DEPARTMENT FOR ENVIRONMENT FOOD & RURAL AFFAIRS

Land Use Consultation

Call for response:

Submission from the Agriculture and Horticulture Development Board (AHDB)

25 April 2025

AHDB

AHDB is a statutory levy board funded by farmers and others in the supply chain. Its purpose is to be a critical enabler, to positively influence outcomes, allowing farmers and others in the supply chain to be competitive, successful and share good practice. It equips levy payers with easy-to-use products, tools and services to help them make informed decisions and improve business performance. Established in 2008 and classified as a Non-Departmental Public Body (NDPB), AHDB supports the following industries: meat and livestock (beef, lamb and pork) in England; dairy in Great Britain; and cereals and oilseeds in the UK.

Offer of support

AHDB recognises the complexity of addressing the climate and nature crises and welcomes the Framework consultation in order to start the conversation of how England's land is best utilised to address competing demands. However, within this response we point out a number of shortcomings that need to be addressed if the Framework is to deliver against the aspirations.

As an evidence-based organisation spanning four critical agricultural sectors including their complex supply chains, we offer our support, insight, and expertise to help Defra address those shortcomings.

We stand ready to contribute our expertise, to help shape a Land Use Framework built on robust evidence which will encourage on the ground action, working towards a national vision.

AHDB's response

A long-term view of land use change

QUESTION 1: To what extent do you agree or disagree with our assessment of the scale and type of land use change needed, as set out in this consultation and the Analytical Annex?
[Strongly agree / Agree / Neither agree nor disagree / Disagree / Strongly disagree / I don't know]
Please explain your response, including your views on the potential scale of change and the type of change needed, including any specific types of change.

Disagree

Summary points:

- With sustainable and resilient food production as a priority for land use, it seems counterintuitive to then suggest 9% of land comes away from this area, alongside a further 10% to be land shared.
- We are concerned both with the use of calorie per hectare as a comparison metric, and with the assumptions used in the proposal around yields and productivity improvements. A more appropriate metric would include macro and micronutrients such as protein, fats, vitamins and minerals.
- The proposal uses some generalised assumptions that could have a significant impact at a local level and lead to undesired consequences, particularly around net zero, soil health, water quality, and biodiversity.
- The proposal does not appear to fully take into consideration how yields and land availability will fluctuate due to climate change, and the need to build additional resilience into our food production system as a result.

From a high-level perspective, the framework consultation provides a vision for land use in England, however, to ensure national food security, the achievement of national and international environmental targets, as well as housing and transport commitments, a Land Use Framework should have clear actionable outcomes based on robust data. In the Annex the analysis' shortcomings are recognised, accompanied with the call for improved data which we agree is essential.

The Framework lays out three key future priority land use aims:

1. Nature recover, water and emissions reduction
2. Sustainable and resilient food production
3. Infrastructure and housing.

Accompanying any future Framework's outcomes, should be clear prioritisation rules regarding land use change decision making. These three key land uses need to be set as the priority. It should be a last resort to take land away from one of these priority

areas, even if moving to one of the other priorities. For example, making best use of brown-field sites for building work, using marginal land by the side of roads and green spaces such as parks and golf courses for environmental commitments. All these options should be considered before land is stripped away from agriculture; the key land use for food, nature recovery, water, and carbon removals.

With a finite amount of land, a multifunctional land use approach is key. Agricultural land can deliver multiple environmental outcomes alongside food production including supporting biodiversity, improving water and air quality, providing flood defence and sequestering carbon. The production of food and restoration of England's natural landscape and wildlife on the same land are not mutually exclusive. Land use needs to become more strategic, and policy needs to support this.

The Framework consultation puts forward a 9% reduction in agricultural land alongside a further 10% of agricultural land to be land shared. Analysis in the Annex indicates an increase in productivity is to offset the loss of food production. AHDB is concerned that the productivity increase is based on Total Factor Productivity (TFP) historical trends. While TFP has increased over recent years, yields have actually plateaued. This brings into question whether the assumed increase in productivity is achievable.

Moreover, NFU analysis comparing forecasted loss of utilised agricultural area (UAA) compared the agricultural land lost to Categories 3.2 and 4 for the next 20 years. The analysis shows that while UAA has been in decline over time, it does not compare to the loss of agricultural land set out by Defra. Defra land use change vision will result in significantly more land being removed from agriculture, predominantly from the livestock sector. This raises concern on the knock-on implications on the long-term viability of the broader livestock supply chain including trade, with the additional risk of us offshoring the climate challenge. The red meat industry is dependent on a continued critical mass of livestock numbers, further reductions in livestock numbers could jeopardise the operational viability of red meat processing plants and their wider supply chains.

It also raises concerns on food production and availability. In the analysis calories have been used as a standardising metric for food production. The use of calorie per hectare is considered arbitrary and should be broadened out to include macro and micronutrients such as protein, fats, vitamins and minerals. All key components of a healthy balanced diet, of which animal sources food play an important role[1]. This may have a material impact on the pattern of how land should be used e.g. increase the value of grassland areas that produce livestock products.

[1] Beal et al (2022) Estimated micronutrient shortfalls of the EAT–Lancet planetary health diet - The Lancet Planetary Health

Destocking of the uplands is implied however research has shown livestock grazing to be beneficial to biodiversity. In historically grazed ecosystems the loss of grazing has resulted in the loss of biodiversity and biotic homogenisation[2]. When appropriately managed, livestock grazing has shown to help keep peatland habitats in good condition by halting scrub encroachment[3]. Grazing has also shown to impact species structure composition, contributing towards diverse wetlands[4].

This raises the broader concern regarding biodiversity. Biodiversity is unique to its specific location. Biodiversity observed in the uplands differs greatly from biodiversity in the lowlands. In the Framework there is particular focus on trees and peatland; habitats that support specific species and in turn specific biodiversity. There is the risk of further biodiversity loss from specific ecosystems. A mosaic of habitats is required to support England's biodiversity, that are bigger, better and more joined up as shown in Lawton's review[5].

