

Written Evidence submitted by The Soil Association (SH0066)

The Soil Association is a membership charity, formed in 1946 by a group of farmers, scientists, doctors and nutritionists who were determined to pioneer a world where we can live in health and in harmony with nature. Our founders were rooted in the belief that healthy soil is the foundation of a healthy and productive food and farming system, a belief we still share today. Our vision is good food for all, produced with care for the natural world.

Today, the Soil Association is both campaigning and scaling up the solutions, collaborating with food procurers from schools to hospitals and restaurant chains, and with organic and non-organic producers to innovate and implement practical solutions. We understand the importance of grounding research and development within the farm setting – our [Innovative Farmers Programme](#) connects farmers and researchers to develop on-farm field trials, championing farmer-led research across the country.

Through our trading subsidiary, Soil Association Certification, we work with over 6,000 businesses including organic farmers and growers, foresters, caterers, food processors and manufacturers across more than 50 countries, and certify over 14 million hectares of forest globally.

SUPPLEMENTARY NOTE

The Soil Association appreciates the extended deadline for this inquiry in light of Defra's recent announcements on the Environmental Land Management schemes (ELMs) and the publication of the Environment Improvement Plan (EIP). However, some points made in our response were formulated prior to this extension, so we wanted to start by clarifying our views on the latest updates, and their implications for soil health in England.

ELMs announcement

We were pleased to see the publication of further details on ELMs last month, which provided some clarity on England's new farming subsidy scheme since its 'rapid review'. Some aspects of the announcement were welcome, including the confirmation of support for organic farming in Countryside Stewardship, and new incentives for agroecological practices – like avoiding insecticides and using legumes for soil fertility instead of chemicals. These will all play a vital role in reducing the use of chemical inputs, which will be key to restoring healthy, living soils.

However, we are disappointed with the lack of clarity around the promised SFI organic standard, and with the absence of a longer-term vision to help farmers do more than make small changes. In our response below, we highlight the need for a '**whole-farm approach**' to soil health management – arguing that farms are complex, interconnected ecological systems that require taking a step back to consider the whole farm, rather than attempting to tackle

individual issues in siloes. Ultimately, a more holistic package of incentives will be needed to spark a shift to healthy soils - and healthy ecosystems - across entire farms.

Soils in the EIP

The publication of the EIP was highly anticipated, after the suggestion that it was replacing a bespoke Soil Health Action Plan for England (SHAPE). It was therefore hugely disappointing to see that this so-called substitute for the SHAPE consists of little more than a page on 'improving and protecting soil health' - including a downgraded goal to work towards making 60% of England's soils sustainably managed by 2030, rather than all soils. Other actions mentioned were merely vague reiterations of existing commitments.

This leaves a frustrating level of uncertainty around soil health in England, despite the fundamental role healthy soils play for the resilience of our food and farming systems, and in reaching our climate and nature targets. A clear and ambitious plan to improve soil management is still urgently needed – even to achieve the adjusted goal of making 60% of soils sustainably managed by 2030. We therefore **urge the government to honour their original commitment to publishing a Soil Health Action Plan for England**, which was promised in lieu of a clause on soils in the Environment Act.

SOIL ASSOCIATION RESPONSE

1. How can the Government measure progress towards its goal of making all soils sustainably managed by 2030? What are the challenges in gathering data to measure soil health how can these barriers be overcome?

Healthy soils are fundamental to the resilience of our food and farming systems, as well as to tackling the climate and nature crises. The Soil Association welcomes the UK Government's original goal of ensuring all soils are sustainably managed by 2030, but urgent action is needed to turn that ambition into reality.

A first step in that process will be to improve the monitoring of soil health across the country. As noted by the Environment Agency, there is still insufficient data on the health of our soils¹. With over 700 different soil types in the UK², the complexity and vulnerability of soil types has made them challenging to monitor and protect – both at the farm level and in setting government policy. This has led to slow progress, despite an increasing interest in soil health³.

What's more, the soil health data that does exist is fragmented and disjointed, as it is recorded by a variety of businesses and institutions, with different methods of soil sampling and

¹ [Environment Agency \(2019\), *The state of the environment: soil*.](#)

² [Mapping and understanding soil types across England and Wales \(cranfield.ac.uk\)](#)

³ [Soil Association, *Saving our Soils: Healthy soils for our climate, nature and health*.](#)

analysis. Combined with the lack of publicly available data sets on the state of our soils, it almost impossible to measure progress or to establish a baseline for farmers to work with.

