Sustainable Soils Now

Launch Report & Call to Action

SUSTAINABLE SOILS ALLIANCE


“Soil is as important as the air we breathe and the water we drink.”
Rebecca Pow MP

Rebecca Pow MP
Member of Parliament for Taunton Deane

HOUSE OF COMMONS
LONDON SW1A 0AA

29th November 2017

Dear Colleague

On Monday October 23rd I hosted a reception at the House of Commons to celebrate the launch of the Sustainable Soils Alliance, an organisation committed to reversing the crisis in our soils within one generation.

The event was attended by over 200 experts and leaders representing every corner of the soil community – science and academia, farmers, industry, professional associations, technology and environmental groups as well as members of both Houses of Parliament. Participants were united, however by the recognition that our soils have for too long been unprotected and, by the determination that through a joint approach, we can push for a positive change in the way our soils are managed before it is too late.

Three things in particular struck me at the event.

1. The depth of concern about the scale and nature of the crisis facing our soils, and the variety of evidence for it – be it contaminated soil, infertile soil, compacted soil or perfectly healthy soil that is washed into our oceans and is lost for good.

2. The range of policy options on the table to address the problem - from improved monitoring and evaluation to incentivisation, education, training and even regulation. Some options require government intervention and investment and others requiring little more than the harnessing and widespread adoption of efforts already underway.

3. And finally, the sense of urgency, not only because we are running out of time before the decline may become irreversible – but also because of the unique opportunity provided to us by Brexit to take our soil policy into our own hands and to design a land management and farming system that is truly fit for purpose.

With that in mind, I was delighted that Secretary of State for the Environment, Michael Gove, was able to attend the launch and hear first-hand so many expert voices and opinions. He made it very clear that he was in listening mode, and in his closing remarks gave some positive indications that soil will now start to get the attention it deserves from this Government.

For my part, I will continue to work with the Sustainable Soils Alliance to ensure soil remains high in the public and political agenda and encourage you to add your voice to their efforts in the months and years to come.

Kind Regards

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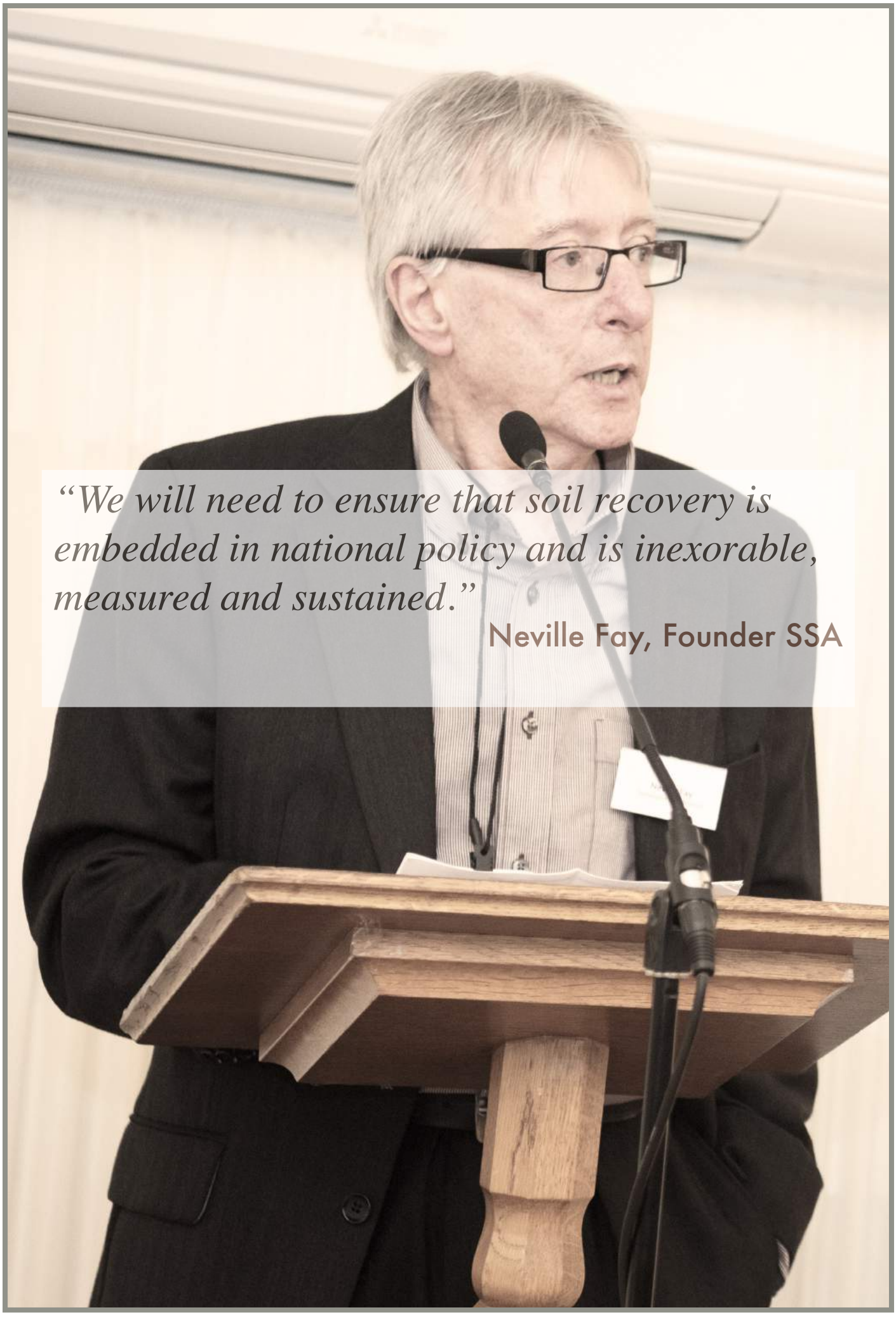

