavy metal pollution of soils.

Our Response

The statement has been amended so that pollution, as both a threat to soils and occurring via soils, is more integrated into Objective Three (Protect, maintain and enhance soils, soil functions and services).

Soil pollution has been identified as a risk in the statement if inappropriate organic materials are applied to increase soil organic matter. It has been highlighted that balancing soil nutrient cycling, maintaining soil organic matter, and improving soil structure can reduce air and water pollution (of which agriculture is a major source in the UK) via soils. It has also been highlighted that soil pollution may threaten soil biodiversity.

Because pollution issues are integrated into the existing priorities, and because some specific examples of pollution raised (e.g. heavy metals and microplastics) currently lack evidence in Wales, the decision was taken not to add a pollution-specific priority at this point. However, Welsh Government does acknowledge that these emerging issues and a broader pollution priority may need to be reconsidered for inclusion in the future.

6. How the statement links to other policies and mechanisms

Feedback

One external stakeholder and some farmers asked for clearer links between the ASPS and existing policies and regulations, including exploration of potential areas of conflict. Farmers engaged with in workshops discussed the new Control of Agricultural Pollution Regulations and how it may lead to increased outwintering of animals:

> "the agri-pollution regs just mean sheds and slurry pits are just so expensive now, and I outwinter, we're starting out, we haven't got any sheds so we've just got to".
>
> Farming workshop participant

Outwintering livestock during wet winter periods can increase the risk of soil compaction.

Our Response

The statement is a strategic document that sets out high-level ambitions for the sustainable use of agricultural soils in Wales. The statement does not address delivery of the objectives, as this will sit across different policy areas in Welsh Government and NRW.

As it is outside of the scope of the statement itself to explore detailed policy context and delivery, this feedback has been addressed by developing an annotated Policy Landscape figure to accompany the ASPS[10]. This highlights where the ASPS sits with current Welsh Government policies and how it links to key policy drivers such as the Well-being of

10 Policy Landscape Figure

Future Generations (Wales) Act 2015[11] and the Environment (Wales) Act 2016[12]. This figure also highlights specific delivery mechanisms for the objectives of the statement through existing regulation and schemes, as well as any potential conflicts to delivering the objectives.

7. Soil structure

Feedback

Many farmers felt that improving soil structure was a key element of 'good' soil management, whilst dealing with compaction was often one of the key challenges. Some farmers commented on the importance of good soil structure for productive functioning of agricultural soils, and highlighted the need for good infiltration, water holding capacity and aeration of soils.

Our response

To reflect the importance of soil structure in feedback from farmers the priority 'minimise compaction' was altered to 'improve soil structure'. This change in framing better reflects the positive ambitions of farmers practicing 'good soil management', whilst still recognising the challenge of dealing with compaction specifically.

8. Interpretation of data

Feedback

Feedback from farmers highlighted the need for more available information on Welsh soils from research, monitoring, and mapping, providing strong support for Objective 1 'Increase information on Welsh soils'.

Feedback also provided insight into the kinds of information which are currently lacking (long-term and farm-scale), as well as how information could be shared to have the greatest benefits to agricultural soils in Wales. Many farmers said they experienced difficulties in interpreting data from soil analysis and expressed a desire for data to be made available in more accessible formats in order for it to be most useful.

Our Response

Objective 1 has been amended to explicitly highlight farmer feedback in relation to information on soils, in the hope that this will therefore directly inform the delivery of this objective:

> 'Our engagement with farmers has highlighted the importance of collecting data at field and farm scales, as this is most relevant to inform farm-level interventions. Feedback also indicated that data must be shared in a timely, accessible and meaningful way to effectively support sustainable soil management'.[13]

11 www.gov.wales/well-being-future-generations
12 www.gov.wales/environment-wales-act-2016-factsheets
13 Agricultural Soil Policy Statement Farmer Engagement Research Report, p60, available at www.gov.wales/agricultural-soil-policy-statement

06

Stakeholder feedback not incorporated into the statement

This section highlights the feedback and evidence that could not be incorporated into the current statement but should be considered for inclusion in future versions of the ASPS. The following issues were either identified as emerging issues, did not have enough evidence currently for Welsh soils to support inclusion, or were not related to agricultural soils (and therefore were outside the scope of the current statement).

1. Timeline of reviewing

Feedback

One external stakeholder suggested a timeline highlighting when the statement would be reviewed and updated to incorporate the latest evidence.