The main consultation document acknowledges that climate impacts will increase over the next 20 years, however, neither of the scenarios account for the need for climate adaptation and resilience. Excluding projected climate change impacts in the scenario model is seen as a significant shortcoming, given that they will significantly affect future land use suitability. Climate adaptation and resilience to weather, political unrest, conflict, migration, and market shocks are key when considering land use and land use change. Scenario modelling should include these factors to ensure the land use change suggested is suitable for the future.

Furthermore, extreme weather events have significant impacts on crop yields, as experienced in 2020, which has not been accounted for in the analysis; and the agricultural acreage on which the productivity analysis is based on, is not the area on which agriculture will operate on in the future.

It has been assumed that improved soil health will positively impact productivity, but no supporting evidence has been given as to what degree of improvement will be derived from policy change and what the expected increase in productivity will be.

There is anecdotal evidence that the weed burden will increase under specific ELMs actions (e.g. winter bird food) and that the cost of managing the increased weed burden would negate any productivity increases. These issues need to be examined

[2] Schrama et al (2023) Cessation of grazing causes biodiversity loss and homogenization of soil food webs | Proceedings of the Royal Society B: Biological Sciences

[3] Natural Resources Wales (2024) Natural Resources Wales / Green light for grazing on Pembrokeshire's important peatland sites

[4] NatureScot, Peatland Management Guidance Peatland ACTION - Peatland Management Guidance - grazing, and muirburn | NatureScot

[5] Lawton et al (2010) 'Making space for nature': a review of England's wildlife sites published today - GOV.UK

across the UK in the context of schemes administered by the devolved nations before determining whether the increase in productivity is achievable.

Principles: Taking a spatial approach

QUESTION 2: Do you agree or disagree with the land use principles proposed? [Strongly agree / Agree / Neither agree nor disagree / Disagree / Strongly disagree / I don't know]
Please provide any reasons for your response including any changes you believe should be made.

Agree with the high-level principles, however, **more specific wording** would aid the achievement of the Land Use Framework outcomes. We also would suggest the inclusion of an additional principle.

1. *Co-design*: Support for participation and leadership at **individual**, local and regional scale to develop and align spatial strategies and assess the fairness of changes in land use.

- The process needs to be transparent, collaborative, and inclusive with fair representation at individual, local and regional level and an ultimate appreciation of how it operates nationally. The importance and relevance of regional variation in land use can only be fully understood by utilising local knowledge and expertise and by facilitating participation in the co-design process.
- Engagement and consultation with intermediaries and key industry stakeholders, including levy bodies, such as AHDB, will enable policy makers to widen their engagement and consultation with those involved in the delivery of the land use changes. Early engagement is likely to improve acceptance and adoption and, therefore, outcomes.

2. *Multifunctional land*: Enable multiple benefits on land, targeted according to opportunity, societal needs (such as the health benefits of co-locating new homes and nature), and environmental pressures (such as reducing pollution).

- With a finite amount of land, a multifunctional land use approach is crucial. **The production of food and restoration of nature and wildlife on the same land are not mutually exclusive** and policy needs to support this.
- Land use decision making needs to become more strategic and make better use of marginal land.
- We need to ensure we are considering all the environmental implications of land use change before making generalist decisions.

3. *Playing to the strengths of the land*: Support and spatially target land use change to locations where benefits are greater, and trade-offs are lower. Give priority to land

uses that are more scarce or spatially sensitive (for example grid capacity places restrictions on new renewable generation sites or protecting land that is best suited for food production).

- Decisions need to account for current and future strengths - land use decisions need to be **climate resilient**.
- This requires an in depth understanding (baselining) of the land, its use, its benefits, and its potential. High grade agricultural land is probably best suited to remain in food production in most instances. However, less productive land may also have specific qualities that lend themselves to both the delivery of eco-system services and food production. Only a detailed baseline will give us this insight.
- A detailed examination of the economic opportunity costs, trade-offs, and the incentives required to optimise land use need to be undertaken before policies are implemented.
- Consideration should be given to the reversibility of land use change in increasingly uncertain times.

4. *Decisions fit for the long-term*: Take a long-term view of changing land suitability, prioritising resilience (including to the impacts of climate change). This could include planning for new homes that are resilient to climate impacts, such as flooding, provision of drinking water, and overheating.

- Taking a long-term view with built in flexibility that acknowledges the multifunctionality of agricultural land and the changing needs of an ever-growing population and natural resources (including soils, air and water) is critical. This would allow for built in adaptability, and ensure land can meet future environmental, social, and economical demands.
- **Climate adaptation needs to be interwoven into decision making to ensure future suitability**. There needs to be consideration as to how climate change may alter and impact land in 5, 10, 20-years' time and beyond, and what this means regarding suitability of land use.

5. *Responsive by design*: Land use policy, including spatial prioritisation and targeting, needs to be responsive to new data, opportunities and pressures.

- The land use framework **needs to be evidence based**. Though the principles touch on this, it would benefit from being explicitly mentioned. Decisions should be made based on current data that has been verified and collected at an appropriate scale. This can be achieved through the completion of comprehensive national baselining. AHDB is currently undertaking a baselining pilot across Great Britain, measuring the net carbon position on 170 farms (Environment Baselining Pilot | AHDB).
- Ensure data used is of high quality, verified and up-to-date. Need to include more than just habitat data; future species abundance and distribution data to build in climate resilience.

- There needs to be good practice and a feedback loop of learning from successful application of actions. Learn from what is currently being done, how it works, what is involved, and how desired outcomes are achieved.

We suggest that a sixth principle is adopted to highlight the importance of land use prioritisation which could set clear **guidance regarding land use change decision making**.

In the Framework Defra set out 3 key land use aims:

1. Sustainable and resilient food production
2. Making space for nature recovery, water and emissions reduction
3. Fulfilling housing and transport requirements

We need to set these land uses as priorities, doing what we can to move other land uses into these priority areas. It should be a last resort to take land away from one of these priority areas, even if moving to one of the other priorities. For example, making best use of brown-field sites for building work, using marginal land by the side of roads and green spaces such as parks and golf courses for environmental commitments should all be considered before we strip land away from agriculture.