"We will need to ensure that soil recovery is embedded in national policy and is inexorable, measured and sustained."
Neville Fay, Founder SSA

Introduction

"Soil is the thin layer that separates civilisation from chaos, and life from death".

Thomas Friedman

Soil is the ultimate natural resource. It underpins humanity's requirements for survival, namely food and clean air and water. It provides the dynamic ecosystem needed for the countless micro-organisms that support life on earth. It mitigates climate change risk by storing carbon that would otherwise be in our atmosphere.

Yet despite this, soil has for too long been taken for granted by society, politicians and end-users leaving much of it at the limit of its viable capacity and us on the brink of environmental catastrophe.

The evidence of this neglect is everywhere. In some areas of the UK and across swathes of the developed world, farming, construction and industrial practices have degraded, polluted and dried out the soil leading to decreasing fertility, wholesale erosion and a diminished ability to act as a water and carbon sink or to support life.

The situation is so urgent that significant portions of farmland may be within measurable limits of remaining harvests until soil fertility is exhausted. And this change is irreversible, for once soil fertility is gone, it is gone for future generations.

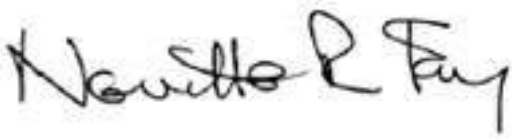
Halting this decline requires a universal step change in our attitude to our soil and an ambitious government policy framework to match.

This framework should address all of the numerous and interconnected factors at stake, factors that were discussed at our launch event, and then detailed in the numerous responses to our postcard questionnaire. We have condensed this feedback in our eight-point Call to Action, but they can be further simplified down to four distinct asks:

- A **regulatory framework** to promote best practice and deter harmful soil management practice
- A viable system for the **monitoring and evaluation** of the quality of our soils
- A robust compliance system of **economic incentives** balanced with regulatory measures
- Investment in **training, education and public communication** and a career path for farming as a profession

There are encouraging signs that these asks will get the attention they deserve. The first ever parliamentary inquiry into soil health carried out by the Environmental Audit Committee was a watershed moment, and I was further heartened by the commitment to soils expressed by Secretary of State, Michael Gove, at our launch event and in subsequent weeks by his colleague, Farm Minister, George Eustice. Meanwhile the frameworks for climate change, water and air are evidence that science-led policy making fuelled by a sense of urgency and a willingness to collaborate can indeed lead to tangible change.

We at the Sustainable Soils Alliance are determined to be the catalyst of this change, to be a forum for debate, a source of expertise and a focal point for the work of the countless organisations already engaged in this issue. We want to build on their activities and use the momentum from the launch and the unique opportunity provided by Brexit to place soil alongside water and air as the third pillar of a truly viable, joined-up and long-term UK environment policy.



"The most important thing for the future of this country is the training of its young people in the science of managing its soil."

Sir Tim Smit, Co-Founder, The Eden Project

Background

The Sustainable Soils Alliance (SSA) was born out of a meeting held on 16 December 2016 with representatives from the worlds of politics, academia, industry and science as well as campaign organisations and end-users.

At this 'Soils in Crisis Commitment Meeting' we discussed the scale and nature of the crisis facing our soils and the efforts already underway to address it. The conclusion was that, despite the massive efforts of a number of individuals and organisations over decades, soil did not receive the political or public attention it needs.

The aim of the SSA is to address this situation by calling on the government to develop a soil policy capable of delivering soil recovery and sustainable soil health within one generation. We will do this by creating a common platform for the community of organisations that campaign for improved soil management, empowering and amplifying their efforts and bringing the whole soil community together with policy makers, end users and other stakeholders.

Equally we want to engage the broad spectrum of end-users and 'soil entrepreneurs', those whose income and livelihoods derive from soil, to comprehensively enlist their contributions in a strategy for soil recovery.