Our response

It is a WG ambition to develop and update the statement further. The point at which this happens will be based on evidence, priority and resource. The statement used scientific evidence and knowledge from farmers and stakeholders on what was important in achieving resilient agricultural soils in Wales. The ASPS acknowledges that threats and challenges will continuously emerge for soils and the ASPS should be adaptive to emerging pressures. Additionally, the policy landscape is still developing and changing, emphasizing the need for the statement to be adaptive.

There are several ambitions proposed for soils and management through the Sustainable Farming Scheme (SFS)[14]. The statement can be useful in highlighting priorities for the scheme development and will need to adapt in the future as SFS develops and gathers information on progress.

Mechanisms for updating and reviewing evidence are established within the Welsh Government. The State of Natural Resources Report for Wales (SoNaRR)[15] is published every 5 years through a requirement set by Welsh Government in the Environment (Wales) Act 2016. SoNaRR is an evidence-based report to provide information on the current state of natural resources, track progress in achieving sustainable management of natural resources and serves as evidence for policy. The use of the SoNaRR reports will be explored as an already established mechanism to update the ASPS on the current state of agricultural soils in Wales.

14 Sustainable Farming Scheme | GOV.WALES
15 SONARR

2. Knowledge exchange

Feedback

The feedback from external stakeholders expressed that awareness should be raised on the value and importance of soils with the general public.

Our response

The statement currently only focuses on agricultural soils and agricultural soil users so this consideration would sit outside the scope of the statement. This would be a consideration if the statement is widened to include other soils or updated in the future. The statement does acknowledge the importance of sharing knowledge and awareness of soils amongst farmers, land managers, decision makers and researchers to enable optimum decision making for resilient soils. This is critical to mitigating and adapting to pressures and threats facing Welsh soils. Other nations (Australian National Soil Strategy and Swiss National Soil Strategy) have encouraged engaging with the public to foster protection of soils. Additionally, the Swiss National Soil Strategy has a target to be an international advocate for the protection and sustainable use of soils globally. Therefore, the Welsh Government recognise that raising awareness about the value of soils with wider audiences would help the vision of the statement and could be a consideration in the future.

3. Background erosion levels

Feedback

There was a discussion from one external stakeholder around the inclusion of background levels of erosion in the statement. It was suggested that the statement did not account for erosion that happens continuously and this may increase with changing weather conditions or management changes.

Our response

The statement has focused on erosion hotspots as there is currently little evidence to support background levels of erosion taking place in Wales. While large areas of Wales are assumed to have low erosion rates due to mostly being grasslands, this is not supported by erosion measurements or observations from Welsh soils (Cranfield University, 2016). Data on erosion and mechanisms to monitor erosion are also limited for different agricultural management (e.g., min-till, no till, plough, undersowing) and extreme weather conditions linked to climate change. Additional local or field scale evidence to assess the impacts of background erosion would be needed to be included in future statements.

Despite not including background erosion levels specifically, the statement does encourage the protection of soils from erosion. The evidence review defines soil erosion as “the displacement of soil by wind or water”, this would encompass hotspot events and continuous background levels of erosion. The statement acknowledges that having management practices in place to reduce erosion has multiple benefits to soil structure, agricultural productivity, air and water quality, soil biodiversity and climate regulation.

4. Synthetic chemicals on soil biodiversity

Feedback

Feedback from some farmers suggested that the impact of synthetic chemicals such as pesticides, herbicides, fungicides and antibiotics on soil biodiversity and health is important and should be included.

Our response

Welsh Government understands the concern of synthetic chemicals around soil biodiversity and health, however there is not currently evidence in Wales to support the inclusion in the statement at this stage. Recent global assessments have shown that soils exposed to pesticides have been linked to effects on biodiversity with declines in insects, earthworms, birds and mammals populations (EEA, 2023). A recent meta analysis indicated that synthetic chemicals can have detrimental effects on soil biodiversity globally and risk threatening ecosystems health, this effect was more harmful to biodiversity when multiple substances and broad-spectrum chemicals were applied (Beaumelle et al 2023). It should be noted that these were global studies, and there is much less available evidence at a smaller scale by country. Additionally, many of these studies focus on the effects on non-soil biodiversity (birds, bees, small mammals). This is an evidence gap for Welsh soil, and evidence in Wales would be needed to be included in future statements.

