

Environment, Food and Rural Affairs Committee

The Sustainable Soils Alliance (SSA) was launched in 2017 to address the current crisis in our soils. Its aim is to campaign to restore UK soils to health within one generation by seeing soil health elevated to where it belongs as a priority alongside clean air and clean water. The SSA is a non-profit organisation (CIC number 10802764).

Soil Health Inquiry: Summary

1. Last week's announcement that the government had downgraded its target from all soils being sustainably managed by 2030 to just 60% of agricultural soils was symbolic of decades of neglect and a disjointed approach to the various policy drivers of soil health: regulations, monitoring, incentivisation and education.

We call on the government to fulfil its promise to publish a Soil Health Action Plan for England (SHAPE). This should establish a clear definition of 'Sustainably managed soils' accompanied by a coherent vision of how specific policies will align to achieve it. A robust and well-funded monitoring programme is needed to trace progress against the target over time.

2. Soil science is similarly fragmented with research organisations, arm's length bodies and industry using specialty-specific terms and resources to describe, measure, and interpret soils to reflect their individual mandates and expertise. This diversity of approaches leads to the silo-ing of publicly commissioned research, inefficient and opaque application at a practical level and critically, the inability to aggregate soil monitoring data from myriad initiatives into a coherent picture or story.

We call on the government to establish a standardised technical framework for describing/classifying, grouping and mapping soils. This will enable consistent soil assessment and interpretation through the development of universally applicable metrics, benchmarks and sampling protocols. This can then become the common reference point for all soil assessment initiatives – cascading through nationwide monitoring, on-farm measurement and non-agriculture soil assessment.

3. The national soil classification data and soil maps of England and Wales have the potential to provide the universal basis to describe and understand the whole soil profile for widespread public and private application. However, despite being publicly funded, pay-wall and IP protection prevent their full and widespread access and use.

We call on the government to follow Scotland's lead and make the soil data and maps publicly available, to unlock public and practitioner understanding of soils and enable the development of a universal and consistent approach to soil assessment.

4. Farmers are confused and frustrated by the variety of different soil measurement methodologies available on the market. They generate inconsistent results and sometimes contradictory advice about interpretation and therefore management practices.

We call on the government to promote the use of the 2022 AHDB Soil Health Scorecard approach as an immediately available and widely understood tool for consistent topsoil assessment and

interpretation that can be universally applied through the Environmental Land Management schemes and Countryside Stewardship, as well as initiatives being implemented by the both the private and third sector.

5. Soils data collected on farms, including that collected through the Sustainable Farming Incentive (SFI), has the potential to dramatically improve our understanding of both macro and micro trends in soil health and the impact of practice change. However, farmers have well-founded concerns about how this data is owned, shared and utilised by third parties.

We call on the government to establish a protocol for the collection and use of soils data – applicable whether it is privately or publicly funded. This should include necessary safeguards to anonymise data and protect any sensitive personal and commercial information. The ambition should be to establish a single mechanism for soil assessment data collection, and its storage on an open-access soils data repository – both reflecting farmer concerns, and the fact that environmental data collection is a public good in itself.

6. Soils currently do not enjoy their own regulatory instrument. The existing Regulations (Farming Rules for Water) do not provide adequate protection for soils, especially with the loss of cross-compliance. Their objective is to protect water, meaning they don't reflect the services soils provide or the threats they face, nor do they fulfil the "polluter pays" principle, a fundamental tenet of international and UK law.

We call on the government to establish a soil-specific regulatory instrument in accordance with soils' multifunctionality, the diverse public goods and services they provide and the risks they face. This should embed consistent soil assessment against established benchmarks throughout the farming industry, including for soil organic matter.

7. The Farming Rules for Water themselves are hard to interpret and apply. Since they were introduced in 2018, there has been inadequate investment made in their dissemination among farmers.

We call on the government to renew its efforts to embed the Farming Rules for Water – starting by confirming that they will be maintained despite the REUL process. Adequate investment should be committed to their communication and enforcement so that no farmer can justifiably claim ignorance of them.

8. The government clearly sees the Environmental Land Management schemes as the primary delivery mechanism to achieving the sustainable management of soils, and yet no reference is made to the role of regulations or enforcement within the schemes. This is confusing for farmers and sends an unclear message to taxpayers about what the schemes should pay for and why.

We call on the government to clarify what it sees as the regulatory baseline for soils within and alongside Environmental Land Management schemes and therefore what 'additional' practices can justifiably be incentivised over and above this. It should also set a clear deadline after which compliance with the Farming Rules for Water should be a condition for public money.

9. There are worrying early signs that farmers are not signing up to the initial Sustainable Farming Incentive Soil Standards, partly because they do not consider the payment rates to be an adequate return on investment in the face of the costs and overheads for implementation – soil assessment, cover crop seed mixes etc.

We call on the government to be fully transparent about the calculations behind the payment rates for the Soil Standards, and to keep these rates under constant review to ensure they reflect all relevant overheads. Payment rates should also take into account the value of the benefits generated by healthy soils, and the nationwide costs of soil degradation.