QUESTION 3: Beyond Government departments in England, which other decision makers do you think would benefit from applying these principles? [In online format the following tick boxes are provided and are accompanied with text boxes]

- Combined and local authorities (including local planning authorities)
- Landowners and land managers (including environmental and heritage groups)
- Others (please specify)

In order for the principles to be adopted, there needs to be a joining up across the various levels of decision-makers as well as a harmonisation with the policies across the devolved governments. For that to happen, it is critical there is clear guidance from Government on when and how the principles should be applied. However, the intricacies of local nuances need to be taken into consideration, so that local authorities abide by the core principles but are able to apply them in the most appropriate way for their own situation.

The Framework's principles need to be imbedded in decision making impacting land use across the country and local actions need to join up at the national level. The LUF requires nationwide action at a local scale, and a lot of it will come down to farmers and land managers. Thus, all stakeholders that are making decisions that may impact land use and land use change should be applying the principles.

There needs to be **consistent and coherent decision-making** regarding land use across national, regional and local governments and the private sector, for example in the designing of Local Plans and Local Nature Recovery Strategies.

The Protected Landscape teams are in a unique position of being able to oversee a large area and aid in project oversight and landscape connectivity. They can also help bring farmers and land managers together for knowledge exchange, to secure their buy in, and to initiate collaborative action.

Making the best use of land

QUESTION 4: What are the policies, incentives and other changes that are needed to support decision makers in the agricultural sector to deliver this scale of land use change, while considering the importance of food production?

We would re-iterate our earlier point, the 3 key land uses need to be set as the priority. It should be a last resort to take land away from one of these priority areas, even if moving to one of the other priorities. On the assumption that even with that principle some land will need to be multifunctional, for the agricultural sector to engage with the Land Use Framework, **there needs to be a just transition that enables farmers to farm profitably, productively and sustainable**.

The policy objectives should be discussed collaboratively, and policies should be co – produced with key stakeholders. Implementation should be consistent, and abrupt changes should be avoided. Agricultural land use takes a long-term view to be able to plan effectively and optimise use of resources. Clarity and consistency of policy, along with flexibility are vital if the necessary investments for land use change are to be encouraged. These are best achieved through a collaborative approach to policy development on an ongoing basis.

Firstly, in-line with Principle 1, there needs to be co-design. It is important that farmers are **actively involved with the shaping of the Food Strategy and the 25-year Farming Roadmap.** The level of change required from farmers means that they need to be engaged with the process. Academic literature[6] [7] [8] [9] [10] would suggest that co-design and co-production of policy will enhance adoption and uptake.

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[6] Shaw et al (2024) What does 'co-production' look like for food system transformation? Mapping the evidence across Transforming UK Food Systems (TUKFS) projects - Shaw - 2024 - Nutrition Bulletin - Wiley Online Library

[7] McCarthy et al (2018) Disciplining the State: The role of alliances in contesting multi-level agri-environmental governance - ScienceDirect

[8] Benoit and Patsias (2017) Greening the agri-environmental policy by territorial and participative implementation processes? Evidence from two French regions - ScienceDirect

[9] Gerlak et al (2011) Building a Theory of Learning in Collaboratives: Evidence from the Everglades Restoration Program | Journal of Public Administration Research and Theory | Oxford Academic

[10] Newig and Fritsch (2009) Environmental governance: participatory, multi-level – and effective? - Newig - 2009 - Environmental Policy and Governance - Wiley Online Library

Secondly, **enable multifunctional land use.** Stacking multiple public goods outcomes and accompanying that with advice, support, and educational opportunities to facilitate adoption.

Thirdly, **clarity and consistency in the agri-environment policy space are lacking but essential to achieve change.** The land use changes being discussed in the Land Use Framework consultation will have a lasting impact on the land, farmers, and the agricultural sector. For stakeholders in the agricultural sector to take action, clarity and consistency are needed along with incentives, as highlighted in the CCC's Seventh Carbon Budget report.

Farmers need to be able to plan ahead which is hard to do if incentives are being suddenly removed, changed or delayed. Production cycles in farming are lengthy and policy formation and adjustment needs to reflect this if farmers are to have confidence in the planned changes and make decisions, in particular investment decisions, accordingly. Government policies and public incentives need to be clear, transparent, consistent and reliable.

The government has in the past indicated the gap in public funding support is to be covered through private incentives. However, the environmental markets are, apart from Biodiversity Net Gain and Nutrient Neutrality, voluntary. Demand for environmental credits may be on the rise, but these markets are new, lack transparency, and reporting is still, though encouraged, often optional. An example of this is the Taskforce on Nature-related Financial Disclosures.

If uptake of private schemes is to become more widespread, farmers will need to have confidence in the schemes, their longevity, the cost of participation and the potential rewards. **However, to increase engagement the asymmetry of knowledge and information regarding private schemes needs to be addressed.**

We also need to ensure that the improvements delivered are measured and reported on throughout the various reporting mechanisms. That requires a baseline and ongoing measurements at a granular enough level to pick up the results of the change, not just report on the change itself. Those improvements should then flow through into Scope 3 declarations as well as the National Inventory and be able to report at the whole farm level. For example, at present the planting of trees in an agroforestry system are not captured within the National Inventory unless tree crown cover is at least 20%. Most agroforestry systems won't get to this level.

Public incentivisation needs to fairly support farmers across all of England. AHDB research indicated this is currently not the case. For example, analysis showed the highest stocking rate in the uplands SFI actions UPL1-3 (livestock grazing on moorland) is 0.16 GLU. This figure cannot be averaged out throughout the year and so stocking rates must not exceed the set stocking rate at any point in the year. We

have modelled the financial impact of these stocking rates using AHDB virtual farms. To meet the requirement the AHDB virtual upland farm would have to reduce its sheep flock by 15%, leading to loss in profit of almost £8,000. For tenant farmers, such a reduction can be more detrimental to their business as the livestock is their capital base.