The soil evidence review identified an evidence gap around soil biodiversity trends in general for Wales. Changes in soil biodiversity were found to be most likely related to land use changes, loss of organic matter, climate change and extreme weather conditions. The monitoring of soil biodiversity and trends with the Glastir Monitoring and Evaluation Programme (GMEP[16]) does not go beyond 2016. This monitoring has not been taken forward with the Environment and Rural Affairs Monitoring & Modelling Programme (ERAMMP), so there is limited emerging evidence on these trends. Further evidence would be welcomed to be able to monitor trends in soil biodiversity.

5. Pollution in relation to heavy metals and microplastics

Feedback

An important consideration for external stakeholders was the inclusion of pollution into the statement. They specifically mentioned heavy metals, microplastics and air pollution.

Our response

Pollution has been incorporated into the policy statement more widely (see above for details). The specific examples of pollution mentioned in the feedback (heavy metals and microplastics) lack evidence and were not included in the evidence review or the ASPS. These are emerging issues to be considered in the future.

Heavy metals are a concern for agricultural soils with major sources coming from atmospheric deposition, sewage sludge, livestock manures, inorganic fertilizers and lime, agrochemicals, composts and industrial by products. Soils act as long-term sinks for heavy metals slowly accumulating into the soil profile over time. This has consequences for soil biodiversity, soil health and human health through increased

16 Summary of GMEP results | Glastir Monitoring and Evaluation Programme

crop uptake or ingestions by grazing livestock.[17] Atmospheric deposition is one of the main sources of heavy metal contamination (25-85%), most of these sources are from industrial activities, power generation and transportation (Nicholson et al 2003; Liu at al 2023). Livestock manures and sewage sludge are also important sources in agriculture and could be major sources of metal contamination in soils (Nicholson et al 2003). The evidence around metal contamination in Welsh agricultural soils is very limited and available data is outdated. From the evidence available, heavy metals potentially pose a threat to agricultural soils in Wales, but further evidence is needed to be considered for inclusion in future soil policy statements.

Microplastics in soils are a recent emerging issue, reflected in the current absence of specific environmental policies or regulations in Wales or the UK to address the threat of microplastics. Microplastic pollution in agricultural soils come from a variety of sources such as plastic mulching, sewage irrigation, soil amendments, fertilizer coating and atmospheric deposition (Huang et al 2020; Li et al 2018; Bian et al 2022). Microplastic pollution can compromise the soil structure, inhibit nutrient availability, and impact microbial diversity (Liu et al 2014). It is thought that agricultural soils contain the highest microplastic concentrations globally compared to other systems (Cusworth et al 2023). They also present a long-term risk to productivity and human health as they are very difficult to recover once incorporated into soil (Qi et al 2020). Despite the emerging threat there is very little evidence for Wales on microplastic in soil, and further evidence is needed to assess this threat.

6. Buffering of nutrients into non-agricultural soil

Feedback

One external stakeholder wanted the statement to acknowledge that agricultural soils are often adjacent to non-agricultural soils and there could be leaching or buffering of pollutants into these systems.

Our response

The statement only focuses on agricultural soils currently, so other soils would sit outside the scope of the statement, but it does acknowledge the importance of good soil management to prevent pollutants or contaminants entering other sensitive habitats. One of the priority areas in the statement is that agricultural soils have balanced soil nutrient cycles. Balanced nutrient cycling provides sufficient nutrients to deliver soil functions and maintain soil fertility whilst minimising losses to the environment.

If other soils are considered in future statements, the buffering of soil contamination might need to be considered. Urban and industrial soil contamination can affect soils in surrounding areas, with diffuse contamination spreading to more sensitive habitats through water or air (Peake et al 2022). An evidence review and stakeholder engagement are required for urban or industrial soils to assess this threat. See point 8 on “Other soils” for more information.

17 Soil pollution and ecosystems — European Environment Agency (europa.eu)

7. Micronutrients

Feedback

A stakeholder highlighted micronutrient deficiencies in food produced from Welsh soils, raising concerns around Welsh soil being good enough to support growth of nutritious arable production.

Our response

Micronutrient deficiency has not been included in the statement because this is a large evidence gap for Wales. For the UK up to two thirds of soil are deficient in key macronutrients, magnesium, phosphorus and potassium (NRM 2022[18]), and we do not have evidence for micronutrients. This appears to be an emerging issue in food production globally. This issue would be quite localised in Wales due to the limited arable production in Wales. Although this consideration could be more important with arable production potentially becoming more viable from climate change. Further evidence for Wales would be needed to support the inclusion of micronutrients in future version of the statement.