10. The Environmental Land Management schemes (ELM) have ambitious objectives for delivering a number of environmental outcomes, and yet there is no vision as to how these targets will be either achieved or measured. This needs to be embedded in the schemes if Defra is to justify to the Treasury and taxpayers the rationale for ELM over time.

We call upon the government to establish a clear thread between guidance, practices, metrics and outcomes that will clearly demonstrate how ELM, SFI and individual standards will contribute to the delivery of national environmental ambitions. This will enable the constant evaluation of the standards to establish if they are delivering all aspects of soil health, and their updating where necessary.

11. A private marketplace is emerging that pays farmers for the numerous environmental co-benefits that increased carbon stored in the soil provides. However, the lack of a regulatory framework for this market means schemes have different approaches to many of the critical elements at stake – measurement, reporting, verification, permanence etc., causing concern among farmers and investors. There is also no clear mechanism for stacking these numerous benefits so farmers can benefit from different incomes simultaneously.

We call on the government to use the proposed Ecosystems Market Framework to bring confidence and clarity to the marketplace by embedding robust standards into farm soil carbon projects, using the UK Land Carbon Registry as leverage. The Framework should also establish a vision for how ecosystem income streams (including farm soil carbon) can be stacked in a manner that ensures high standards and transparent recording and accounting.

12. The private market for farm soil carbon has the potential to be an important driver of farmer incomes, soil health and climate change mitigation and resilience. However, as it stands public and private schemes are not aligned, with the risk being that the SFI will crowd out private investors whilst failing to either support private market growth or fill the gaps it leaves behind.

We call on the government to monitor the emerging private market for soil carbon and identify policies that can support its growth. This should include providing clarity over the principle of additionality, directing public money towards long-term carbon storage (which private schemes cannot reward), and lowering the financial barriers to entry by adequately subsidising soil carbon measurement.

13. The food supply chain has a significant impact on nationwide soil health. Major brands invest heavily in monitoring and research and can be crucial drivers of best practice, and certification schemes are increasingly incorporating soil health. However, pressures from intensification and contractual obligations can cause farmers to knowingly damage their soils (by harvesting in wet weather etc.) in order to fulfil orders on time. With growing consumer interest in soil health and concerns over long term security of supply, this influence will only grow.

We call on the government to better understand and harness the impact of the major food businesses in driving soil health – through guidance, regulatory compliance etc. The need for fair payments for farmers and protection from adverse contractual agreements should be reflected in its work on supply chain codes of practice, the work of the Grocery Code Adjudicator and a level playing field for farm soil carbon.

14. Soil health does not enjoy the position of priority it needs within the various educational modules that form the basis of expert soils understanding – the advisory services, higher education, CPD and even inspector training. Recent advances in science, policy and technology are often transferred slowly and inadequately onto the syllabus of the respective courses.

We call on the government to use its influence to amplify soil's importance for the farm-knowledge community and accelerate the transfer of science into practice. We also urge it to promote peer-to-peer farmer education since seeing results 'in field' is often the most convincing rationale to convert to pioneering new and innovative soil management.

15. Since 2015, repeated, first-hand experience of extreme weather has increased our appreciation of the economic cost of climate change, biodiversity loss and flooding – as has the science linking soil health with both the mitigation of and adaptation to these threats.

We call on the government to commission an update of the research: *The Total Cost of Soil Degradation in England and Wales* to reflect new data and trends, as well as an understanding of the interconnectivity of diverse environmental pressures. This should include an up-to-date and accurate picture of soil's true economic cost and value, including climate change mitigation and resilience.

16. Some of the most significant impacts on soil function, and the services it provides (including carbon storage) occur as a result of activities associated with land development (housing, infrastructure, etc.), yet there is a general lack of awareness and understanding of this within the development sector, the public and across policy areas.

We call on the government to make good on its 25 Year Plan commitment to embed the principle of environmental net gain for development, including housing and infrastructure projects, and a national target of no net soil loss for England. To help facilitate this, Defra should ensure that the updated Code of Practice for the sustainable use of soils on construction sites gives equal weight to soil health as it does to contaminants.

17. Plastic pollution in soils is increasingly recognised as posing a threat equal to that of plastics in water. The potential for microplastics to enter the food system via contaminated soil may present a significant risk to public health.

We call on the government to take a proactive lead in the standardisation of biodegradable products. A first priority here should be biodegradable agricultural equipment and compostable household waste bags. Microplastic washing machine filters should be mandated.

18. Atmospheric nitrogen pollution, transfer of excess nutrients, transfer of human pathogens and antimicrobial resistance from soil to waters, as well as climate change pressures on soils are all of increasingly urgent concern.

We call on the government to urgently establish the global risks posed by chemicals in our agricultural systems and take clear, well-communicated steps to address them. We call on the government to assess the risks to soils from climate change, including associated impacts on other parts of the environment and to include the findings in future policy development.