The first step in this process is the formulation of our Call To Action - an eight-point checklist of the main areas requiring political attention (overleaf). These are based on the insights and expertise of our founders, steering group and other experts, as well as the feedback from the 200+ attendees at our launch event who took the time to describe the areas of principle concern for them - and the policy steps needed to address them.


“The challenge we face now is to deliver on government commitment to raise our soil organic matter by 0.4% each year”.
Helen Browning OBE, CEO, The Soil Association

Call to Action

We call upon the government, devolved assemblies and other relevant bodies to undertake the following actions as the pillars of a coherent and ambitious future soils strategy.

1. Long-term Strategy

Introduce a nationwide soil protection and recovery programme, underpinned by statute, that places soil at the heart of the UK and devolved governments' environment policy - alongside that of air and water - and as an integral part of the 25-year Plan for the Environment.

2. Economic Evaluation

Invest in the tools and methods needed to evaluate in economic terms the societal and environmental benefits of healthy soil, as well as the consequences of reaching a soil degradation tipping point.

Ensure that these benefits are identified and recognised across Government policy in all sectors and that the benefits of healthy soil are effectively and widely communicated.

3. Monitoring

i. Develop and implement local (e.g. landscape, catchment) and site (farm, forest, contaminated land etc) based regular monitoring:

a) To identify whether soils are degraded, are being lost, are in good health or might be described as organic, what the consequences are and what remedial measures are likely to be feasible where soil is becoming degraded.

b) To inform current and future land management practices, such as the need for nutrients and other inputs.

ii. Instigate and repeat at a minimum 5-10 year interval, a replicable system of soil monitoring across the UK.

iii) Integrate modelling, monitoring and data related to soil, water and flooding where these overlap.

iv) Refine and establish national data and monitoring standards and protocols for soil monitoring.

v) Develop and implement appropriate training, education and tools to aid those who will be involved in soil monitoring, such as farmers, other land managers and advisers, and soil scientists.

4. Pollutant reduction

Create a coherent nutrient pollution reduction strategy for agriculture (linking soil-air-water) that includes emissions targets. Disseminate the benefits to farmers of alternative approaches that reduce reliance on high agrochemical inputs.

"We need a soil monitoring programme to understand the direction of travel and to provide evidence that our actions are working.

Chris Collins, Co-ordinator, the Soil Security Programme

Call to Action (cont.)

5. Measures

Introduce a robust regulatory framework and a scheme of incentives that will:

(i) discourage practices that cause or contribute to soil degradation and associated impacts (e.g. flooding and damage to rivers), and

(ii) encourage practices that will deliver soil recovery and good soil management including agroecological, organic and other appropriate approaches.

Ensure there are sufficient resources (funding and people) to enforce regulatory breaches, advise and implement incentivisation schemes.

6. Innovation & Tools

Promote and disseminate innovative technologies for soil improvement and monitoring including a joined-up laboratory network, smart applications, remote sensing and open source data. Develop a framework for continuous knowledge exchange and co-operation between research and land manager communities with a focus on farmer-led research.

Review and update Agricultural Land Classification Maps which can then be used to steer on-the-ground land management practice and demonstrate what land can sustainably be used for and its physical limitations.

7. Education & Training

i. Embed the science and understanding of soil and good soil care into the further and higher education curricula for agriculture and other land-based courses.

ii. Introduce a nationwide programme of supported advice in good soil management and soil monitoring to existing land-based workers.