That said, there is a clear role for farmers to play in gathering data to help monitor soil health moving forwards. Many are already doing so – as shown by our Innovative Farmers Programme, which supports farmer-led research and innovation. Various field labs have looked into practical ways to monitor and improve soil health. In the Westmoreland Dales,⁴ for instance, a group of seven farmers is working on the development of a toolkit for monitoring soil health in northern upland farming. The farmers will work with researchers and advisors to monitor results and implement changes.

Ultimately, we believe that all farmers should know the state of their soils, and how they compare to farms of similar soil types. With the right support, advice, and incentives, farmers could be regularly monitoring the health of their soil and working to improve it. The testing and reporting of that data would help build a more accurate picture of the state of our soils and identify new opportunities for funding, research and innovation.

To that end, we recently launched the Soil Association Exchange,⁵ a new platform dedicated to supporting farmers to gather data on key farm sustainability metrics, such as soil health, and share that information across the farming industry. The process of gathering accurate data will lead to improvements in overall farm sustainability, which will then allow farmers to benefit from the financial opportunities available for agroecological farming practices. We would be delighted to share more information about this initiative with the Committee.

For on-farm soil health monitoring to be most effective, however, we urgently seek a cohesive, standardised approach that will help join the dots between the various sectors involved – from farmers, to businesses, researchers, and policymakers. We welcome the government’s intention to establish a soil health indicator, as noted in the EIP, but more detail is needed around this ambition and how it will be put into practice. Ultimately, a Soil Health Action Plan is still essential to map out the full extent of the government’s vision for soils, and the steps in place to turn that vision into reality.

2. Do current regulations ensure that all landowners/land managers maintain and/or improve soil health? If not, how should they be improved?

In terms of existing regulation in England, there are two main categories relevant to soil health – both of which present their separate challenges.

⁴ <https://www.innovativefarmers.org/field-lab/?id=2ed1f04e-2b57-eb11-8191-005056ad0bd4>

⁵ <https://www.soilassociationexchange.com/>

In 2018, the most recent body of regulations linked to soil management was set out in the eight **Farming Rules for Water** – three of which are directly linked to soil health⁶.

The effectiveness of these regulations on soil health is hard to judge due to the lack of data available on soil health improvement, as previously mentioned. However, the impact of these regulations on improving other, more measurable, environmental outcomes such as water and air quality, has been demonstrably limited, indicating an overall lack of efficacy. In particular, there is a clear issue regarding the methods through which these rules are enforced.

The Environment Agency's inadequate capacity for farm inspections is well documented, with less than 2% of farms inspected per year. The statistics on fines administered to registered breaches of environmental regulations are equally alarming - last year, ClientEarth and WWF launched a legal complaint against the Environment Agency to the Office of Environmental Protection, after finding that only 1 in 1000 breaches were subject to sanctions⁷. There is therefore an urgent need to rethink methods for enforcing environmental regulations, starting by improving the Environment Agency's capacity to inspect farms more frequently. We welcomed the commitment for increased funding for farm inspections as detailed in the EIP, and hope that will translate to a tangible shift in the effectiveness of regulatory frameworks moving forwards.

A further layer of regulation sits within cross-compliance. The **Good Agricultural and Environmental Conditions (GAEC)** set out the regulatory baseline for soil management practices.⁸ From minimum soil cover, to maintenance of soil organic matter levels, and site-specific land management rules, the GAEC standards represent the minimum standards for soil health, along with other key environmental factors. However, with cross compliance coming to an end in 2024, it is unclear what will replace that regulatory baseline. As much a concern for soil health as for broader agricultural practices, the gaps left by the end of cross compliance urgently need addressing.