QUESTION 5: How could Government support more land managers to implement multifunctional land uses that deliver a wider range of benefits, such as agroforestry systems with trees within pasture or arable fields?

Many farmers are already utilising their land in a multifunctional way, including carbon sequestration and storage, improving water quality, maintaining and enhancing habitats, managing soil health and improving air quality. Agriculture is uniquely placed to deliver further multifunctional land uses given the appropriate policy mechanisms, including the recognition of such actions.

An example of this is the management of meadow grassland through sustainable livestock grazing, which support biodiversity, soil health, and produces high quality meat[11]. In addition, the creation and management of hedgerows holds multiple benefits in addition to carbon sequestration, including providing food, habitat, and connectivity for wildlife, reducing water runoff, preventing soil erosion, shade for livestock, and are a natural barrier both as a defence to crops by acting as a windbreak during storms, and for biosecurity of livestock.

To increase and enhance multifunction land use, we see obtaining an environmental baseline of the land as critical, as well as the facilitation of knowledge exchange so land managers are aware of multifunctional land use opportunities and the win wins that farming this way can provide.

It is known that the government expects private markets to, in part, fund environmental land use outcomes, however, there are significant challenges farmers and land managers (tenant farmers in particular) face when engaging with private environmental markets. Many nature-based market opportunities require long-term commitment, longer than some tenant farm agreements. The lack of ownership also means tenant farmers require the landlord's approval to engage. Tenant farming agreements can often include restrictions that prevent the land managers from making significant changes to the farming operation that could deliver on the principles. For example, the planting of trees in an agroforestry set-up could be regarded as a change of land use, away from agriculture, which would not be permitted by some tenancy agreements. There are also limitations for those farming in Protected Landscapes or under other designations to access private nature markets due to the demonstration of additionality or minimal local developments.

[11] Environment Bank (2024) The Yorkshire farmers restoring land with a BNG Habitat Bank - Farmers Weekly

QUESTION 6: What should the Government consider in identifying suitable locations for spatially targeted incentives?

Points for consideration in identifying suitable locations for spatial targeting:

- Current and future weather patterns, how these weather patterns will impact the land, and how the land is best utilised. Climate change is causing more intense and prolonged rainfall and increased frequency and severity of flooding and drought in England. Agricultural land provides flood defence, with farmland being submerged, at the cost of crop yields and soil health and fertility.
- Climate change impact on habitats and therefore the distribution and abundance of species. An area that may currently offer suitable habitat for species may not be suitable in the future.
- The risk of new or increased incidences and presence of various pests and diseases and the suitability of certain locations as a result.
- Consideration should be given to the multifunctionality of land and how public goods such as food production, flood defence, nature recovery, and carbon sequestration can best be stacked. For example, livestock grazing on flood-risked grassland provides an opportunity to maximise multifunction land use as, unlike crop production, livestock can be moved.
- Clear prioritisation of land use in land use decision making. Sustainable and resilient food production is one of the Framework's key aims. To safeguard this, agricultural land should be considered a priority area, and it should be a last resort to take land away from it.
- Local experience and expertise: Currently the consultation document sets out a vision with high-level aims. AHDB is concerned that these aims and visions are too high-level and vague when considering it will need to translate into local action to realise the vision. To be able to identify suitable locations for spatially target incentives, **the Framework needs clearly defined outcomes** and use/highlight case studies of what success looks like.
- Incentives: Once clear outcomes have been established, one can assess what type of incentive would work best to achieve those outcomes. With the right incentives the market will work out where it is most beneficial to deliver those outcomes. If spatially targeted incentivises are to be used, data used to formulate these spatial targets needs to be up-to-date, accurate, of a high enough resolution, and verified.

QUESTION 7: What approach(es) could most effectively support land managers and the agricultural sector to steer land use changes to where they can deliver greater potential benefits and lower trade-offs?

Co-production/co-design

Farmers and land managers are fundamental to achieving national and international environmental targets. They are guardians of the landscape. Thus, building on Principle 1 Co-design of the proposed land use principles, it is imperative that farmers and farming intermediaries are closely involved in the development of strategies and policies that sit under the Framework, such as the 25-year Farming Roadmap and the Food Strategy, and other relevant land-use decisions. Unless barriers to adoption and participation are clearly understood, explored and addressed, the required land use changes will be more challenging to implement.

The development of these strategies needs to take farmers with it. They need to have a meaningful voice in this process and not have change imposed without close collaboration if broad uptake is going to be required and is voluntary. Collaborative approaches of co-production and co-design[12] are recognised methods to enhancing stakeholder engagement and increasing policy adoption[6 9].

Financial reward

Farmers require appropriate financial support to be able to afford and make the changes necessary. As the Climate Change Committee pointed out in the Seventh Carbon Budget:

"*If properly supported by the UK's Governments, meeting net zero will provide opportunities for farmers and land managers to diversify land use and management, while continuing to produce food. Effective government policy and clear incentives, both public and private, will be required to deliver this change, which can generate new revenue streams and increase the resilience of businesses.*" - page 192, Seventh Carbon Budget

To assist this, economic analysis of opportunity costs should be undertaken collaboratively utilising land managers expertise along with scientific knowledge and economists.

QUESTION 8: In addition to promoting multifunctional land uses and spatially targeting land use change incentives, what more could be done by Government or others to reduce the risk that we displace more food production and environmental impacts abroad?

Please give details for your answer. [In online format the following tick boxes are provided and are accompanied with text boxes]

[12] Dolinska et al (2023) Co-production opportunities seized and missed in decision-support frameworks for climate-change adaptation in agriculture – How do we practice the "best practice"? - ScienceDirect

- Monitoring land use change or production on agricultural land
- Accounting for displaced food production impacts in project appraisals
- Protecting the best agricultural land from permanent land use changes
- Other (please specify)

We would re-iterate our earlier point; the three key land uses need to be set as the priority. It should be a last resort to take land away from one of these priority areas, even if moving to one of the other priorities. On the assumption, that even with that principle some land will need to be multifunctional, we should note that agriculture in England already delivers more public goods than just affordable and nutritious food, including soil health, air and water quality, carbon storage and biodiversity.