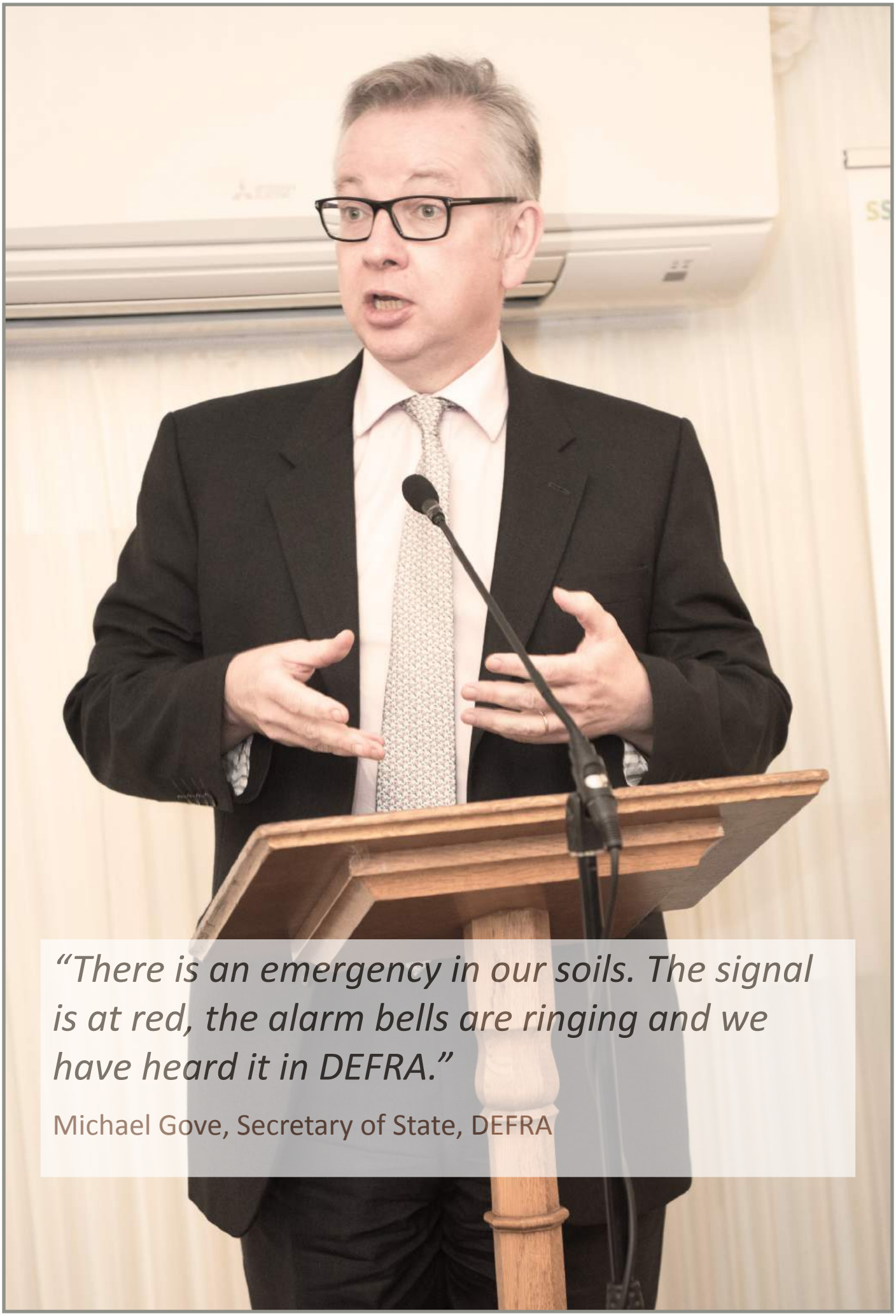
iii. Develop a professional body for farmers, other agricultural workers and agronomists that will set standards, develop career pathways and recognise competences in knowledge, understanding and practices relating to good environmental land management.

iv. Address the need for more soil scientists qualified at degree and postgraduate level.

8. Collaboration

Increase collaborative working at all levels by engaging organisations who play a part in land-related work, whether in the NGO, government, professional, industry/other private and education sectors.

Extend the understanding of and appreciation for soil beyond the farming, horticulture and land-management communities to include other relevant professional bodies, such as those involved in urban soil use and the general public.



“There is an emergency in our soils. The signal is at red, the alarm bells are ringing and we have heard it in DEFRA.”

Michael Gove, Secretary of State, DEFRA

Press Cuttings

UK is 30-40 years away from 'eradication of soil fertility', warns Gove

Farmers must be incentivised to tackle decline in biodiversity, says environment secretary at launch of parliamentary soil body

Michael Gove says UK is facing 'eradication of soil fertility'

Time is growing short to save soil fertility, Gove tells farmers

UK will see 'fundamental eradication of soil fertility', Gove warns

Gove warns of 'eradication of soil fertility' due to intensive farming

The Telegraph

News

Gove says UK cannot withstand further soil fertility loss

Brexit

UK To Lose Soil Fertility In 30 Years, Says Environment Secretary

Michael Gove blames intensive farming practices

News

Britain's soil to become infertile within 40 years due to intensive farming, warns Gove

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Watch: Gove pledges to protect soil

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Farms could become a wasteland in just 30 years, says Gove: Environment Secretary warns intensive farming and chemical sprays are damaging soil

Gove pledges action to protect soils

GOVE: BRITAIN'S SOIL IS 30 TO 40 YEARS AWAY FROM BECOMING INFERTILE

"Soils are not just the things that hold plants up, they are the basic substance that nurtures our biodiversity web".

Baroness Barbara Young, Chair, The Woodland Trust

The State of Our Soils: UK & Global Picture

The annual (quantifiable) costs of soil degradation in England and Wales are between £0.9 and £1.4 billion, with a central estimate of £1.2 bn. These costs are mainly linked to loss of organic content of soils (47% of total cost), compaction (39%) and erosion (12%).

The Total Costs of Soils Degradation in England and Wales, 2011

Land degradation is costing the world as much as $10.6tn every year, equivalent to 17% of global gross domestic product

The Economics of Land Degradation, 2015

The contribution of damaged soils to flooding events is estimated to be £233m per year.