Finally, it's worth noting that existing regulations aimed at improving soil health largely focus on adapting practices to tackle individual issues. As a result, progress at the farm level tends to be seen in fragmented ways. A 2020 project between the University of Sheffield and ADAS⁹ looked into how 339 farmers engaged with sustainable soil management practices. While the results showed a high awareness of sustainable soil management as a priority area, the researchers found that few of the farmers used a diverse range of practices in a holistic manner. This matters because farms are complex, interconnected

⁶ <https://www.gov.uk/government/publications/farming-rules-for-water-in-england>

⁷ [Environment Agency “missing in action” when it comes to enforcing key regulation on nitrogen pollution | ClientEarth](#)

⁸ [https://marswiki.jrc.ec.europa.eu/wikicap/index.php/Good_Agricultural_and_Environmental_Conditions_\(GAEC\)](https://marswiki.jrc.ec.europa.eu/wikicap/index.php/Good_Agricultural_and_Environmental_Conditions_(GAEC))

⁹ <https://www.sheffield.ac.uk/sustainable-food/research2/translational-transformative/achieving-sustainable-soil-management-uk>

systems, with equally interrelated challenges. Future regulations on soil health will be far more effective if framed as part of a **whole farm approach** (see question 4).

3. Will the standards under Environmental Land Management schemes have sufficient ambition and flexibility to restore soils across different types of agricultural land? What are the threats and opportunities for soil health as ELMs are introduced?

It is right that soil health should sit at the heart of the Sustainable Farming Incentive (SFI), with two soil standards kicking the scheme off (alongside the moorland standard) last year. These require farmers to test soil organic matter levels, undertake soil assessments and produce soil management plans. While this marks an important step forward for monitoring and improving soil health at scale, we remain concerned that the level of ambition of these standards remains too similar to a regulatory baseline.

As such, alongside the need to ‘ratchet up’ their requirements over time, the overall effectiveness of the soil standards will rely on the ambition of other SFI standards, and how the scheme works as a whole. Strong support for farmers to adopt nutrient management and integrated pest management, for instance, will be key to reducing the use of agrichemical inputs, which plays a major role in restoring healthy, living soils.¹⁰

Similarly, supporting organic farmers (and conversion to organic) will be crucial. When compared to non-organic farms, organic farm soils perform significantly better against a range of soil health indicators: they have, on average, 16cm more topsoil, a stronger ability to sequester and store carbon, and higher levels of soil organic matter¹¹. They are also found to show better resilience against drought, and have higher levels of soil biodiversity¹². A central tenet of organic farming is maintaining and regenerating soil health, and this should be appropriately reflected in ELMs. While we welcome the confirmation of organic support in Countryside Stewardship, we urgently seek clarity around the promised organic standard in the SFI.

Finally, we are also concerned about the slow uptake to the SFI so far¹³, making Defra’s original target of getting 70% of all farmers signed up by 2028 look increasingly unlikely. This poses a real threat to soil management, particularly when considering the regulatory gaps left by the end of cross compliance. If the SFI is, in itself, intended to replicate a regulatory lever, a much higher level of engagement will be needed from farmers.

¹⁰ [Impact of agrochemicals on soil health - ScienceDirect](#)

¹¹ <https://www.organicseurope.bio/what-we-do/biodiversity-soil-water/>

¹² [Soil Association, *Saving our Soils: Healthy soils for our climate, nature and health*.](#)

¹³ <https://www.fwi.co.uk/business/business-management/agricultural-transition/slow-uptake-of-sfi-blamed-on-low-payments-and-lack-of-detail>

4. What changes do we need to see in the wider food and agriculture sector to encourage better soil management and how can the Government support this transition?

We know that industrial farming practices such as monocropping, intensive tillage and overuse of synthetic inputs are key drivers of soil degradation, yet there has been slow progress on farming policies that support a transition to more regenerative practices. Our *Saving our Soils*¹⁴ report outlines seven key areas in which farmers should urgently be supported to take action:

1. **Monitoring soil health** – there should be clear incentives for farmers to monitor their soil health and improve it above their soil type baseline. This could initially be achieved through SFI soil standards, but long term should become a baseline practice for all.

Aim: All farmers should know the state of their soils, and how they compare to farms of similar soil type.

2. **Increasing plant and animal matter being returned to soil** – as well as supporting an increase in cover crops/ green manures, there should be support for a reintegration of grass-fed livestock. This then need to connect with policies around nutrient pollution reduction.

Aim: Across government policy there should be a clearer vision to close nutrient loops in farming, including through supporting more mixed farming and a shift away from intensive indoors systems.

3. **Improving soil life through reduced tillage and chemicals** – increased incentives are needed for farmers to increase use of minimum or no-till systems, along with support for drastically reduced pesticide use. This could be achieved by incentivising whole farm approaches that reduce the risk of pests, weeds and disease in the first place, and address gaps in chemical regulation to support soil life.