When considering food production in the UK, we should consider the global context. Agriculture is increasingly becoming more vulnerable to a changing climate and unpredictable seasons. A combination of warmer, drier weather, and extreme rainfall with an increased risk of flooding threatens food security. Yet, England's temperate climate allows for the cultivation of cereals and oilseeds, predominantly grass-based livestock production that significantly contribute to the rural economy by feeding the nation and exporting food abroad to aid the delivery of the UN's Sustainable Development Goal 2. It accomplishes this while maintaining crop quality and meeting high animal health and welfare standards.

Despite the anticipated change in weather patterns caused by climate change, it is predicted that England will be less impacted by extreme weather than a number of other countries. Opportunities to diversify into producing different crops as a result of climate change may occur, including the growing of various legumes for home-grown protein and the introduction of new crops such as soya and commercial sunflowers. Being on the front foot with this and understanding when production may need to be adjusted, for example by supporting farmers with accessing suitable research, advice, and products, will allow for continuous food production.

By ensuring the food system is sustainable, resilient and adaptable, one secures a future with nutritious and affordable food whilst enhancing natural resources. Moreover, maintaining a core degree of food resilience will in turn aid food security, as will maintaining a diverse supply chain that ensures options should one source of supply fail.

Furthermore, in line with UN's Sustainable Development Goal 2 and 13, there is a global responsibility to address climate change, end hunger, achieve food security, improve nutrition, and promote sustainable agriculture. Subsequently, English produce could be exported to overseas as a more sustainable alternative to some global produce that may have greater environmental footprints.

In line with the above, policy mechanisms that protect against the risk of carbon leakage from agricultural imports, such as an expansion in scope of the UK Carbon Border Adjustment Mechanism (CBAM) could be considered.

QUESTION 9: What should Government consider in increasing private investment towards appropriate land use changes?

Currently, private sector engagement is often linked to voluntary reporting, e.g. scope 1 and 2 greenhouse gas reporting is currently mandatory, but scope 3 is not. Yet, the emissions that fall under scope 3 make up a significant proportion of the greenhouse gases targeted in the Framework. Another example is the Taskforce on Nature-related Financial Disclosures, a voluntary framework encouraging the reporting on nature-related impacts, risks, and opportunities. Thus, reporting (and accountability) is still often voluntary, limiting engagement.

There is limited policy and regulation demanding positive environmental outcomes alongside the production of agricultural goods. Furthermore, several additional barriers have been identified[13]:

- Limited sources of revenue to fund investment at the required scale
- Lack of coherent framework that ensures market integrity
- Limited experience and capacity within the supply-chain to deliver projects
- High transaction costs
- Misalignment in economic and environmental regulations

Expanding on the limited capacity and knowledge barrier, the asymmetry of information worsens this. At present, there is a lack of knowledge and understanding of the schemes, of the value of natural capital and of the risks and benefits of private schemes among farmers. Currently, there is no single set of rules to which the private markets adhere to. Nor is there a clear independent monitoring, reporting and verification (MRV) vehicle in place to ensure transparency and integrity. This means that farmers are vulnerable to being persuaded to join unfair agreements that may disproportionately place risk on them, as opposed to the buyer of their natural capital. This impacts confidence engaging with the private sector. To address this, robust regulation and standard setting is required to enable farmers to make informed decisions.

Lastly, increasing private investment only works if farmers and land managers are open to engaging. Yet, there are multiple barriers stopping farmer from engaging that remain unresolved[14]. A significant barrier to farmer engagement is that carbon sequestration on agricultural land is not captured in the UK Greenhouse Gas National Inventory. Carbon sequestration from agroforestry systems, with trees planted on agricultural land, is not captured in the inventory unless tree crown cover is over 20%, and even them it is set against LULUCF not agriculture. Similarly, soil carbon stocks are not accounted for, offering no incentive for improvement. Actions need to be

recognised, and results should be included in the UK Greenhouse Gas Inventory under agriculture including the creation and change of carbon stocks.

QUESTION 10: What changes are needed to accelerate 30by30 delivery, including by enabling Protected Landscapes to contribute more? Please provide any specific suggestions. [In online format the following tick boxes are provided and are accompanied with text boxes]

- Strengthened Protected Landscapes legislation (around governance and regulations or duties on key actors) with a greater focus on nature

  Strengthening legislation on its own does not necessarily improve habitats. A co-design approach is recommended as policies must address economic, environmental, and social concerns efficiently and effectively.
  We must also be mindful that any policy change does not inadvertently hinder access to green finance. There is a risk that with increased legislation farmers and land managers may not be able to engage with environmental markets due to failing the legal additionality test; hindering multifunctional land use. This is already an ongoing issue and hinders progress caused by lack of financial funds.

- Tools: such as greater alignment of existing Defra schemes with the 30by30 criteria

  New tools when brought in to support legislation do help to engage those that need to change their behaviour, but we would go back to our co-design suggestion.

- Resources: such as funding or guidance for those managing Protected Landscapes for nature
- Other (please specify)

Farmers and land managers, as custodians of the land, can help stop species decline and support species recovery. Considering the edge effect, agricultural land bordering protected land will play an important role in nature and species recovery and habitat connectivity. To enable and accelerate this, farmers, particularly in Protected Landscapes, need to be supported. It was recently announced that Farming in Protected Landscapes programme (FiPL) has been extended until 2026. Long-term environmental recovery requires long-term resources that are available for extended periods of time.

Protected Landscape teams need capacity (time and money) to help farmers and land managers transition towards sustainable farming practices. The Protected Landscape teams are in a unique position of being able to oversee a large area and aid in project

oversight and landscape connectivity. They can also help bring farmers and land managers together for knowledge exchange and to initiate collaborative action.

QUESTION 11: What approaches could cost-effectively support nature and food production in urban landscapes and on land managed for recreation?