8. Other soils

Feedback

Farmers and external stakeholders highlighted that the policy statement should be expanded to include soils from other sectors not just agricultural soils.

Our response

This consideration currently sits outside the scope of the statement which focuses on agricultural soils. Agricultural soils represent up to 80% of soils in Wales. Widening the scope of the statement would see soils being considered in forestry, urban and industrial sectors. The objectives laid out in the current statement will overlap with issues faced in these sectors too but there might also be new emerging issues to consider. If future statements are to be expanded into other sectors a similar evidence collection and stakeholder feedback process will need to be considered to prioritise the sustainable management of soils in Wales.

18 Soil-Summary-2022-digital.pdf (cawood.co.uk)

9. Land use change

Feedback

Land use change was identified as a major threat to agricultural soils in the evidence review.

Our response

Land use change sits outside the current scope of the statement, as the statement just focused on threats within agricultural soils. This does not diminish the importance of this threat to agricultural soils in Wales. Increased demands and competition between land uses are predicted between sectors, such as forestry, renewable energy, and urban development, for which agricultural land will be required. The long-term impacts of development on soil and ecosystems need to be better understood in Wales. Any future direction in land use change will be determined by several competing factors such as climate change, trade deals, agricultural policies, net zero plans (tree planting and renewable energy), management of natural resources, national growth plans and well-being. The sealing of soil and land take when land use change occurs is not well reported or monitored, more information on the extent and location is needed in Wales. Refer to the Soil Evidence Review[19] for more information on the threats of land use change. Land use change will be considered if the statement is expanded in the future.

10. Forestry and trees

Feedback

Concern was raised by one external stakeholder and a farmer that the WG tree planting ambitions would affect the ambitions of the ASPS. The conversations around tree planting were also raised relating to land use shift from agricultural to forestry.

Our response

Trees have not been mentioned in the statement as tree planting is considered either a delivery mechanism for policy or seen as a land use change outside the scope of the statement (see sub-section 9.). Welsh Government acknowledges that there were concerns that planting trees could trigger soil degradation in some instances. Currently, there is a knowledge gap around the long-term impacts of afforestation on Welsh soils. Poor management of forest soils could result in soil erosion, compaction, and biodiversity losses (West, 2011; Morison et al 2012), similar to threats facing agricultural soils identified in the soil policy statement. Additionally, the impacts of afforestation on organo-mineral soils is not clear[20]), especially around soil organic matter losses. These soils are sensitive to management changes, and the evidence on how tree planting will affect these soils is limited (Vanguelova et al 2019). While there is some research into soil carbon stability around tree planting most of this is from England and using outdated forestry management practices. The Welsh Government would welcome additional evidence on this knowledge gap.

19 Synthesis of Welsh Soil Evidence (gov.wales)
20 Impact of tree planting on Welsh organo-mineral soils 2020

The UK Forestry Standard (UKFS) is the technical standard for sustainable forest management in the UK and provides guidance on how to practice sustainable forest management. In that guidance the UKFS states soil, 'is a vital but fragile resource that must be used in a sustainable way by knowing and working to soil type and condition.'[21]

The Welsh Government has set targets to plant 180,000 ha with trees by 2050 to meet Net Zero targets with grant schemes in place to support the target, and tree planting actions proposed in the Sustainable Farming Scheme. Trees on farms and the forestry sector will be increasing in response to these ambitions, making forestry and tree planting a consideration for the statement in the future. For inclusion in future statements a similar evidence collection and engagement process would need to take place to assess the threats facing forested soils.

11. Imported soils

Feedback

One external stakeholder noted that the statement only focused on "naturally occurring" soils and not imported soil materials. There was a request for a mechanism to be put in place for sustainably managed manufactured/ imported soils.

Our response

The statement only focuses on agricultural soils, and imported or manufactured soils sit outside of the scope. The purpose of the policy statement is to set out ambitions for agricultural soils in Wales, it is not a delivery mechanism, so it is not possible to meet the stakeholders request (see Policy Landscape figure[22]). Manufactured or imported soils might need to be considered if the statement is expanded to other soils in the future.

21 The UK Forestry Standard – GOV.UK (www.gov.uk) (p.98)
22 Policy Landscape

07
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