Securing UK Soil Health, 2015

9% of Europe's surface has been sealed over. Compaction threatens 35% of Europe's soil and contributes to flooding.

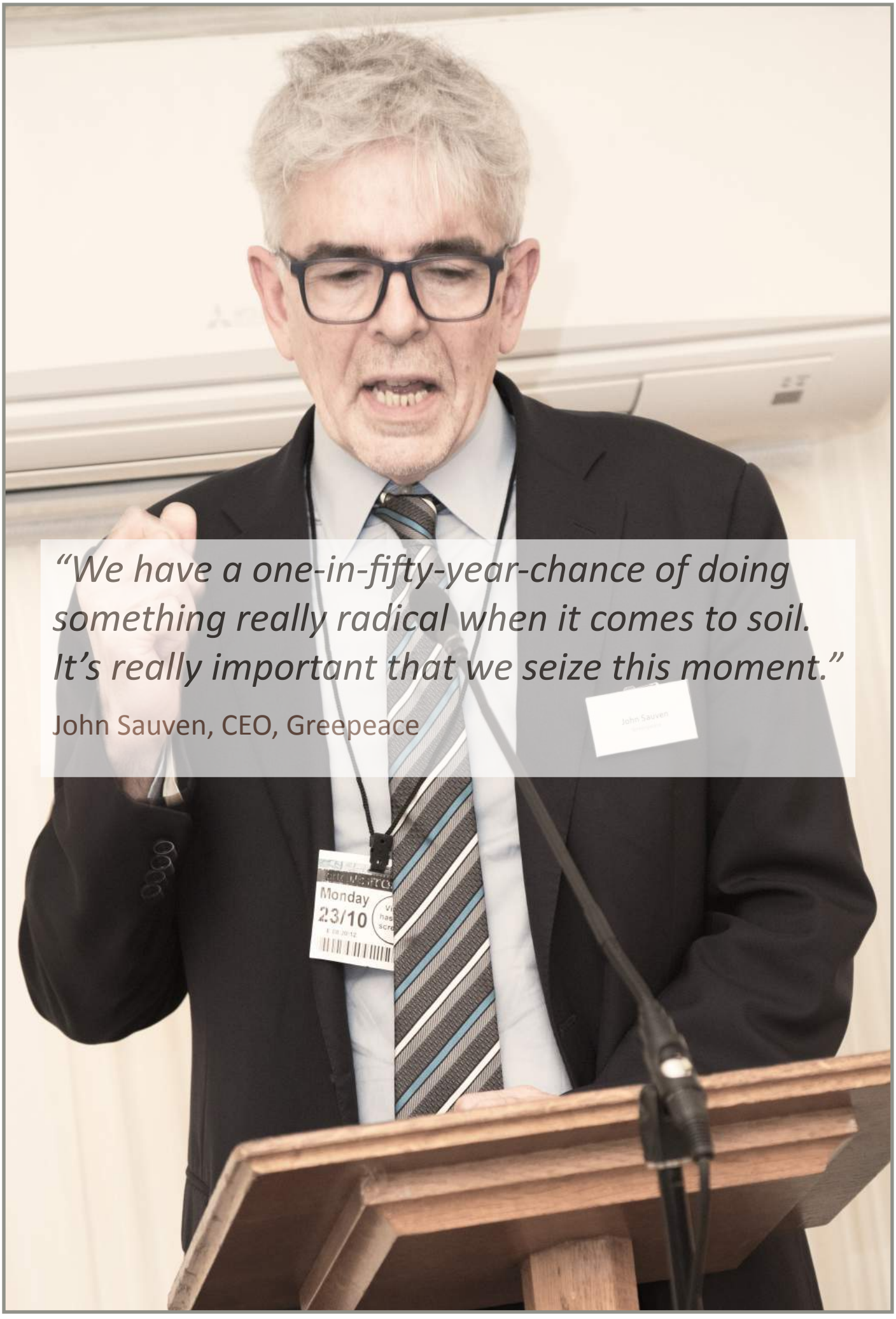
Soil: worth standing your ground for, 2011

The UK has lost 84% of its fertile topsoil since 1850, with the erosion continuing at a rate of 1cm to 3cm a year.

The Committee on Climate Change (CCC) report (2015)

If action is not taken to reduce erosion, total crop yield losses projected by the year 2050 would be equivalent to removing 1.5 million km^2 of land from crop production – or roughly all the arable land in India.

Status of the world's soil, UN FAO, 2015



"We have a one-in-fifty-year-chance of doing something really radical when it comes to soil. It's really important that we seize this moment."

John Sauven, CEO, Greepeace

The State of Our Soils: UK & Global Picture (cont.)

Around 300,000 hectares of UK soil are thought to be contaminated with toxic elements – such as cadmium, arsenic and lead.