Aim: Farmers should be enabled to plough less and reduce dependency on agrichemical inputs. Legal targets on maximum pesticide use and toxic load would help drive that shift.

4. **Covering up bare soil** – farmers should be supported to increase use of fertility-building green manures/cover crops, or the of the area under permanent grassland and longer leys, particularly on vulnerable soils. A strict regulatory baseline needs to be developed to keep vulnerable soils better covered. Monitoring should include a minimum percentage of bare soils at any time of year.

Aim: Healthy soil is rarely visible – it is covered by plants. UK agricultural soils should only be bare for short periods of time.

¹⁴ [Soil Association, *Saving our Soils: Healthy soils for our climate, nature and health*.](#)

5. Bringing in trees into the farmed landscape – agroforestry systems protect soils from erosion by wind and water, as trees with long roots hold soils firm while increasing soil organic matter, but existing policy and support for agroforestry is inconsistent and fragmented. New farm woodlands, and the integrated management of existing farm woodland can contribute significantly to government ambitions for woodland cover and help store more carbon in woodland soils. Coherent advice should be available to farmers on suitable choices for their particular landscape, and all regulation and public payments for trees on farms should be based on a whole farm plan.

Aim: Farm woodland area and implementation of agroforestry should be doubled by 2050.

6. Reducing compaction - awareness of this issue should be raised amongst farmers via advisory services and written guidance, and baseline regulations should have compaction prevention as a clear standard. This baseline will need to be regulated and enforced with clear penalties and adequate funding for enforcement.

Aim: Farmers should address compaction across all farm systems.

7. Designing crop rotations or the equivalent – longer and better rotations and intercropping should be incentivised alongside better support for farmers to move to niche and protein crops. New baseline regulations should help the transition away from basic rotations.

Aim: Farms should have long, diverse rotations or cropping systems. Fewer crops should be used for animal feed, replaced with a more diverse range of crops and breeds intended directly for human consumption.

Together, these seven areas help form the holistic, whole farm approach alluded to previously. Not only would this approach deliver for soil health, but it would promote healthy, sustainable food systems more broadly, unlocking a wide range of benefits for our climate, nature and health. A good example of a whole farm approach can be seen in agroecological farming practices, such as organic.

We therefore believe that the best route to healthy soils is a widescale transition to agroecology. This would require the UK government to fairly reward farmers for employing agroecological approaches, but it will also require a significant dietary shift.

Indeed, a series of European and UK-level studies¹⁵ has indicated that a broad transition to agroecological farming would feed a growing population while also tackling the nature, health and climate crises, but this transition would rely heavily upon a dietary shift - and this becomes particularly relevant when thinking about soil health. Shifting towards 'less

¹⁵ Food, Farming & Countryside Commission, *Farming for Change*: <https://ffcc.co.uk/library/farmingforchangereport> ; Sustainable Food Trust, *Feeding Britain from the Ground Up*: <https://sustainablefoodtrust.org/our-work/feeding-britain/> ; WWF, *Land of Plenty*: <https://www.wwf.org.uk/updates/land-of-plenty>

but better' meat consumption, and 'more and better' plants, including beans and pulses, will be key to supporting the transition away from more intensive farming practices, thereby contributing to a return to better soil health.

To facilitate that shift, joined up, cross-departmental policy making is crucial. With over £2.4bn spent on food in the public sector, the upcoming revisions to the Government Buying Standards for Food are a good opportunity to support the transition to agroecology. The proposed standards, which we encourage to be upheld, include a requirement for 50% of spend on local or higher environmental standard produce, including a minimum 20% spend on higher environmental standard produce, such as organic. This could play a vital role in supporting farmers already using agroecological practices, as well as encourage others to make that transition.

Supported by a shift to healthier and more sustainable diets, the transition to agroecological farming and land use practices will be key to restoring the health of our soils. By working with nature, rather than against it, and shifting towards a more diverse, circular model, agroecology will promote the natural regeneration of soil health, particularly through improving soil organic matter levels and boosting soil biodiversity¹⁶. In doing so, it will also present opportunities for improving our food security and enhancing our resilience against climate change. Now, more than ever, we need strong leadership from the UK government to support a vision for food and farming which places soil health at its core.

February 2023

¹⁶ <https://www.soilassociation.org/media/18074/iddri-study-tyfa.pdf>