By applying a multifunctional land use approach, incorporating climate adaptation into land use decision making, and having clear prioritisation rules regarding land use change decision making (see Principle 6 in the response under Question 2).

QUESTION 12: How can Government ensure that development and infrastructure spatial plans take advantage of potential co-benefits and manage trade-offs?

By applying a multifunctional land use approach, incorporating climate adaptation into land use decision making, and having clear prioritisation rules regarding land use change decision making (see Principle 6 in the response under Question 2).

QUESTION 13: How can local authorities and Government better take account of land use opportunities in transport planning?

By applying a multifunctional land use approach, incorporating climate adaptation into land use decision making, and having clear prioritisation rules regarding land use change decision making (see Principle 6 in the response under Question 2).

QUESTION 14: How can Government support closer coordination across plans and strategies for different sectors and outcomes at the local and regional level?

The Government can support by having clear, consistent and long-term policies, incentives and outcomes at national level, i.e. consistent framework to then be implemented at local level in an appropriate way.

Multifunctional land use requires a different way of managing and reporting, and it is important that land can be recognised for delivering two or more totally different land uses at the same time.

Ensure the Framework's principles are embedded in local and regional decision making (Principle 1 – Co-design) and as mentioned in the response to Question 2 this could be strengthened by having local representatives. Clear and effective communication will be an important pillar that the Government could support.

The Framework is to inform, not impose, decisions and offers a vision of English land use. The governance surrounding local and regional level decisions, such as the Local Nature Recovery Strategies (LNRS), remains unclear and needs to be addressed. For

climate and environmental targets to be achieved collective action is required; bigger, better, and more joined up.

The benefit of local decision making is that it brings local needs and priorities to the forefront of decision making. However, with differing priorities influencing decision making there is a risk that when putting the local plans together, plans will be disjointed at national scale. Local data needs to feed into regional and national levels to get a more joined up approach. This requires a framework of its own. For example, the development of LNRS is done at a local/regional level. Responsible bodies will have different data imports or varying quality as well as different spatial priorities and land use. If the LNRSs are being created in complete isolation from one another it will need to be determined how it will all come together. Local data needs to feed into regional and national levels to get a more joined up approach. This requires a framework of its own.

QUESTION 15: Would including additional major landowners and land managers in the Adaptation Reporting Power process (see above) support adaptation knowledge sharing? Please give any reasons or alternative suggestions
[Yes / No / I don't know]

Yes, it would be a benefit to include companies and/or organisations that are major landowners and/or comprise or represent land managers. Especially those that represent the commercial sector. They would help demonstrate the challenges of dealing with climate risks, building and providing climate resilience, as well as meeting business profitability.

Perhaps this information could be obtained via a structured survey and could be conducted at a greater frequency than the five yearly cycles of the Adaptation Reporting Power. An increased frequency of reporting would allow for more frequent up to date information for decision making and enable a faster response to climate change events and non-climate change events including policy changes and geopolitical events. It will instil action faster. Additionally, it could help accelerate learning by providing current evidence and insight which applied through, for example, peer to peer learning could aid in increasing the uptake of environmentally friendly farming practices by others.

However, it should be recognised that major landowners, small farmers, tenanted farmers, and fifth generation farmers will often look upon difficult decisions, especially those that will affect the land over multiple years, in very different ways. Embracing large landowners will help, but the lessons learnt are rarely transferable to the other groups of landowners/decisions makers.

QUESTION 16: Below is a list of activities the Government could implement to support landowners, land managers, and communities to understand and prepare for the impacts of climate change. Please select the activities you think should be prioritised and give any reasons for your answer, or specific approaches you would like to see. [In online format the following tick boxes are provided and are accompanied with text boxes]

- Providing better information on local climate impacts to inform local decision making and strategies (for example, translating UK Climate Projections29 into what these mean in terms of on-the-ground impacts on farming, buildings, communities and nature)
- Providing improved tools and guidance for turning climate information into tangible actions (for example, how to produce an adaptation plan for different sectors)
- Developing and sharing clearer objectives and resilience standards (for example, a clear picture and standards of good practice for each sector under a 2°C climate scenario30)
- Supporting the right actions in the right places in a changing climate (for example, prioritising incentives for sustainable land uses where they will be most resilient to climate change)
- Other (please specify)

1. Supporting the right actions in the right places in a changing climate (for example, prioritising incentives for sustainable land uses where they will be most resilient to climate change)
2. Providing improved tools and guidance for turning climate information into tangible actions (for example, how to produce an adaptation plan for different sectors)
3. Providing better information on local climate impacts to inform local decision making and strategies (for example, translating UK Climate Projections into what these mean in terms of on-the-ground impacts on farming, buildings, communities and nature)

The climate change risks, impacts, actions and opportunities will be location dependent, and this variability needs to be acknowledged. This will all help in understanding the magnitude of the risks and inform the extent of the actions required on a regional or business basis.

The provision of the appropriate guidance and tools will be key to supporting landowners and land managers in enabling implementation, for example in a decision support system or providing vital knowledge. The interdependencies of the risks and opportunities should be understood in developing and communicating the benefits of the guidance and tools. There should also be support and guidance to overcome barriers to implementation, e.g. grant funding and training.

4. Other (please specify) - Providing information on the potential opportunities available in a trajectory towards a 2°C increased climate

Better information should be provided both to raise awareness of the potential opportunities arising from climate change, and to understand how they could be attained. This may be implicit in the above activities but perhaps it needs to be made more explicit in a separate activity.

Lastly, support can be provided by showcasing best practices. Peer to peer learning has proven to be a valuable tool for knowledge transfer amongst farmers. This could take shape as a network of demonstration case studies showcasing land managers who have already changed positively to deliver multiple public goods from different land uses.