Environmental Audit Committee Report on Soil Health, 2016

There may be as many as 2.5 million potentially contaminated sites across Europe, which need to be investigated. Of these, approximately 14 % (340 000 sites) are expected to be contaminated and likely to require remediation.

Progress in the management of Contaminated Sites in Europe, 2014

English farmers are losing valuable resource through diffuse pollution. 235,000 tonnes of nitrogen and 8,391 tonnes of phosphorus are lost every year that would otherwise help sustain farming.

Consultation on new basic rules for farmers to tackle diffuse water pollution from agriculture in England, 2015

In Africa, all but three countries extract more nutrients from the soil each year than are returned through use of fertilizer, crop residues, manure, and other organic matter.

Status of the world's soil, UN FAO, 2015

UK soils store over 10 billion tonnes of carbon in the form of organic matter. Over half of the UK's soil carbon store is contained in peat soils. Of Wales' peat-lands, only 30% of the area is thought to be in good condition. Around 80% of Northern Ireland's peat-lands have been degraded and need to be restored.

The Welsh Government State of Natural Resources Report, 2017

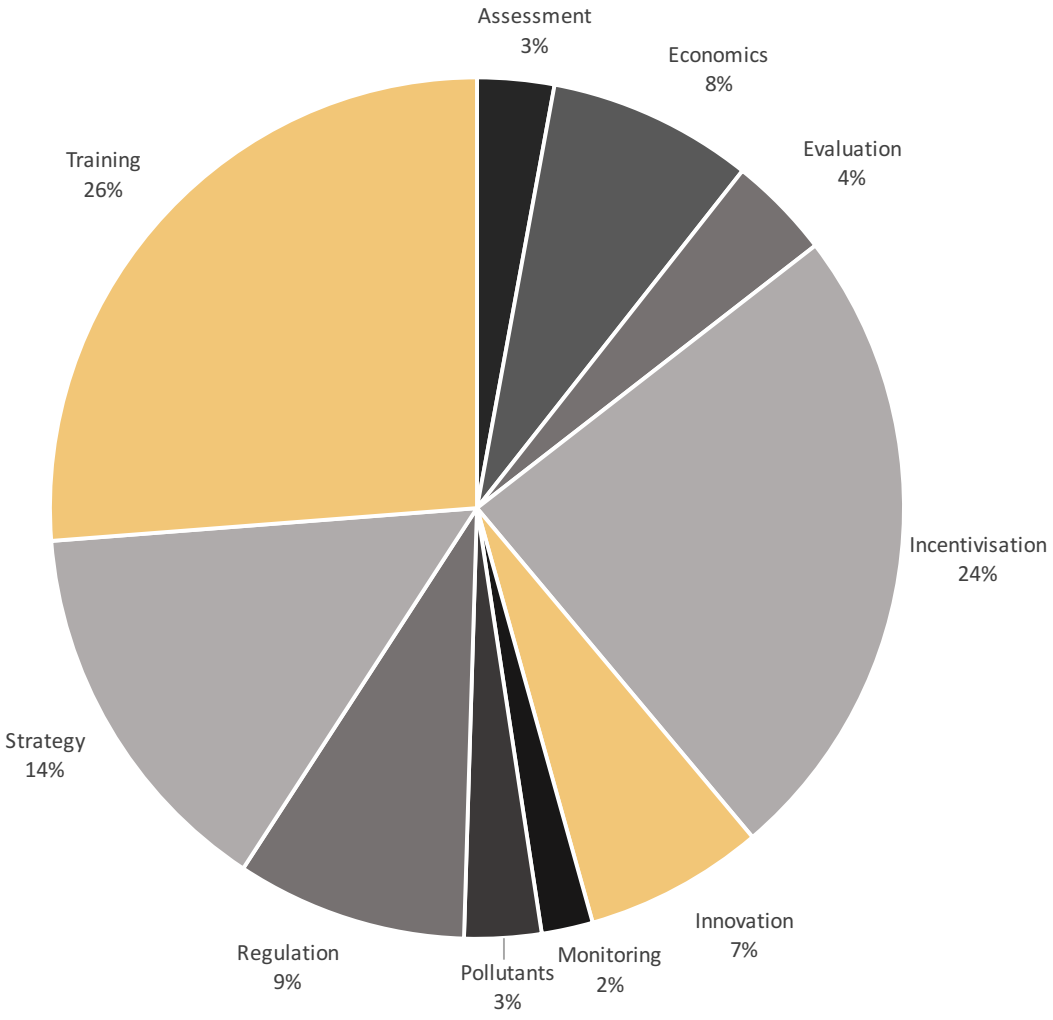
133 billion tonnes of carbon has been removed from the top two metres of soil since farming began some 12,000 years ago.

Soil carbon debt of 12,000 years of human land use, 2017

Summary of Postcard Responses

At our launch event we asked the 200 attendees to identify the issue that concerned them most about the state of UK soils, the steps required to address them and the government policies needed to make these changes happen.

The answers we received spanned the full spectrum of the soils issue, demonstrating the complexity of the subject and the scale of the task ahead. We have grouped them around the following ten categories as follows:



These ten categories can be further distilled down to four themes that will direct our work-streams and future activities.

- A **regulatory framework** to promote best practice and deter harmful soil management practice
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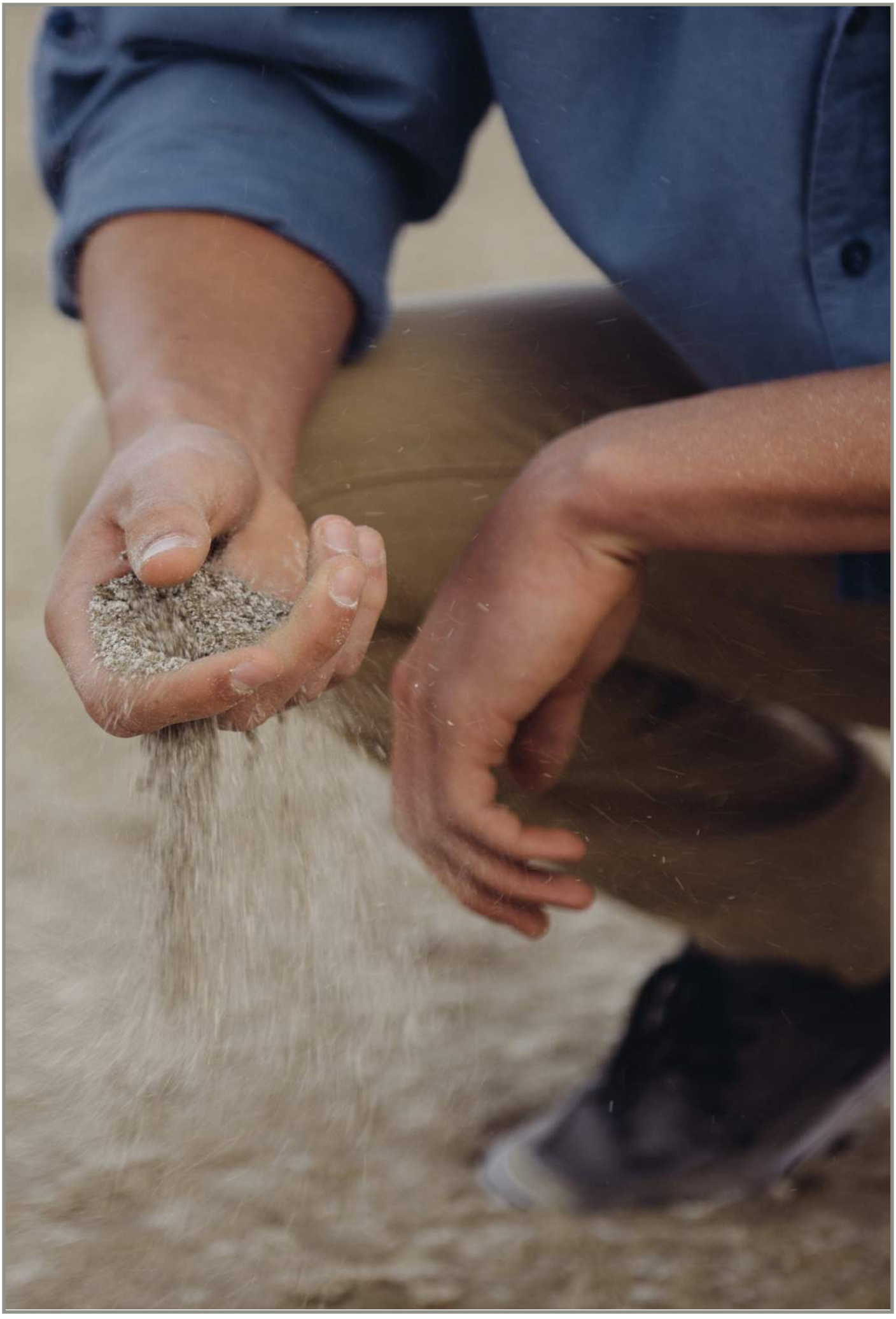