QUESTION 17: What changes to how Government's spatial data is presented or shared could increase its value in decision making and make it more accessible? [In online format the following tick boxes are provided and are accompanied with text boxes]

- Updating existing Government tools, apps, portals or websites
- Changes to support use through private sector tools, apps or websites
- Bringing data from different sectors together into common portals or maps
- Increasing consistency across spatial and land datasets
- More explanation or support for using existing tools, apps or websites
- Greater use of geospatial indicators such as Unique Property Reference Numbers (UPRNs) and INSPIRE IDs to allow data to be more easily displayed on a map
- Other (please specify)

All the above.

- There are useful sources of spatial data that can help inform decision making if they are made more accessible. Data such as the Countryside Survey could be made more easily available but it would require higher temporal and geographic resolution to inform farm level decision making.
- Tools such the CEH-Planner uses basic spatial data to inform decision making but requires greater spatial resolution to be useful.
- A far greater resolution of land components is required to properly understand what is present and how it can best be enhanced. This is vital to ensure the Framework's outcomes are built on robust data.
- Opportunities to build upon existing tools such as Magic Maps whilst ensuring that farmers and land managers have the necessary skills and support to utilise such data sources.
- It is important to ensure datasets are accessible and coherent with what the private sector needs. This links back to the need for increased consistency

across spatial and land datasets. Dataset transferability needs to become more streamlined. Actions to address this include:

  - Providing datasets at the “right” resolution. Decisions on appropriate land use should be informed at a field level, based not only on soils and climate data, but also the historic management which can be a good indicator for the habitat value. Historic Land Parcel Information Data would be a useful resource for this purpose
  - Comparable/identical/matching user format
  - API links utilised
  - Data transferability

- Building on the increased consistency of spatial and land datasets, the approach to aggregating data needs to be improved. There are many opportunities to collect data, and many stakeholders are doing so, however, this is often happening in isolation. This works needs to be brought together, providing a more complete picture, and in turn will improve land use decision making on the ground. This is a key component for ensuring the Framework’s outcomes are clear and actionable.
- Accessibility
  - Spatial and land datasets must be accessible via API in order for platforms, programmes, and systems, to make them available for wider industry use.
  - Secondary to the ability for system-to-system access to the spatial data, is the ability to link elements such as shape files, or other spatial data, to particular farms/businesses across the industry. The challenge of joining up coordinates, addresses, CPH numbers, and SBI numbers has still not been addressed by government systems. This linking capability also needs to be made available for system-to-system access for the wider supply chain.
- National database of information: AHDB is currently undertaking a Farm Data Exchange project that aims to connect the various databases to enable a more co-ordinated approach to reporting and decision making. The idea is to reduce the burden of reporting to multiple audiences and give control of the use of farmers data to the farmer.
- Welsh Government have used Glastir Monitoring and Evaluation Programme data to inform habitat maps for Welsh farmers which have been made available via the Rural Payments Wales portal. This is a useful case study on how data can be combined to inform appropriate land use at a farm and field level
- Northern Ireland’s Soil Nutrient Health Scheme focusses on improving soil health and assessing farm carbon stocks. Key components of the government’s scheme include the high-resolution (0.5m) LiDAR surveys and the channel network mapping. Farmers are provided with detailed information on the nutrient status of their soils, runoff risk maps, an estimate of above and below ground carbon stocks, and training on how to interpret the data. The information

enables farmers to make informed land use decisions on their farm optimising soil nutrient management, reducing water pollution, and help farmers transition towards net zero. We would encourage a baselining programme across England to help inform decision-making.

QUESTION 18: What improvements could be made to how spatial data is captured, managed, or used to support land use decisions in the following sectors? Please give any reasons for your answer or specific suggestions. [In online format the following tick boxes are provided and are accompanied with text boxes]

- Development and planning: such as environmental survey data
- Farming: such as supply chain data and carbon or nature baseline measurements
- Environment and forestry: such as local and volunteer-collected environmental records
- Recreation and access: such as accessible land and route data
- Government-published land and agricultural statistics
- Farming: such as supply chain data and carbon or nature baseline

Since 2024, with the loss of BPS (and unlike Scotland, Wales, and Northern Ireland), English land managers and farmers do not complete an annual land use declaration. Without these declarations there is no longer a register providing an overview of what agricultural land is being used for in England. This is a significant loss in land use oversight that with the consultation's ask for spatial data should be addressed, and the scope of the declaration should be widened to include other land uses; providing a more comprehensive overview of land use in England.

To achieve the national and international climate and environmental goals, **farmers and landowners need to understand their environmental baseline**, detailing:

- Carbon emissions of their operations
- Carbon sequestered and stored on their land
- Habitats present and the biodiversity it supports
- Soil health and soil run off risk maps
- Water quality and flow management maps

This data will help drive change, forging a fairer and more resilient path towards becoming net zero by 2050, and gives integrity to the process. However, as it stands, for a farm to obtain an environmental baseline, they need to pay for it themselves. **The financial cost in this is a significant barrier, despite this spatial data being key when making informed land use decisions.**

It should be recognised that farmers will need positive financial support to enable them to afford to make the changes necessary. The consistent collection of

data needs to be affordable and scalable, so farmers and land managers have access to a baseline and oversight of the impact of land use change over time.

AHDB is in its first year of the Environmental Baselining Project. The project aims to establish the amount of net carbon on a range of different farms and land uses, taking account of carbon stored in soil, hedges and tress, as well as greenhouse gas emissions and sequestration. It is also looking to use that data to help deliver other public goods, such as habitat improvements and reduced risk of nutrient run-off. The project supports the industry to unify and act, based on accurate on-farm data and evidence, to safeguard the future of UK agriculture with fair recognition and reward.

In the medium to long term, AHDB's Farm Data Exchange concept should be a key enabling system for the exchange of farm activity data, resulting in more efficient and more accurate greenhouse gas assessments. It is the capturing of consistently measured data (agreed MRV), the joining up of those data sets, and the support to land managers of how to interpret that information that combined will lead to the right decision making and ultimately the improvements across all priority areas that are desired.

QUESTION 19: What improvements are needed to the quality, availability and accessibility of ALC data to support effective land use decisions?