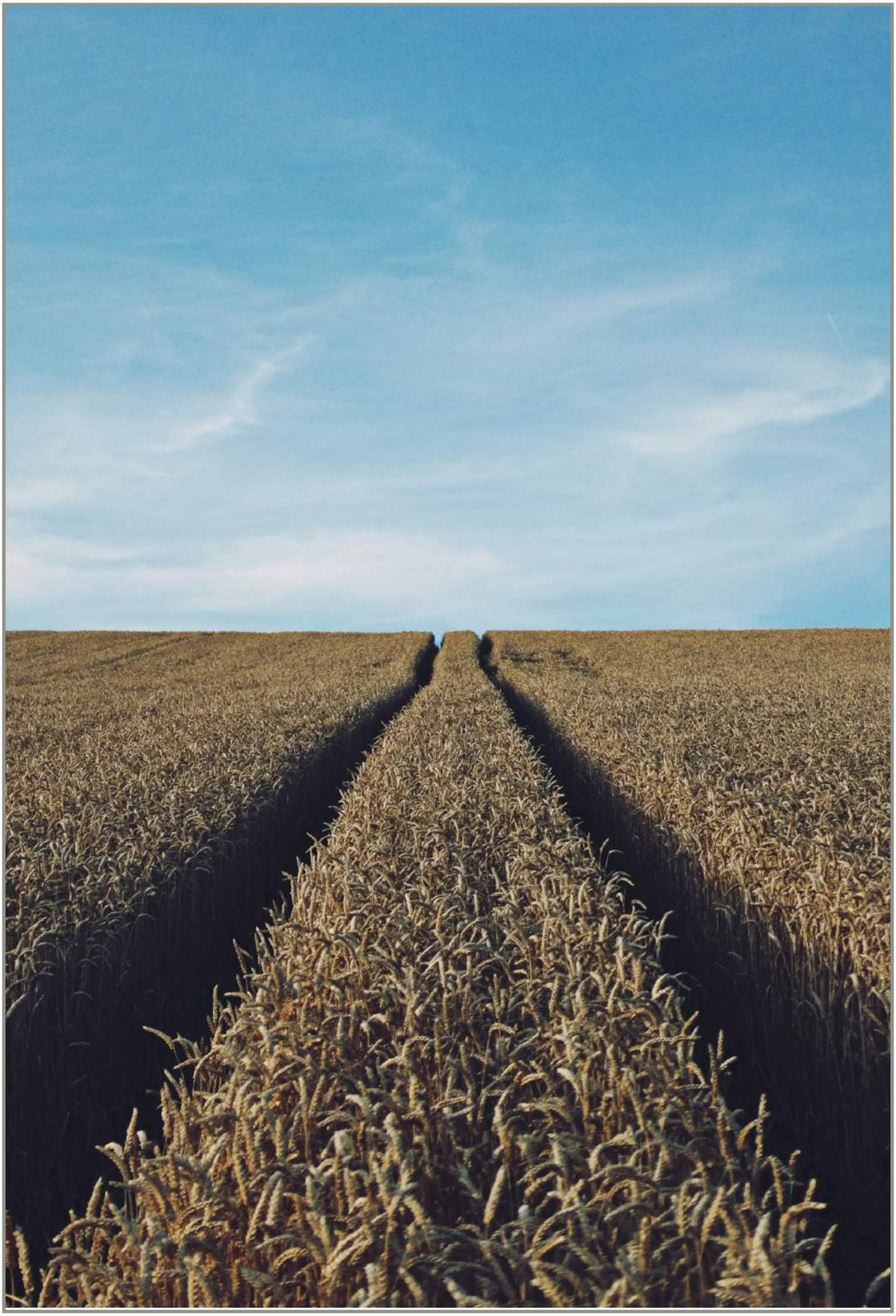
Our Work

The role that the Sustainable Soils Alliance will play in addressing the crisis in our soils will be determined by a number of factors. The community of individuals and organisations already active on the issue, the need to involve stakeholders from all backgrounds and perspectives and the rapidly evolving policy landscape as the UK negotiates its departure from the EU and develops its post Brexit farming and environmental strategy.

Core activities will include the following:

- Organise events for sharing ideas, science and experiences, breaking down silos and mediating different perspectives.
- Channel and amplify the views of experts in the field to politicians and other stakeholders via consultation responses and calls to action.
- Collate, pool, generate and commission new research to fill the gaps in the communal understanding of soil management issues and the political, management and scientific solutions to them.
- Develop briefing notes and backgrounders on specific policy and scientific aspects of soils.
- Raise awareness amongst the general public of the broad issue of soil quality, through events, social and traditional media campaigns, newsletters etc.
- Hold a rolling meeting programme with all relevant stakeholders to communicate our key messages and ensure our activities are responsive to the needs of the broader community in which we operate.

The culmination of our activities will be the 'Step-change Conference', scheduled to take place in 2019. The event will showcase the work of the four thematic work-streams and will aim to do for soil health what the Stern Review did for climate change.



Our Thanks

We would like to extend our thanks to the individuals and organisations who share our passion for sustainable soils, and who have lent us their support - in terms of finance, expertise, energy and enthusiasm in the months leading up to the launch and since.

If you would like to get involved with our work, support us, receive our newsletter or just find out more about what we are all about, please don't hesitate to get in touch.

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