ALC may underestimate the value and potential of soil in regard to food production. For instance, grassland is undervalued due to the ineffectiveness of crop production on that land. It currently does not fully recognise the value of food production in terms of livestock grazing. Furthermore, soils provide other ecosystem services such as carbon storage, flood management and biodiversity which are not included in the value of the ALC.

We agree on all considerations mentioned on page 32 of the consultation document: improvements to spatial and temporal data resolution, accuracy, transposability, and with a version that is free to access at the point of use.

It is essential that climate change is accounted for, for example, changing temperature, rainfall and flood risk. Therefore, the data will need to be updated on a regular basis.

It is important to acknowledge and understand the limitations of the ALC, even when updated. Land managers and farmers when considering the potential of their land, will still need to augment the information from ALC with local soil health datasets, nutrient analysis and previous crop and grassland yield and quality data. Joining up of the data, such as through the Farm Data Exchange pilot being delivered by AHDB, is crucial particularly when looking at multifunctional land use and delivering change.

QUESTION 20: Which sources of spatial data should Government consider making free or easier to access, including via open licensing, to increase their potential benefit?

Enabling existing and new sources of spatial data to be available via API is a key enabler for the wider industry. In addition to the field boundaries, the following layers would be useful:

- Arial photography data used for hedgerow measurement but could also have a wider application for biodiversity habitat mapping
- Historic LPIS data for assessing historic land use data which can inform habitat and agricultural productivity
- Livestock density data (BCMS) to assess the intensity of production and potential environmental impacts.

Satellite imagery and measurement data may also fall into this category, as well as the national LiDAR datasets, although we would encourage capture at a higher level of resolution to pick up change.

Regarding soils, make the soils geospatial data available at the highest resolution, this will inform land use decisions and promote private sector innovation. Currently there is a cost to access data from Cranfield for LandIS data, but we could follow the Scottish lead on providing free licence for soils data https://www.hutton.ac.uk/soil-maps//.

QUESTION 21: What gaps in land management capacity or skills do you anticipate as part of the land use transition? Please include any suggestions to address these gaps. [In online format the following tick boxes are provided and are accompanied with text boxes]

- Development and planning
- Farming
- Environment and forestry
- Recreation and access
- Other (please specify)

- Farming

As mentioned in previous answers, there is a knowledge gap that hinders the development of the required skills and capacity to undertake required land use actions. To address this the Framework needs to present clear actionable outcomes, which will identify what capacity and skills are required. Additionally, terms such as regenerative farming need to be clearly defined.

Encourage and enable peer to peer learning. Provide groups such as farm clusters funding/opportunities for skills development.

Improvement of broadband connectivity to make knowledge development easier, e.g. being able to listen to podcasts across the farm property.

Acknowledge the importance and value of knowledge development by including capacity and skill development into a public payment option, for example by formalising CPD in farming.

Financial capacity – transitioning to regenerative farming may require a change in machinery, farming appliances, etc which comes with a financial cost.

Farmers understanding around data – ownership, control, value, and their wider use.

- Environment and forestry

In order to transition towards multifunctional land use, we need to consider how to upskill land managers not only in one area, but in those multiple areas. For example, agroforestry, requires land managers with farming, forestry and environmental skills.

QUESTION 22: How could the sharing of best practice in innovative land use practices and management be improved?

Innovative land use practices and management need to be accessible in order to be actionable.

Peer to peer learning has been shown as an effective tool for sharing best practice. Despite the numerous trails and demonstration plots across the country, there are a limited number of examples and case studies available for farmers and land managers to learn and draw ideas from. The sharing of practice needs to be supported by facilitating farm clusters, transparently sharing finding for previous Test and Trial projects and, importantly, there need to be more real-life practical examples covering the diverse farm-types.

Part of AHDB's role is to facilitate knowledge transfer and the sharing of good practice. AHDB has the unique position of being able to bridge the gap between academic research and practical on farm application. AHDB's Knowledge Exchange and Knowledge Transfer teams facilitate the sharing of best practice in innovative land use practices and management by bringing levy payers together at events, meetings and online. Through knowledge exchange events levy payers are equipped with products, tools, and services to help them make informed decisions and improve business performance.

Co-creation and engagement on a Land Use Framework: next steps

QUESTION 23: Should a Land Use Framework for England be updated periodically, and if so, how frequently should this occur?

- Yes, every 5 years
- Yes, every 3 years
- Yes, another frequency or approach. Please provide details.
- No
- I don’t know

5-years

- In-line with other review/updates such as the EIP
- Need time to see what is happening, 3 years may therefore be too short to pick up on change.
- It is also important that any changes made with the 5-year review are evolution rather than revolution. Land changes take time and consistency in policy is required to encourage this.

QUESTION 24: To what extent do you agree or disagree with the proposed areas above? Please include comments or suggestions with your answer.
[Strongly agree / Agree / Neither agree nor disagree / Disagree / Strongly disagree / I don’t know
Proposed areas above:

- A strategic oversight function to ensure the right information and policy is in place to enable delivery against a long-term land use vision;
- A cross-governmental spatial analysis function to produce evidence-based advice on strategic implications across different demands on land;
- Processes to embed land use considerations in strategic Government decisions;
- Open policy-making processes in collaboration with research organisations. Open policy-making process in collaboration with research organisation and other relevant stakeholders to

Agree with the proposed areas. It is important to note that additional to the proposed areas, clear, consistent and effective communication across national governmental bodies, between national and local bodies as well as between policy makers and those on the ground is key. Furthermore, the policy-making process should be collaborative and should include a variety of relevant stakeholders, not just research organisations (enforcing Principle 1 Co-design).

Further information

AHDB would welcome the opportunity to contribute our expertise, to help Defra shape a Land Use Framework built on robust evidence which will encourage on the ground action, working towards a national vision.

Any queries relating to this submission should, in the first instance, be directed to Andy Hutson, AHDB Senior Media Relations and External Affairs Manager, Agriculture and Horticulture Development Board, Middlemarch Business Park, Siskin Parkway East, Coventry CV3 4PE. T: 024 7647 8822 E: andy.hutson@ahdb.org.uk